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Fourth Bi-monthly Monetary Policy Statement, 2016-17 Resolution of the Monetary Policy Committee (MPC), Reserve Bank of India *

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

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

Consequently, the reverse repo rate under the LAF stands adjusted to 5.75 per cent, and the marginal standing facility (MSF) rate and the Bank Rate to 6.75 per cent.

The decision of the MPC is consistent with an accommodative stance of monetary policy in consonance with the objective of achieving consumer price index (CPI) inflation at 5 per cent by Q4 of 2016-17 and the medium-term target 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. Global growth has been slowing more than anticipated through 2016 so far, with weak investment and trade damping aggregate demand. Meanwhile, risks in the form of Brexit, banking stress in Europe, rebalancing of debt-fuelled growth in China, rising protectionism and diminishing confidence in monetary policy have slanted the outlook to the downside. World trade volume has contracted sharper than expected in the first half of 2016, and the outlook has worsened with the recent falling off of imports by advanced economies (AEs) from emerging market economies (EMEs). Inflation remains subdued in AEs and has started to edge down in EMEs.

3. International financial markets were overwhelmed by the Brexit vote in Q2, with equity markets losing valuations worldwide, currencies plunging and turning volatile, and investors rushing for safe havens. Markets, however, recovered quickly and reclaimed lost ground in Q3, with a return of risk appetite propelling capital flows back into EMEs. Nonetheless, an uneasy calm prevails on uncertainty about the stance of monetary policy of systemic central banks. Commodity prices have firmed up slightly, easing stress for commodity exporters and shaving off some of the terms of trade gains accruing to commodity importers. Crude prices rose to a recent peak in Q2 of 2016, mostly on supply disruption in various parts of the world, and again in late September as the OPEC announced intentions of cutting back on supply; but, the upturn has been curbed by higher inventories.

4. On the domestic front, the outlook for agricultural activity has brightened considerably. The south west monsoon ended the season with a cumulative deficit of only 3 per cent below the long period average, with 85 per cent of the country's geographical area having received normal to excess precipitation. *Kharif* sowing has surpassed last year's acreage, barring cotton, sugarcane and jute and mesta. Accordingly, the first advance estimates of *kharif* foodgrains production for 2016-17 by the Ministry of Agriculture have been placed at a record level, and higher than the target set for the year. The industrial sector, by contrast, suffered a manufacturing-driven contraction in early fiscal year Q2, after a sequential deceleration in gross

* Released on October 04, 2016.

value added in Q1. Even after trimming the statistical effects of the lumpy and order-driven contraction of insulated rubber cables, industrial production as measured by the index of industrial production (IIP) turned out to be slower than a year ago. In August, steel production rose to a 37-month high and cement production maintained momentum - auguring well for construction activity - even though the output of core industries as a whole was weighed down by a decline in the production of coal, crude oil and natural gas and deceleration in refinery products and electricity generation. Nonetheless, business expectations polled in the Reserve Bank's industrial outlook survey and by other agencies remain expansionary in Q2 and Q3. The strong public investment in roads, railways and inland waterways, the recent efforts to unclog cash flows in large projects under arbitration, and the boost to spending from the 7th Pay Commission's award, should improve the industrial outlook. In the services sector, the acceleration in the pace of activity in Q1 appears to have been sustained. An increasing number of high frequency indicators are moving into positive territory, construction is boosted by policy initiatives, and public administration, defence and other services will be supported by the pay commission award.

5. Retail inflation measured by the headline CPI had been elevated by a sharp pick-up in the momentum of food inflation overwhelming favourable base effects during April-July. In August, however, the momentum of food inflation turned negative and surprised expectations; consequently, base effects in that month came into full play and pulled down headline inflation to an intra-year low. Fuel inflation has moderated steadily through the year so far. Inflation excluding food and fuel (including petrol and diesel embedded in transportation) has been sticky around 5 per cent, mainly in respect to education, medical and personal care services. Households reacted to the recent hardening of food inflation adaptively and raised their inflation expectations in the September 2016 round of the Reserve Bank's inflation expectations survey of households. Input costs in the manufacturing sector, including staff costs, have firmed up slightly as evident in various surveys, but the presence of considerable slack has restrained their transmission into corporate pricing power.

6. Liquidity conditions have remained comfortable in Q3, with the Reserve Bank absorbing liquidity on a net basis through variable rate reverse repo auctions of varying tenors. Liquidity was injected through open market purchases of ₹200 billion in line with the system's requirements. As a result, the weighted average call money rate (WACR) remained tightly aligned with the policy repo rate and, in fact, traded with a soft bias. Interest rates on commercial paper (CPs) and certificates of deposit (CD) also eased.

7. In the external sector, merchandise exports contracted in the first two months of Q2. Subdued domestic demand was, however, reflected in a faster contraction in imports. Moreover, the still soft crude prices pared off a fifth of the oil import bill and gold import volume slumped to a fifth of its volume a year ago. Consequently, the merchandise trade deficit narrowed by US$ 10 billion in April-August on a year-on-year basis. These developments are likely to have contained the current account deficit in Q2 at its level in Q1, although the decline in remittances and the flattening of software earnings warrants monitoring. While the pace of foreign direct investment slowed compared to a year ago, portfolio flows were stronger after the Brexit vote, galvanised by a search for returns in an expanding universe of negative yields. The level of foreign exchange reserves rose to US$ 372 billion by September 30, 2016 – an all-time high.

Outlook

8. The Committee expects that the strong improvement in sowing, along with supply management measures, will improve the food inflation outlook. It notes that the sharp drop in inflation reflects a downward shift in the momentum of food inflation – which holds the key to future inflation outcomes – rather than merely the statistical effects of a favourable base effect. The Government has announced several measures to cool food inflation pressures, especially with regard to pulses. These measures should help in moderating the momentum of food inflation in the months ahead. This has opened up space for policy action, as indicated in the third bi-monthly monetary policy statement. The easy liquidity conditions engendered by the Reserve Bank's operations should also enable the smooth transmission of the policy action through various market segments. Furthermore, banks should find added impetus for better transmission by the recent downward adjustment in small savings rates. The Committee took note of potential cost push pressures that may emerge, including the 7th pay commission award on house rent allowances, and the increase in minimum wages with possible spillovers through minimum support prices. The fuller play of these factors will need vigilance to prevent a generalised cost spiral from taking root. On balance, the Committee envisages a trajectory taking headline CPI inflation towards a central tendency of 5 per cent by March 2017, with risks tilted to the upside *albeit* lower than in the second and third bi-monthly monetary policy statements of June and August respectively (Chart 1).

9. The momentum of growth is expected to quicken with a normal monsoon raising agricultural growth and rural demand, as well as by the stimulus to the urban consumption spending from the pay commission's award. The accommodative stance of monetary policy and comfortable liquidity conditions should support a revival of credit to the productive sectors. The continuing sluggishness in world trade

Chart 1: Quarterly Projection of CPI Inflation (y-o-y) for Q2:2016-17 to Q4:2016-17

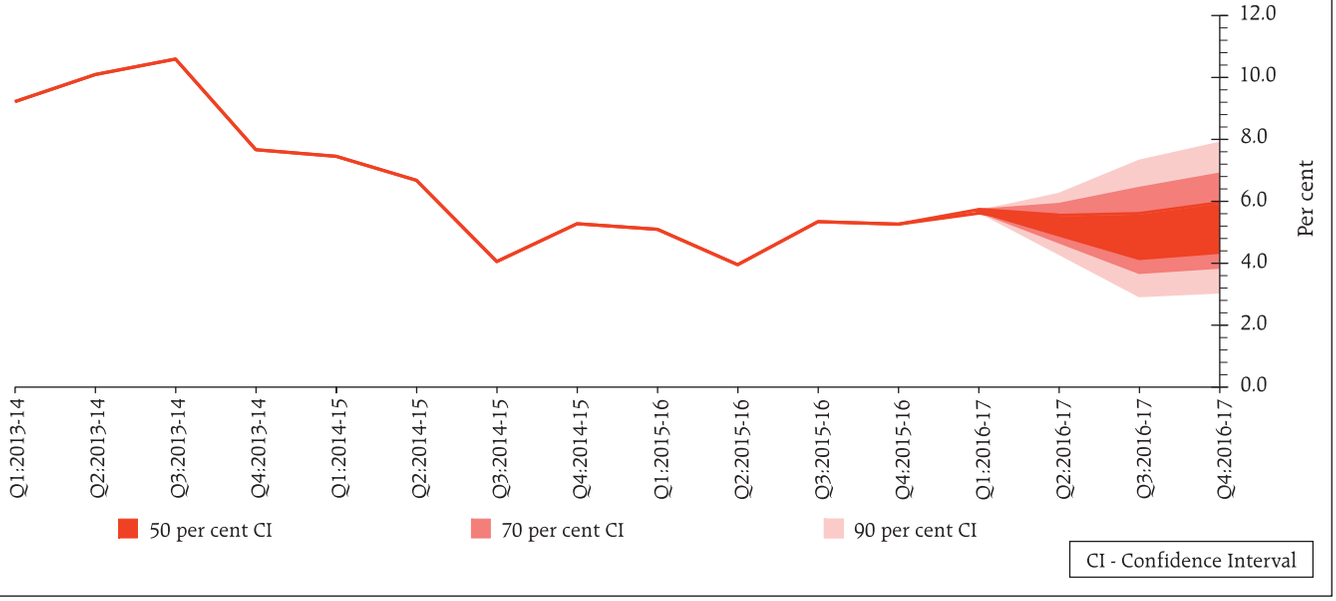
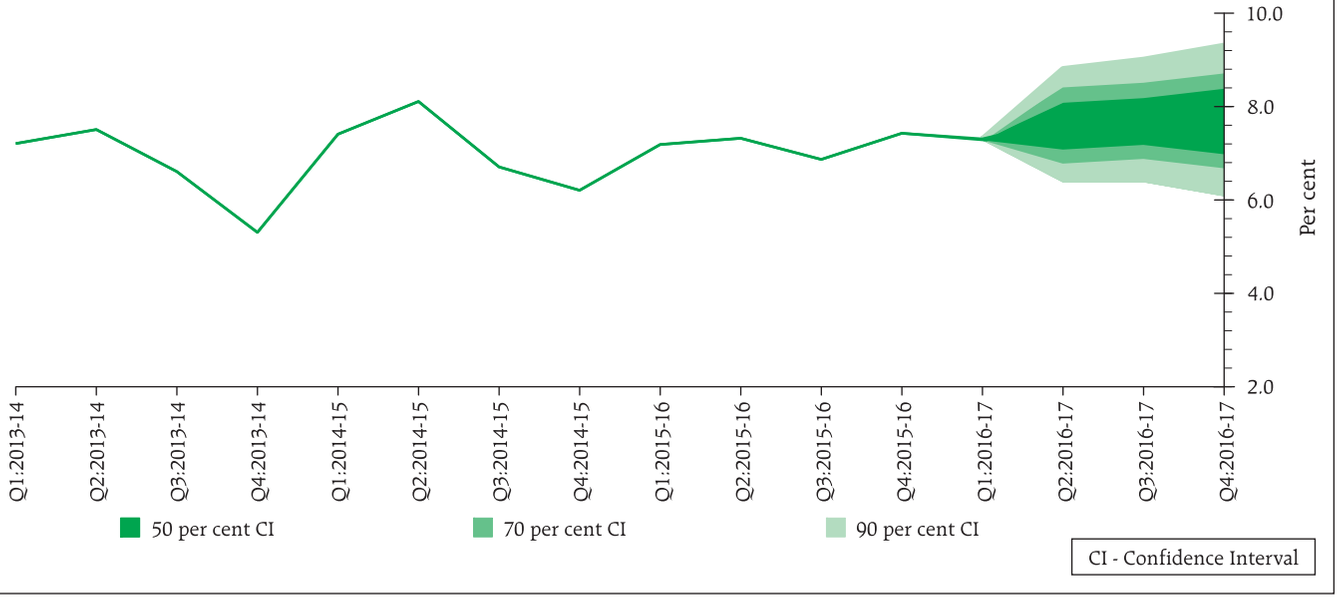


Chart 2: Quarterly Projection of Growth in GVA at Basic Prices (y-o-y) for Q2:2016-17 to Q4:2016-17



and smaller terms of trade gains than in the past point, however, to further slackening of external demand going forward. Accordingly, the projection of growth of real gross value added (GVA) for 2016-17 is retained at 7.6 per cent, with risks evenly balanced around it (Chart 2).

10. Six members voted in favour of the monetary policy decision. The minutes of the MPC's meeting will be published on October 18, 2016. The next meeting of the MPC is scheduled on December 6 and 7, 2016 and its resolution will be announced on December 7, 2016.

I. Macroeconomic Outlook

The inflation outlook for 2016-17 has improved, but beyond, close vigilance is required to achieve the prospects of reaching 4 per cent i.e., the centre of the target band. Robust consumption brightens the outlook for real gross value added (GVA) in 2016-17, but muted private investment and weak global demand may restrain the pace of growth in 2017-18.

Amendments to the Reserve Bank of India (RBI) Act, which came into force on June 27, 2016 will empower the conduct of monetary policy in India. For the first time in its history, the RBI has been explicitly provided the legislative mandate to operate the monetary policy framework of the country. The primary objective of monetary policy has also been defined explicitly for the first time – "to maintain price stability while keeping in mind the objective of growth." The amendments also provide for the constitution of a monetary policy committee (MPC) that shall determine the policy rate required to achieve the inflation target, another landmark in India's monetary history. The composition of the MPC, terms of appointment, information flows and other procedural requirements such as implementation of and publication of its decisions, and failure to maintain the inflation target as well as remedial actions have been specified and subsequently gazetted. On August 5, 2016 the Government set out the inflation target as four per cent with upper and lower tolerance levels of six per cent and two per cent, respectively.

The Government and the RBI have constituted the six member MPC. All conditions are, therefore, in place for the MPC to take its first decision on October 4 under the Reserve Bank's fourth bi-monthly monetary policy review for 2016-17. The amended RBI Act establishes the procedures for MPC meetings. It specifically lays down that the Bank shall organise at least four meetings of the MPC in a year (Section 45ZI). The cross-country experience in this regard is varied, both in terms of the number of meetings and the press conferences that usually follow the meetings in order to explain the stance of monetary policy for the benefit of the public. A survey of country practices suggests a central tendency among major central banks to hold four press conferences a year, although the number of MPC meetings may be higher (Table I.1).

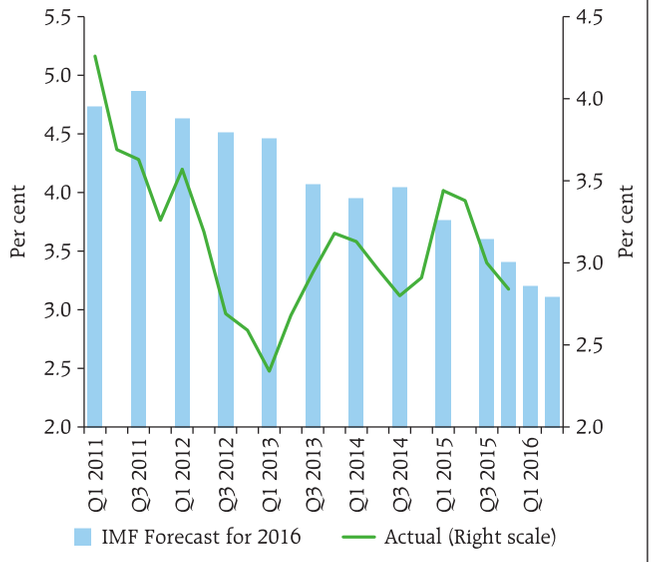
Table I.1: Monetary Policy Meetings and Press Conferences

Name of the Central Bank/ Monetary Authority	Number of Monetary Policy Meetings in a Year	Number of Press Conferences in a Year
Bank of England	8	4 (a)
US Federal Reserve	8	4
Bank of Canada	8	4
Reserve Bank of New Zealand	7	4
Bank of Israel	12 (8 from 2017)	4
Bank of Russia	8	4
Central Bank of the Republic of Turkey	12	4 (b)
Bank Indonesia	12	4
Banco Central Do Brasil	8	4 (c)
European Central Bank	8	8
Norges Bank	6	6
Bank of Japan	8	8
Bank of Korea	12	12
South African Reserve Bank	6	6
Czech National Bank	8	8

Notes:
(a) : Inflation Report press conference.
(b) : Governor's speech/presentation at the briefing on the Inflation Report.
(c) : Presentation by central bank director at the quarterly Inflation Report.
Source: Central Bank websites.

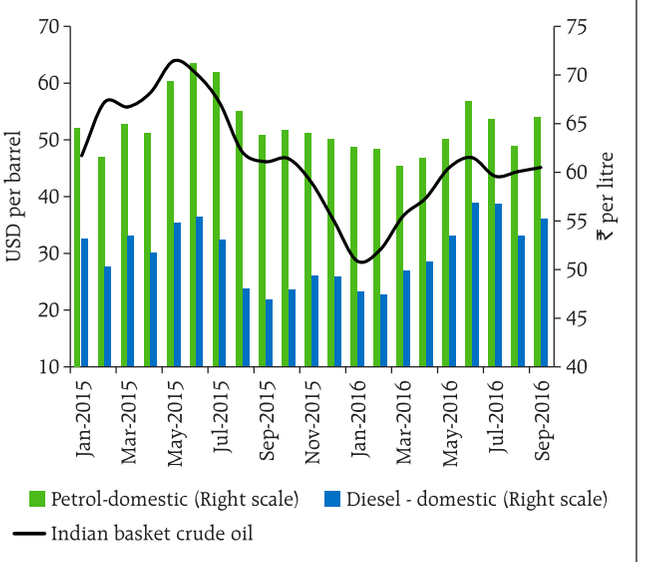
Chapters II and III compare inflation and growth outcomes with the April 2016 forecasts and drill down into factors underlying deviations. Turning to the outlook, the April 2016 monetary policy report (MPR) presaged the continuing weakening of global growth and external demand. At the September G20 Summit in Hangzhou, the International Monetary Fund (IMF) warned about an even more modest pace of global growth this year, with the balance of risks remaining skewed to the downside (Chart I.1). This will necessitate an adjustment to assumptions on initial conditions for the projections given in this MPR. Furthermore,

Chart I.1: Global GDP Growth (y-o-y)



Source: IMF.

Chart I.2: Movements in Crude Oil and Pump Prices



Source: IOCL, PPAC and Bloomberg.

international crude oil prices, which fell to a recent trough in early April, have been edging up in ensuing months and the slightly firmer note in these prices observed since July will need to be factored into the assumptions (Table 1.2).

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

Variable	April 2016 MPR	Current (October 2016) MPR
Crude Oil (Indian Basket)*	US$ 40 per barrel during FY 2016-17	US$ 46 per barrel during 2016-17:H2
Exchange rate **	₹68.5 per US$	Current level
Monsoon	Normal for 2016	Normal for 2016
Global growth ***	3.4 per cent in 2016 3.6 per cent in 2017	3.1 per cent in 2016 3.4 per cent in 2017
Fiscal deficit	To remain within BE 2016-17 (3.5 per cent)	To remain within BE 2016-17 (3.5 per cent)
Domestic macroeconomic/ structural policies during the forecast period	No major change	No major change

Notes:

* Represents a derived basket comprising sour grade (Oman and Dubai average) and sweet grade (Brent) crude oil processed in Indian refineries in the ratio of 71:29.

** 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/ band around the exchange rate.

*** Based on projections from January 2016 and July 2016 Updates of the IMF's World Economic Outlook.

International petroleum product price benchmarks used by domestic oil marketing companies (OMCs) to set domestic pump prices of petrol and diesel at fortnightly intervals tend to be highly correlated with international crude prices (0.9). On the other hand, domestic pump prices and international petroleum product prices diverge on account of refinery/ maintenance/inventory costs and domestic tax structures, with this wedge having increased significantly since November 2014 in view of excise duty increases. Of every one per cent change in international product prices (lagged by a fortnight to simulate pump price revisions in India), only 0.31 per cent is reflected in domestic pump prices of petrol, the pass-through increasing to 0.42 per cent during episodes of international price increases and falling to 0.28 per cent during international price declines (Chart I.2; see also Chapter II). In 2016 so far, however, a substantially higher degree of pass-through is being observed.

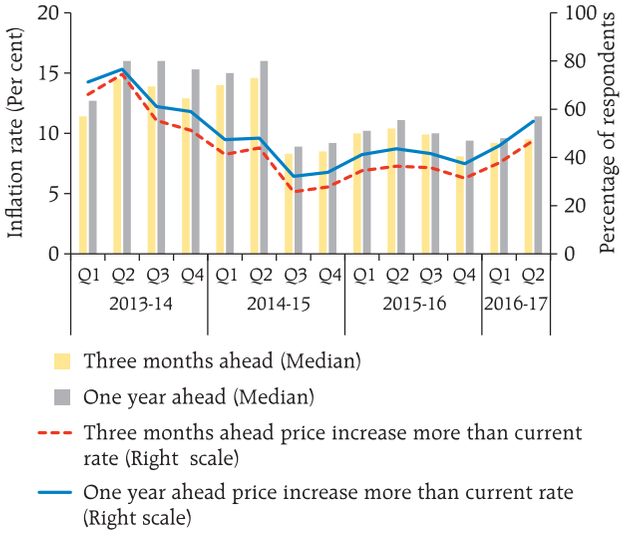
I.1 The Outlook for Inflation

Daily price collections of sensitive items under pulses, fruits, vegetables and cereals suggest that the seasonal surge in food prices may have peaked in July.

Subdued momentum in food inflation in Q3 and the usual seasonal softening of food prices in early Q4, notwithstanding a reversal of base effects in March 2017, improves the near-term outlook for inflation considerably. Commodity prices are expected to remain quiescent over the rest of the year. These anticipated developments feed into inflation expectations and, in turn, influence wage and price conditions, going forward.

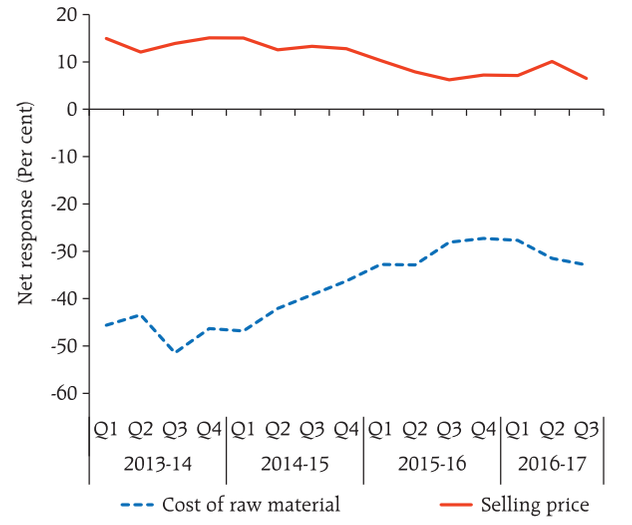
Among various economic agents, households tend to be the most adaptive in their expectations formation. Accordingly, food price increases of May-July appear to have remained entrenched in their inflation expectations. The September round of the Reserve Bank's survey of urban households indicates a pick-up in their current perceptions and expectations of inflation farther out, as in the June round of the survey, with an increase in the proportion of respondents expecting prices to rise by more than the current rate[1] (Chart I.3). In the September round, in fact, inflation is expected to be 9.5 per cent three months ahead and 11.4 per cent one year ahead.

Chart I.3: Inflation Expectations of Households



Source: Inflation Expectations Survey, RBI.

Chart I.4: Expectations of Cost of Raw Material and Selling Prices



Source: Industrial Outlook Survey, RBI.

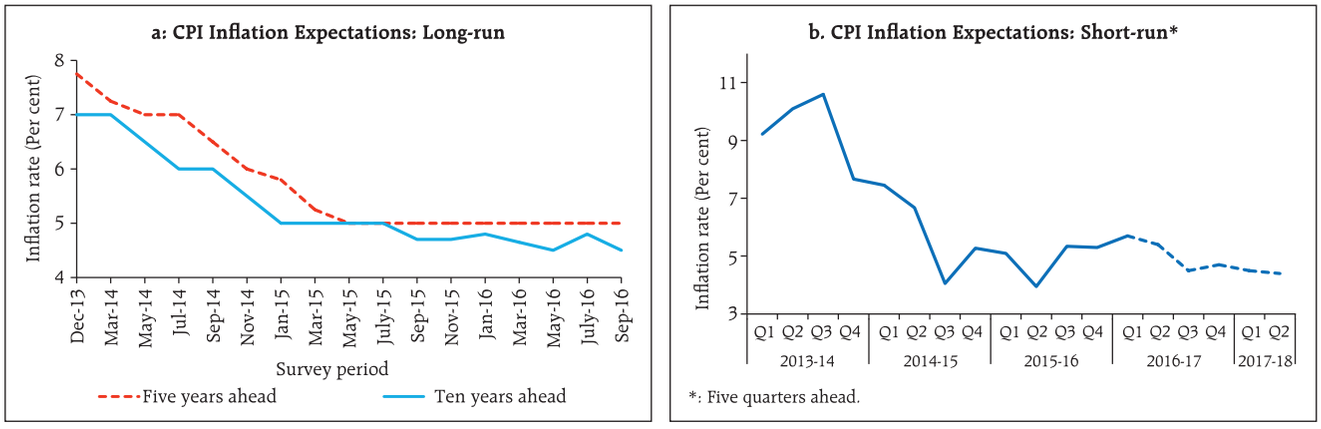
By contrast, producers' inflation expectations appear to be more forward-looking. The July-September round of the Reserve Bank's industrial outlook survey[2] reveals an increase in the proportion of respondents expecting higher input prices in Q3. The survey also indicates a decline in their expectations of higher selling prices (Chart I.4). Expectations of improvement in demand conditions should be comfortably absorbed by the presence of spare capacity. Manufacturing purchasing managers polled in Nikkei's survey for September 2016 indicate that, despite some uptick, both input and output price indices were lower than their long-term averages. Increases in staff costs in the organised sector as well as nominal rural wage growth – especially with the deceleration in July – are expected to remain moderate in Q3.

The September round of the Reserve Bank's survey of professional forecasters indicates a greater degree of anchoring of their inflation expectations, relative to other agents, around the Reserve Bank's inflation targets (Chart I.5). They expect inflation to ease to 4.7 per cent by Q4 of 2016-17 and to 4.4 per cent by Q2 of

[1] The survey was conducted in 18 cities and covered 5,300 urban households.

[2] The survey covered responses from 723 manufacturing companies.

Chart I.5: Inflation Expectations of Professional Forecasters



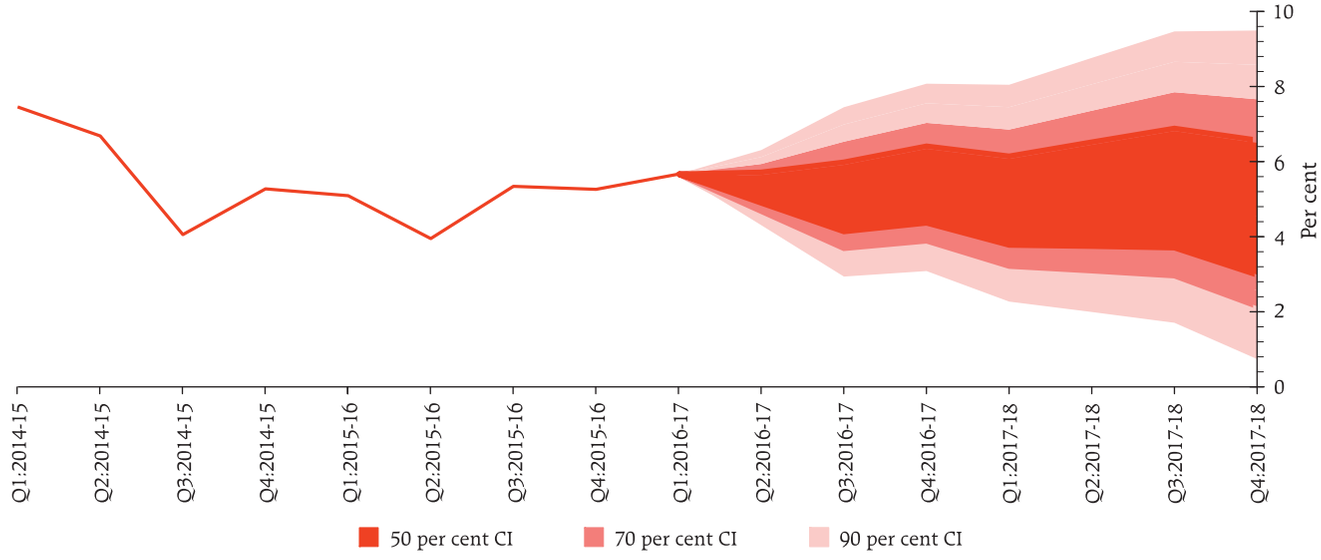
Source: Survey of Professional Forecasters, RBI.

2017-18, both lying within the Reserve Bank's inflation target band. While their medium-term inflation expectations (five years ahead) have remained unchanged at 5 per cent, their longer-term expectations (10 years ahead) have moved down to 4.5 per cent from 4.8 per cent polled in the immediately preceding round of the survey. These expectations reflect the stubborn persistence that may be encountered in moving below current levels of inflation.

Staff's baseline model forecasts, taking into account the revisions in assumptions on initial conditions and augmented by information yielded by these forward-looking surveys of various classes of economic agents as well as from lead indicators, set a trajectory that takes consumer price index (CPI) inflation down from 5.7 per cent in Q1 of 2016-17 to 5.0 per cent in Q3 before it firms up moderately to 5.3 per cent in Q4 (the 70 per cent confidence interval lies in a range of 3.9-7.0 per cent) (Chart I.6).

These projections incorporate the 7th pay commission's award relating to salaries and pensions which will work through aggregate demand and

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



Source: Staff estimates.

CI-Confidence Interval

expectations effects to add around 10 basis points (bps) to the baseline path from Q4 of 2016-17. Furthermore, the projections also factor in cost-push effects of the proposed increase in minimum wages which would add 5 bps to baseline inflation within two months of implementation[3].

Taking into account these shocks to the baseline and given the initial conditions in Table I.2, staff projects inflation to ease modestly through 2017-18 and reach 4.5 per cent by Q4 of 2017-18 (2.1 per cent to 7.7 per cent defining the 70 per cent confidence interval). By current reckoning, the pass-through of the goods and services tax (GST) will likely commence from April 2017 and last for about 12-18 months, going by the cross-country experience. While the impact of the GST on CPI inflation would largely depend on the standard rate decided by the GST Council, almost 50 per cent of the CPI is expected to be exempt. Cross-country experience indicates that the GST implementation might have one-off effects, which tend to dissipate after a year of its implementation (see Chapter II).

It is in the context of unanticipated shocks to the future evolution of inflation that the rationale of setting India's inflation target at 4 per cent with a tolerance band of +/- 2 per cent can be appreciated. Globally too, the subject of the appropriate level of the inflation target is being intensely debated. For advanced economies, the wide-spread practice of a 2 per cent inflation target has come under considerable scrutiny in the aftermath of the global financial crisis. The crisis showed that large adverse shocks can and do happen and when they do, policymakers need room for monetary policy to react to them, especially when the longer-term prospects of the economy are jeopardised. Accordingly, a view has been expressed that they should aim for a higher inflation target of say 4 per cent since the costs of inflation at 4 per cent and/or of anchoring expectations at 4 per cent are judged to be lower than the benefits of headroom made available to monetary policy to stabilise the economy in the face of recession risks. More recently, the potential benefits of a higher inflation target have been cited in the context of the secular decline in the natural/neutral rate of interest (Williams, 2016[4])[5].

I.2 The Outlook for Growth

The April 2016 MPR had outlined the key downside risks that could impinge upon the path of growth in 2016-17 – the depressed private investment climate amidst subdued capacity utilisation and corporate balance sheet deleveraging; depressed global output and trade growth dragging down net exports. It also highlighted several positive factors that could potentially lift growth, including the government's "start-up" and other initiatives, the boost to household consumption demand from the 7th Central Pay Commission (CPC) award, still benign cost conditions, measures announced in the Union Budget 2016-17 to transform the rural sector, upbeat consumer confidence and the expected recovery in agriculture and allied activities.

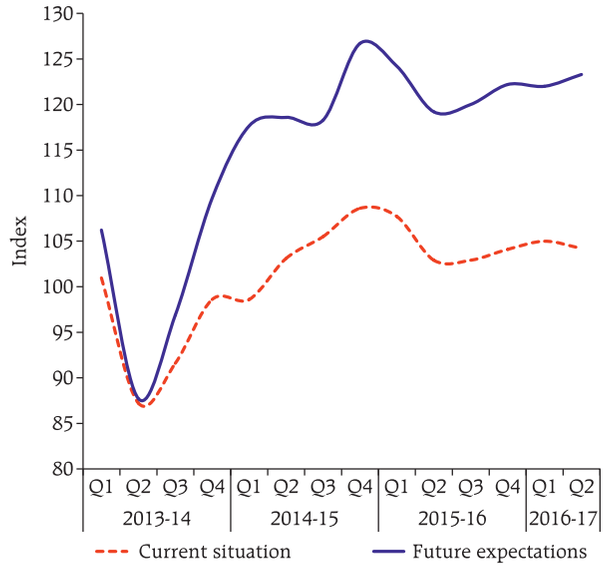
Since then, some of these assumptions have materialised. Accordingly, the spatially and temporally satisfactory south-west monsoon during the 2016 season, and the implementation of the 7th CPC award are expected to provide a boost to consumption spending, both rural and urban. The Reserve Bank's survey conducted in August-September 2016 found consumer optimism on the general economic outlook,

[3] The Union Government's proposal to revise basic minimum wages, including Variable Dearness Allowance (VDA), for different categories of employees would raise basic minimum wages in the range of ₹198-453, which works to an overall increase of 42 per cent. The increase in basic minimum wages will also have some impact on rural wages.

[4] Williams, John (2016), "Whither Inflation Targeting?", available at http://www.frbsf.org

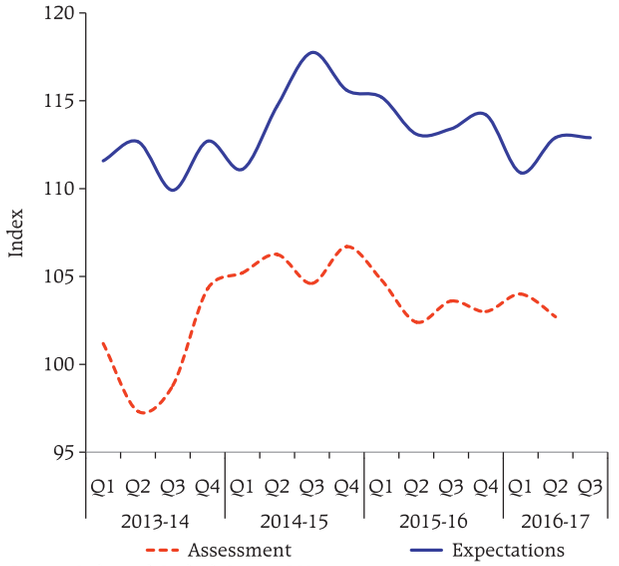
[5] In fact, the debate has led up to the question of the appositeness of the Fed adopting India's inflation target (The Economist, August 27, 2016)! A 4 per cent inflation target is not unusual outside the advanced country context: Indonesia (4+/-1 per cent); Russia (4 per cent for 2017); Brazil (4.5 +/- 2 per cent).

Chart I.7: Consumer Confidence



Source: Consumer Confidence Survey, RBI.

Chart I.8: Business Assessment and Expectations



Source: Industrial Outlook Survey, RBI.

but somewhat less confidence on future income and employment[6] (Chart I.7).

While private investment activity remains sluggish, corporate business expectations remain upbeat in the Reserve Bank's industrial outlook survey on improving prospects for production, capacity utilisation, employment and the availability of finance (Chart I.8). This positive sentiment was also reflected in business confidence surveys conducted by other institutions (Table I.3).

Over the medium-term, the implementation of the GST should boost business confidence and investment, brightening the environment for an acceleration of growth. Other initiatives such as steps to attract foreign direct investment in defence, civil aviation, pharmaceuticals and broadcasting, measures to improve infrastructure, and the enactment of the Insolvency and Bankruptcy Code and the Real Estate (Regulation and Development) Act should also contribute to unlocking entrepreneurial energies and growth impulses.

[6] Based on the Reserve Bank's Consumer Confidence Survey covering around 5,000 respondents in six metropolitan cities.

Professional forecasters surveyed during September 2016 expected real GVA growth to improve from 7.3 per cent in 2016-17:Q1 to 7.6 per cent each in the remaining three quarters of 2016-17 on account of better agricultural prospects (Chart I.9 and Table I.4).

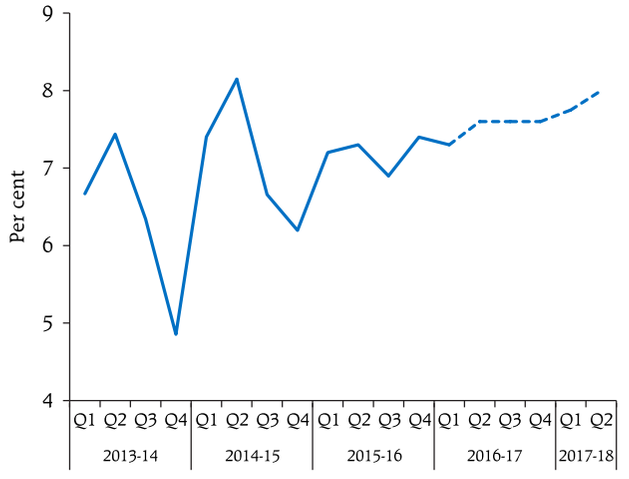
Taking into account these developments in conjunction with signals from various surveys and indicators and updated model forecasts, staff retains the projection of real GVA growth at 7.6 per cent for

Table I.3: Business Expectations Surveys

Item	NCAER Business Confidence Index	FICCI Overall Business Confidence Index	Dun and Bradstreet Composite Business Optimism Index	CII Business Confidence Index
	Q1: 2016-17	June 2016	Q3: 2016	Q1: 2016-17
Current level of the index	124.3	64.3	83.2	57.2
Index as per previous Survey	121.6	56.7	81.1	54.1
% change (q-o-q) sequential	2.2	13.4	2.6	5.7
% change (y-o-y)	2.1	-3.0*	6.7	5.1

*: Variation over August 2015 survey.

Chart I.9: Professional Forecasters' Projected Growth in GVA



Source: Survey of Professional Forecasters, RBI.

2016-17, with a range of 7.6-7.7 per cent in Q2-Q4 (Chart I.10). For 2017-18, assuming a normal monsoon, fiscal consolidation in line with the announced trajectory and no major exogenous/policy shock(s), structural model estimates and off-model adjustments (Box I.1), real GVA growth of 7.9 per cent indicated in April is retained, but with downside risks mainly due to lower global demand *vis-à-vis* the April MPR.

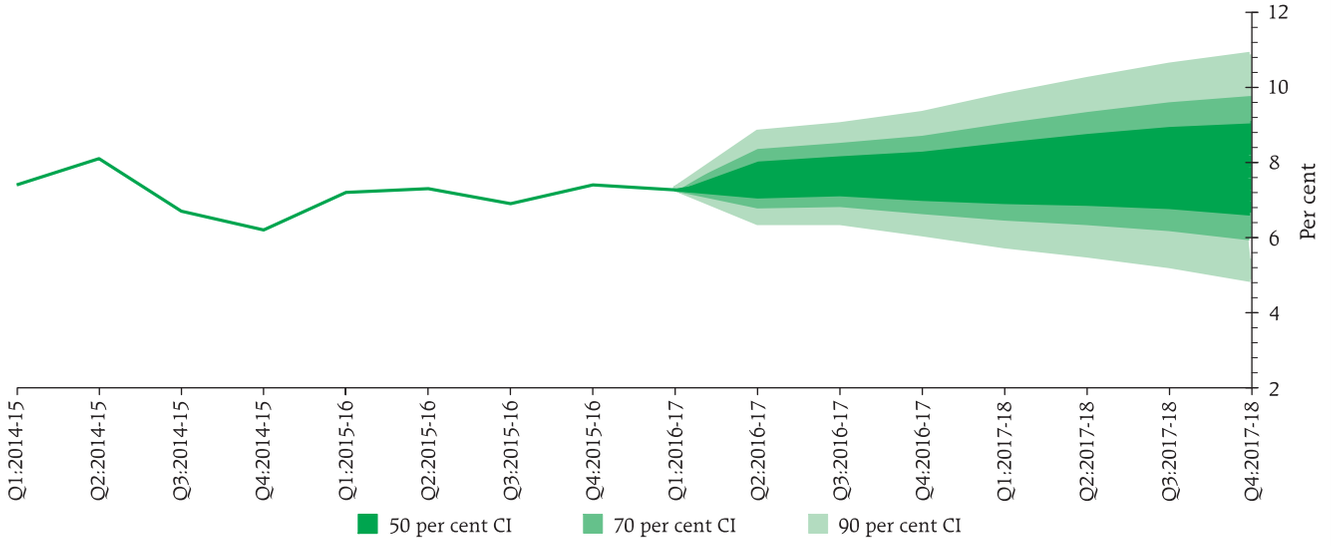
Table I.4: Reserve Bank's Baseline and Professional Forecasters' Median Projections

(Per cent)

	2016-17	2017-18
Reserve Bank's Baseline Projections		
Inflation, Q4 (y-o-y)	5.3	4.5
Real Gross Value Added (GVA) Growth	7.6	7.9
Assessment of Survey of Professional Forecasters@		
GVA Growth	7.6	7.8
Agriculture and Allied Activities	3.5	3.0
Industry	7.5	7.9
Services	8.8	9.2
Inflation, Q4 (y-o-y)	4.7	4.4 #
Gross Domestic Saving (per cent of GNDI)	31.6	32.1
Gross Fixed Capital Formation (per cent of GDP)	29.5	29.8
Money Supply (M3) Growth	11.5	12.3
Credit Growth of Scheduled Commercial Banks	11.5	13.0
Combined Gross Fiscal Deficit (per cent of GDP)	6.5	6.0
Central Government Gross Fiscal Deficit (per cent of GDP)	3.5	3.3
Repo Rate (end period)	6.25	6.25
CRR (end period)	4.00	4.00
Yield of 91-Days Treasury Bills (end period)	6.4	6.4
Yield of 10-years Central Government Securities (end period)	6.8	6.8
Overall Balance of Payments (US$ bn.)	24.7	34.0
Merchandise Exports Growth	1.2	6.1
Merchandise Imports Growth	-1.1	9.2
Merchandise Trade Balance (per cent of GDP)	-6.0	-5.6
Current Account Balance (per cent of GDP)	-1.0	-1.2
Capital Account Balance (per cent of GDP)	2.0	2.9

@: Median forecasts. #: Q2: 2017-18
GNDI: Gross National Disposable Income.
Source: Survey of Professional Forecasters (September 2016).

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



Source: Staff estimates.

CI - Confidence Interval

Box I.1: Nowcasting Economic Activity

It is widely accepted that monetary policy needs to be forward-looking and should respond to expectations, since it affects inflation and output with varying lags. Moreover, lags in data releases challenge the assessment of underlying economic conditions. Illustratively, the latest data on GDP, which became available on August 31, 2016 pertain to April-June 2016; GDP data for the quarter July-September 2016 – the quarter that is most relevant to this MPR as a starting point – will be released at the end of November 2016. Therefore, timely and accurate projections of these key goal variables are important.

As noted in the MPR of September 2015, the Reserve Bank deploys a host of modelling approaches for generating forecasts. It also scans a host of incoming data to "nowcast" the current state of the economy. The "nowcasting" process involves analysing a number of leading and concurrent indicators of economic activity through a dynamic factor model (DFM) to estimate GVA growth for the relevant quarter, as well as the immediately preceding and following quarters. With an initial input of around 47 variables, the DFM exploits the co-movement among the series to select a relatively few salient 'factors'. Given that data releases are scattered over the course of a month, the nowcast is updated as soon as new information comes in, thus providing an assessment of the economy almost in real time.

The nowcasting of India's GVA employs not only coincident and lead indicators but also survey results. Chart A presents nowcasts at the end of the relevant quarter - for example, the nowcast for the quarter January-March 2016 is based on information up to end-March. Chart B evaluates nowcasting performance over alternative horizons (from 2 months before the end of the reference quarter to one month after the reference quarter), and indicates an improvement in model performance as more information becomes available. The model performs better than a benchmark random walk (RW) model. Nonetheless, there are formidable challenges to nowcasting performance from the data – the persisting wide wedge between growth in industrial production and the growth in GVA in the manufacturing sector necessitates off-model adjustments to the results.

Chart A: Growth (y-o-y) in GVA

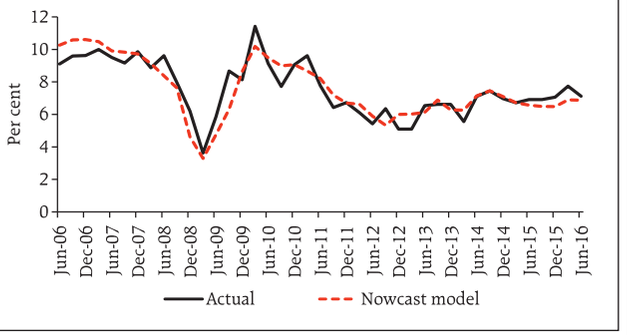
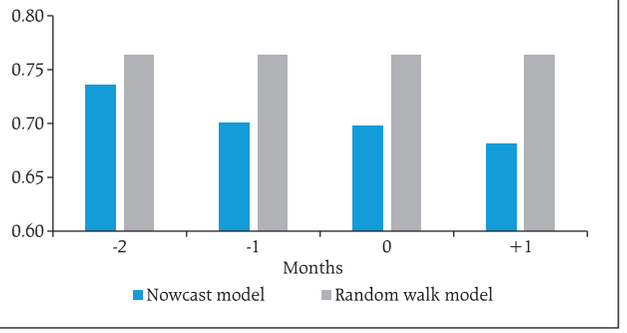


Chart B: Forecast Performance (RMSE)



Reference:

Giannone, Domenico, Lucrezia Reichlin and David Small (2008), "Nowcasting: The Real-time Informational Content of Macroeconomic Data", *Journal of Monetary Economics*, Vol. 55, pp.665-676.

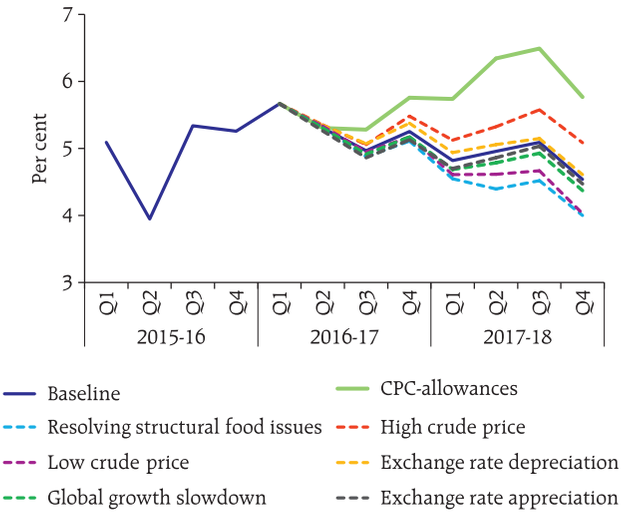
I.3 Balance of Risks

(i) Implementation of the 7th Central Pay Commission Award on Allowances

While the second round impact of the 7th CPC award in the form of salaries and pensions is incorporated in the baseline forecasts, the effect of house rent allowances (HRA) is not, since its implementation was deferred, pending a review. As and when the revised allowances are awarded, they will have a direct impact on headline CPI inflation through an increase in housing inflation (house rents have a weight of 9.5 per cent in the CPI). In addition, indirect effects could arise

through inflation expectations. Assuming that (a) the revised allowances are implemented from early 2017, (b) the increase proposed by the 7th CPC is retained[7], and (c) state governments implement a similar order of increase in allowances with a lag of one quarter, headline CPI inflation in 2017-18 could be 100-150 bps above the baseline. The impact on inflation is expected to persist for 6-8 quarters, with the peak effect occurring at around 3-4 quarters following the implementation (Chart I.11). While for policy purposes, the statistical direct effects of the increase in HRA should be looked through since they do not constitute an increase in true inflation, model simulations indicate that indirect effects arising out of aggregate demand effects and rise in inflation expectations may require a tightening of the monetary policy stance to ensure that inflationary pressures from this factor do not get generalised and entrenched into expectations.

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



Source: Staff estimates.

(ii) Moderation in Pulses Inflation

A striking characteristic of food inflation in recent years has been its persistence in certain groups such as pulses. In turn, this characteristic imparts stickiness to overall inflation formation. Pulses, which have a weight of just 2.4 per cent in the CPI, have accounted for around 12-20 per cent of overall inflation since mid-2015, manifesting structural demand supply imbalances rather than transient mismatches. Several initiatives have been undertaken over the past year to augment supply and bring down pulses inflation (see Chapter II).

If these efforts are able to bring down the prices of pulses on a sustained basis, food inflation could ebb by around 35 bps by 2016-17:Q4 and around 100 bps by 2017-18:Q4 and, through a process of relative price adjustments, overall inflation could moderate by 15 bps in 2016-17:Q4 and 50 bps by 2017-18:Q4.

(iii) Exchange Rate Movements

Uncertainty prevailing about the pace of US monetary policy normalisation tends to get amplified by every incoming data. The outcome of the US presidential election also adds to uncertainty. Consequently, spillovers purvey volatility to global and domestic financial markets, especially in the foreign exchange, equity and debt segments, with implications for domestic inflation and growth. A five per cent depreciation of the Indian rupee *vis-à-vis* the US dollar could increase inflation by 10-15 bps and real GVA growth by 5-10 bps above the baseline through effects on net exports (Charts I.11 and I.12). Model simulations that incorporate the resulting rise in headline inflation above the baseline path and a faster closing of the output gap could indicate monetary policy tightening.

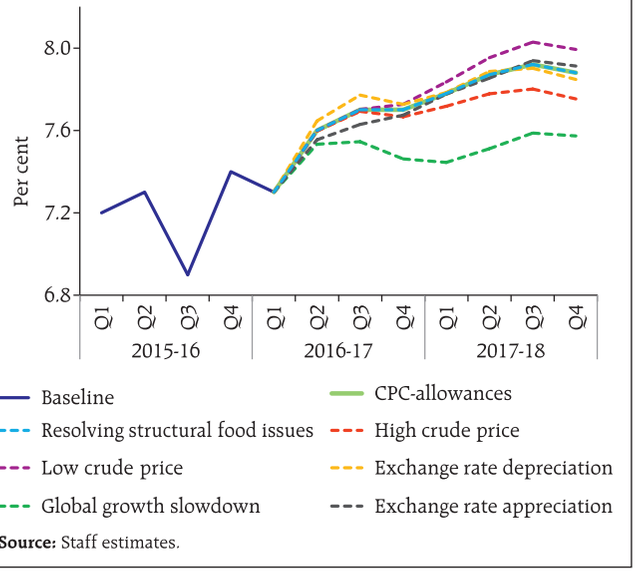
On the other hand, India could become a preferred destination of capital flows, as is the case currently, in view of relatively stronger macroeconomic fundamentals. This may cause the rupee to appreciate. An appreciation of the rupee by 5 per cent could moderate inflation by around 10-15 bps and real GVA growth by 10 bps below the baseline.

(iv) International Crude Oil Prices

International crude oil prices have remained volatile in recent months. The price of the Indian

[7] The 7th CPC recommended an HRA increase of 8-24 per cent of the basic pay.

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



Source: Staff estimates.

basket increased from around US$ 36 per barrel in March 2016 to US$ 47 in July before softening again to around US$ 44 in August-September. Consequently, the baseline assumption in Table I.2 could be subject to variations on either side. If crude oil prices increase to US$ 70 per barrel by the end of 2017-18 (higher by around 40 per cent than the baseline assumption), inflation could be higher by about 40-60 bps, while real GVA growth could weaken by around 20 bps relative to baseline paths by March 2018. Returning the goal variables to their baseline trajectories would require monetary policy tightening.

On the other hand, crude prices could also soften below the baseline assumption in an event of weaker than expected global demand, and/or excess supply of crude in global markets. If crude oil prices fall to around US$ 35 per barrel and this softening is passed on to pump prices of petroleum products in India, inflation may be about 30-50 bps below its baseline, while real GVA growth could be around 15 bps above its baseline.

(v) Global Demand Stagnation

Global growth has been muted so far and projections by various agencies for this year and the next are expected to downgrade the outlook for global growth even further. The uncertainty associated with the "Brexit", the US presidential election and the still nebulous effects of US monetary policy normalisation and Chinese re-balancing, could undermine global economic activity even more. Should global growth be one percentage point below the assumed baseline, domestic real GVA growth and inflation could be 20-40 bps and 10-20 bps below their respective baseline forecasts.

The near-term outlook for the Indian economy is characterised by a continuing slow recovery, underpinned by consumption spending and by public investment at the margin. As regards inflation, the outlook has improved for 2016-17, but beyond, the prospects of reaching 4 per cent *i.e.*, the centre of the target band requires close monitoring. Recent initiatives and reforms by the government such as 'Make in India', measures to improve the infrastructure, the scheduled introduction of the GST, improvements in food supply management and steps to enhance domestic production of fertilisers as well as a reduction in prices of non-urea fertilisers are expected to help disinflate in the medium-term. Even as the urgency of safeguarding near-term growth and stability has increased, the policy challenge is to bolster medium-term growth prospects through structural reforms that step up new investment in the economy on a sustained basis, renew skills and job creation, and broaden the swathe of the growth process to include the widest sections of society in its benefits. Globally, the danger of secular stagnation and an entrenchment of lastingly impaired potential output have become more tangible than before. Besides the main priority of lifting both actual and potential output, keeping financial stability risks in check, containing external vulnerabilities, and building resilience is essential if an adjustment to diminished growth prospects globally becomes inevitable.

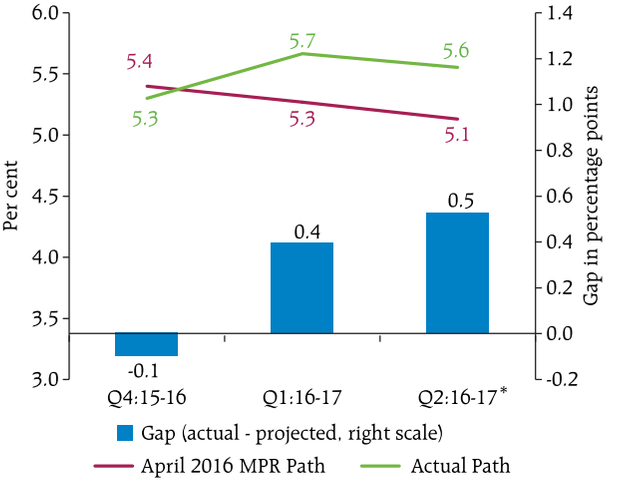
II. Prices and Costs

Consumer price inflation was pushed up by a surge in the momentum of food inflation during April-July 2016 before a sharp correction set in during August. Input costs firmed up moderately for both farm and non-farm sectors alongside corporate staff costs.

Drawing on a modest softening of households' and professional forecasters' inflation expectations, still muted corporate pricing power and model forecasts, the April 2016 MPR envisaged a trajectory on which headline CPI inflation[1] would edge down from 5.4 per cent in Q4 of 2015-16 to 5.3 per cent in Q1 of 2016-17 and to 5.1 per cent in Q2. In the event, the momentum of the seasonal firming up of food prices that usually sets in from April was much stronger than anticipated, especially in vegetables prices. Moreover, occurring as it did on top of highly elevated prices of pulses, it imparted an unusual upside to inflation that lasted right up to July. In addition, international crude prices rose from a recent trough in April to US$ 44 per barrel by September. Crude prices averaged US$ 44 per barrel during April-September as against US$ 40 per barrel in the assumptions on initial conditions in the April 2016 MPR.

Consequently, headline CPI inflation averaged higher at 5.7 per cent in Q1 of 2016-17, deviating from the forecast of 5.3 per cent (Chart II.1). With the rapid waning of these transient price pressures in August, inflation momentum collapsed. Inflation appears to be returning to the April 2016 forecast path, *albeit* from some elevation. A one percentage point deviation of food inflation from its trajectory projected in the April MPR leads to 47 basis points increase in headline inflation in terms of the direct effect alone and this perturbation could cause headline inflation to diverge from its projected path for upto four to six months,

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



* Projections for entire Q2 2016-17 *vis-a-vis* actual average inflation during Jul-Aug 2016.
Source: CSO and staff estimates.

based on impulse responses in an unrestricted vector autoregression (VAR) framework. This imparts a modest potential upside to the balance of risks around the target of 5 per cent for Q4 of 2016-17.

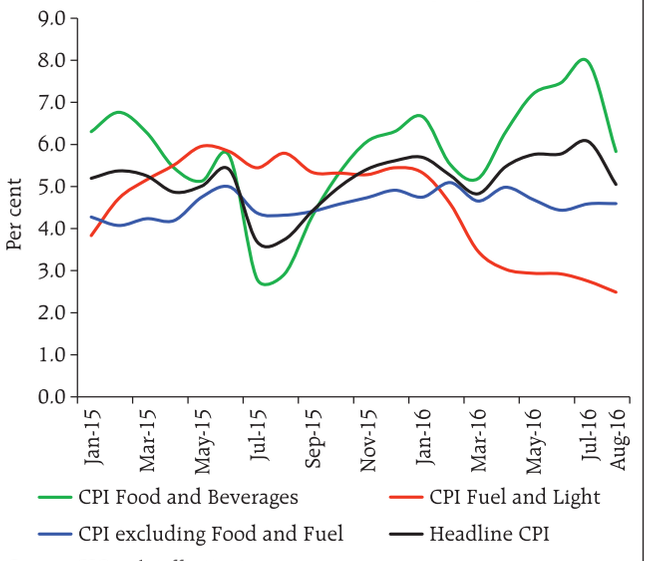
II.1 Consumer Prices

The April 2016 projections were predicated on the presence of favourable base effects arising from high inflation a year ago, with the base effects for food inflation stronger than those pulling down the headline. Even while the downside base effects were significant up to June-July, they were overwhelmed by a surge in the month-on-month (m-o-m) momentum – especially of food prices – which peaked in July. As surprisingly as it took hold, the momentum of headline CPI dissipated completely in August, with the momentum of food prices turning negative. With this unexpected reversal, sizable base effects in that month came into full play and pulled down overall inflation to 5.05 per cent, an intra-year low, in August (Charts II.2 and II.3).

The transient upsurge in inflation momentum in April-July was induced by two main drivers – pulses and vegetables – as evident in the strong positive skew of the distribution of inflation (Chart II.4). This is

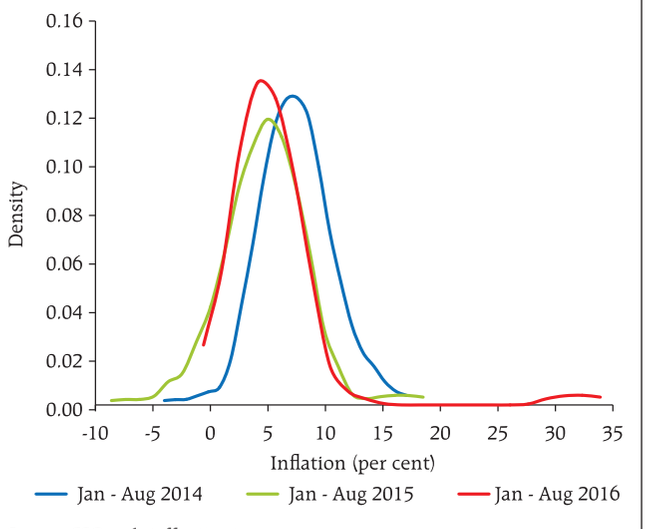
[1] Headline inflation is measured by year-on-year changes in all-India CPI Combined (Rural+Urban).

Chart II.2: CPI Inflation (y-o-y)



Source: CSO and staff estimates.

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



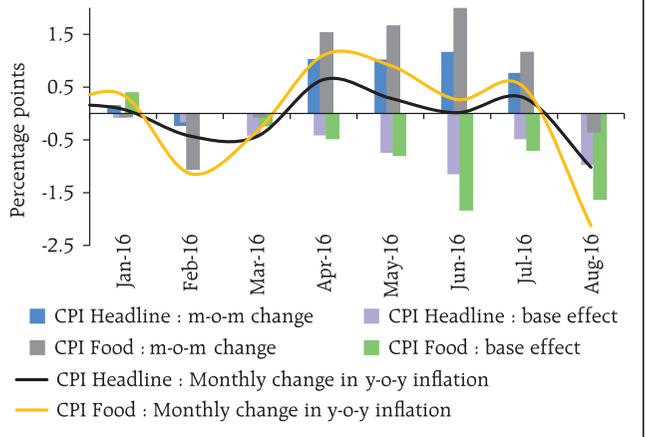
Source: CSO and staff estimates.

corroborated by a significant fall in the diffusion index of price changes in CPI during the first half of 2016-17, which suggests that inflationary impulses were confined to a few food items (Chart II.5).

II.2 Drivers of Inflation

In a forward-looking perspective, inflation developments are likely to be influenced by three domestic drivers which, in themselves, embed upside risks to the inflation target, namely (a) spatial distribution of food inflation pressures; (b) the implementation of the 7th CPC award, especially house rent allowances and subsequently, implementation by states; and (c) the 42 per cent increase in minimum wages across the board for the central sphere[2].

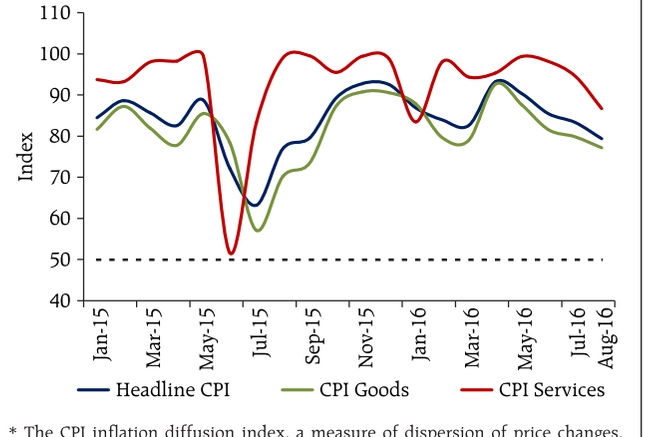
Chart II.3: CPI Headline and Food Inflation: Momentum and Base Effects



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 September 2014 MPR.

Source: CSO and staff estimates.

Chart II.5: Diffusion Indices*: CPI (m-o-m seasonally adjusted)

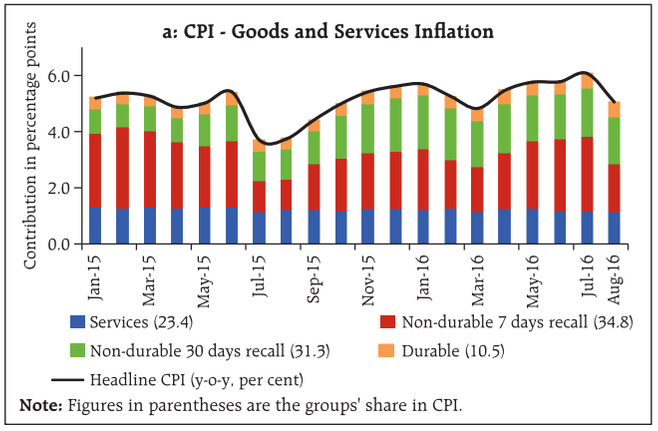


* The CPI inflation diffusion index, a measure of dispersion of price changes, categorises items in the CPI basket according to whether their prices are rising, stagnant or falling over the previous month. A reading above 50 for the diffusion index signals a broad expansion or the extent of generalisation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

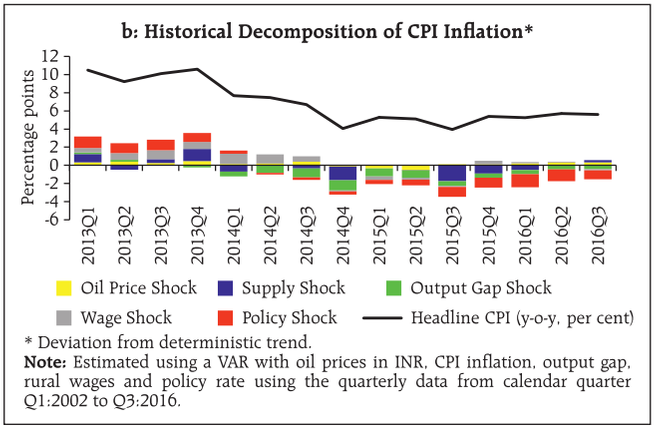
Source: CSO and staff estimates.

[2] Activities that come under the purview of Chief Labour Commissioner (central).

Chart II.6: Drivers of Inflation



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



* Deviation from deterministic trend.
Note: Estimated using a VAR with oil prices in INR, CPI inflation, output gap, rural wages and policy rate using the quarterly data from calendar quarter Q1:2002 to Q3:2016.

Source: CSO and staff estimates.

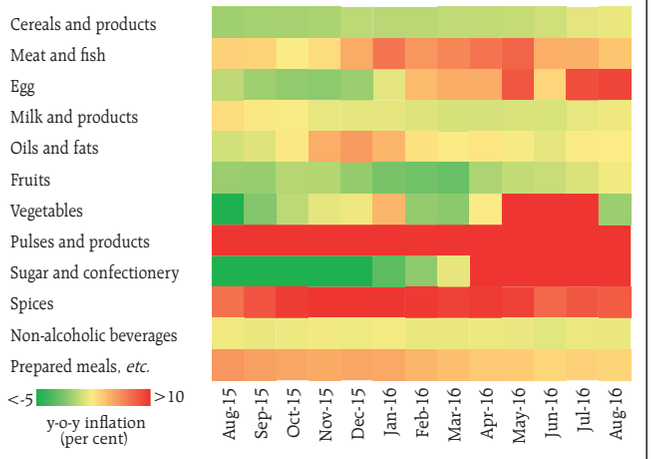
Accordingly, the narrative in the rest of this chapter, *albeit* backward-looking, will be tilted towards a sharper focus on these elements under their respective categories in the CPI. This assumes relevance in view of the presence of considerable slack in the economy, resulting in demand-push factors remaining muted as evident in the relatively stable contribution of services to overall inflation. By contrast, there has been a predominance of supply side factors – non-durable items that are largely food related – in the unravelling of recent inflation developments (Chart II.6a).

A historical decomposition of inflation shocks also shows that in the April-July episode, it was the positive contribution of domestic supply shocks along with that of firmer international crude oil prices that resulted in the uptick in inflation. Aggregate demand – embodied in the still negative output gap – along with continuing pass-through of past monetary policy tightening worked towards tempering inflation pressures (Chart II.6b).

In the food and beverages sub-group – the dominant category in the CPI with a weight of 46 per cent – inflation rose steadily through April-July. The sharp, though delayed, correction in August was triggered by the compression in the contribution of vegetables. The food group contributed 59 per cent to average headline CPI inflation during April-August, with price pressures mainly emanating from pulses, sugar and vegetables (Chart II.7).

Pulses have been the major source of food inflation consistently since Q2 of 2015-16 (Chart II.8). Reeling under two consecutive droughts, the production of pulses declined from 19.3 million tonnes in 2013-14 to 16.5 million tonnes in 2015-16 and the widening of the demand-supply imbalances elevated pulse prices unconscionably. As a consequence, pulses accounted for 22 per cent of food inflation and 13 per cent of overall inflation during April-August, despite a relatively

Chart II.7: Heat Map* of Food Inflation

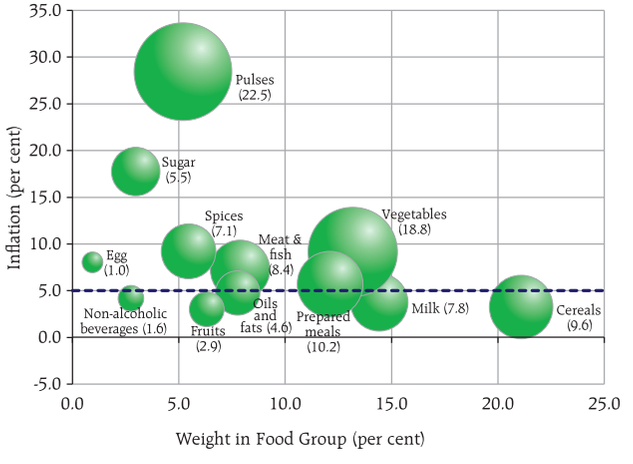


*The heat map visually elaborates the evolution of inflation. Greener areas indicate low inflation pressures and increasing order of red represents higher and higher inflation.
Source: CSO and staff estimates.

low weight of 2.4 per cent in CPI. Excluding pulses, average food inflation would have been lower by 1.2 percentage points and average headline inflation by 0.6 percentage points during this period. In order to augment the supply of pulses, the Government undertook a number of measures, including higher imports at zero import duty, raising the buffer stock of pulses as well as minimum support prices (MSP). Although initially hamstrung by delayed arrival of imports, procurement at a time of high market prices and low offtake by States; the combined effects of these measures are increasingly visible in softening price pressures in pulses.

Sugar emerged as the second major driver of food inflation during first half of 2016-17 (Chart II.8). Despite adequate availability of stocks and reasonably good production, inflation in this component rose sharply and remained in double digits from April, suggesting possible illicit stocking. Some moderation in sugar prices is expected by October 2016 as the cane-crushing season begins and fresh output is released in the market, although policy interventions may be warranted to ensure this outcome. A number of price control measures have been undertaken by the Government, including imposition of stock holding limits, extension of production subsidy, withdrawal of the mandatory export quota as well as extending financial assistance to the sugar mills through soft loan scheme.

Chart II.8: Food Inflation Dynamics – Apr-Aug 2016



Note: The size of the bubbles and figures in parentheses denote the percentage contribution of food sub- groups to overall food inflation.
Source: CSO and staff estimates.

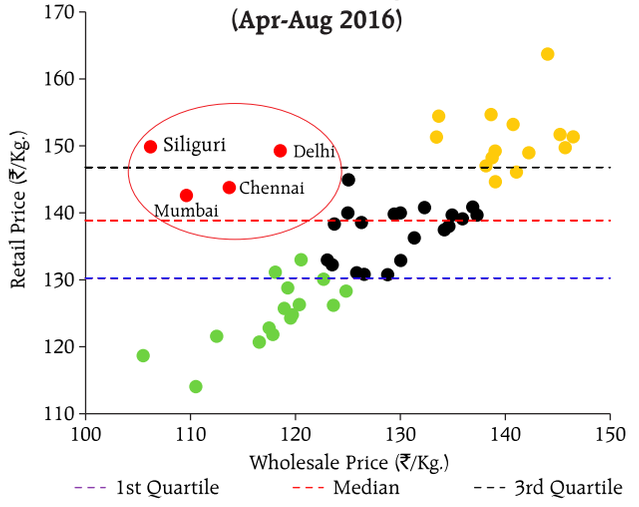
Food inflation was also pushed up by a sharp uptick in prices of vegetables, especially tomatoes. Upside impulses started to manifest in April in a typical pre-monsoon sequence; however, pressures accentuated during June-July 2016 on account of the delayed onset of the south west monsoon.

Food supply management strategies need to be informed by the spatial dynamics of inflation. Empirical scrutiny of the stronger than anticipated firming of food price pressures during April to July 2016 in an analysis of variance (ANOVA) framework that tests *inter alia* for the equality of mean inflation across states reveals significant spatial variations. Inter-state price differences turn out to be statistically significant for all sub-groups of food. Cereal prices show up pockets of high inflation in Andhra Pradesh, Jharkhand and Odisha. Vegetables inflation was highest in the eastern states of Odisha and West Bengal, and least in the hilly states of Himachal Pradesh and Jammu and Kashmir. Pulses inflation, which averaged 30 per cent across the country, was relatively low at around 13 per cent in Assam and West Bengal (Annex Table II.1). These wide variations across states appear to be complemented by rising inter-state divergence in the case of commodities such as eggs, oils and fats, spices and sugar. This calls for integrating fragmented agricultural markets in the country, if food supply management policies have to be effective.

Cluster analysis by sifting centre-level daily data from *mandis*[3] points to strong regional variation in mark-ups from wholesale to retail prices for pulses, especially in the case of *tur*. In centres like Mumbai,

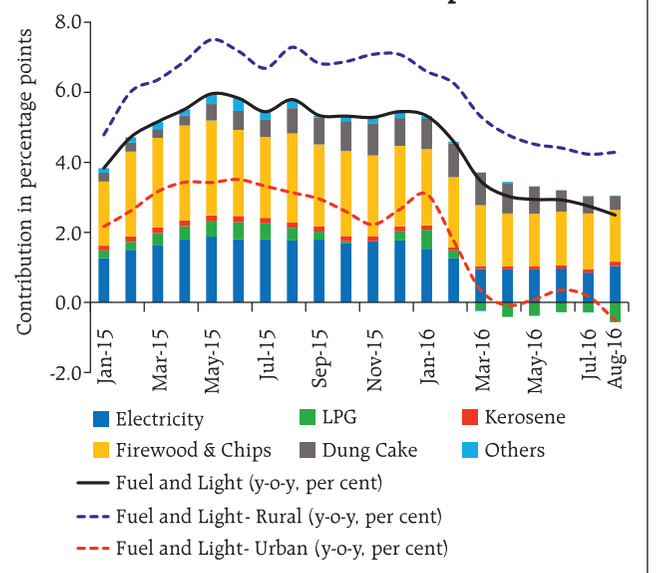
[3] Collected by the Department of Consumer Affairs, Ministry of Consumer Affairs, Food & Public Distribution.

Chart II.9: Cluster analysis – *Tur* (Apr-Aug 2016)



Note: The cluster of centres highlighted in different colours represents homogenous price centres using k-means clustering.
Source: Ministry of Consumer Affairs, Food & Public Distribution and Staff estimates

Chart II.10: Drivers of Fuel Group Inflation



Source: CSO and staff estimates.

Chennai, Delhi and Siliguri, the mark-ups for *tur* have been strikingly higher than in the rest of the country (Chart II.9). Thus, the sharp increase in retail prices in pulses, for example, is due to a combination of increases in wholesale prices and unduly large retail margins.

In the fuel and light sub-group, inflation softened steadily through April-August. Electricity demand underwent a sustained moderation in an environment of subdued offtake from the manufacturing sector as well as from stress-laden distribution companies (DISCOMs). With the resulting compression in the demand supply gap, spot electricity prices fell below the average price in the power purchase agreement (PPA) contracts. LPG prices also declined sharply, largely influenced by the softening of international gas prices. International kerosene prices have hardened during the financial year so far, driving a wedge between the administered kerosene price which has been increased by ₹0.25 per litre per month beginning July 2016; under-recoveries on account of kerosene prices rose to ₹10.5 per litre effective October 1, 2016 from ₹6.5 per litre for March 2016.

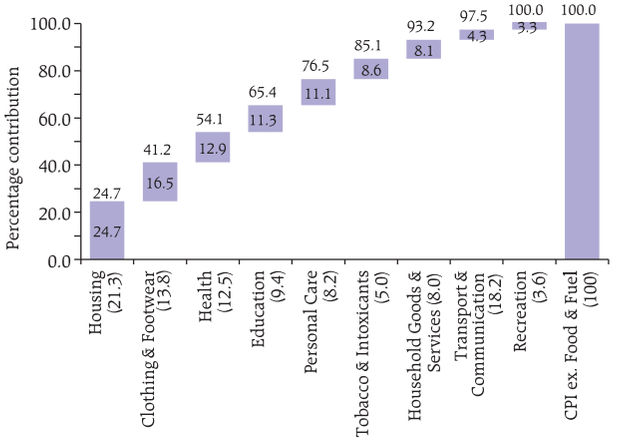
Inflation in respect of fuel items has diverged significantly between rural and urban areas with the latter, in fact, going into deflation in August. Items of fuel consumption in rural areas like firewood and dung cake reveal stickiness; on the other hand, fuel items in urban consumption are increasingly getting indexed to international prices (Chart II.10).

CPI inflation excluding food and fuel eased unevenly through April-August from 5.0 per cent in April to 4.6 per cent in August, with most of the sub-groups imbibing this halting moderation. Housing, clothing and footwear, and health were the main drivers (with a combined weight of 48 per cent in CPI excluding food and fuel), contributing 54 per cent of inflation in this category (Chart II.11).

Included in this sub-group under transportation, however, are petrol and diesel[4]; if they are excluded, inflation excluding food and fuel (and petrol and diesel) would have moved down by less – from 5.3 per cent in April to 5.0 per cent in August (Chart II.12a).

As alluded to in Chapter I, the implementation of the 7th CPC award starting August 2016 is expected to

Chart II.11: CPI excluding Food and Fuel Inflation: Contribution by Major Sub-groups (Apr-Aug 2016)



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

have a significant and drawn out impact on the CPI inflation trajectory through both direct and indirect channels.

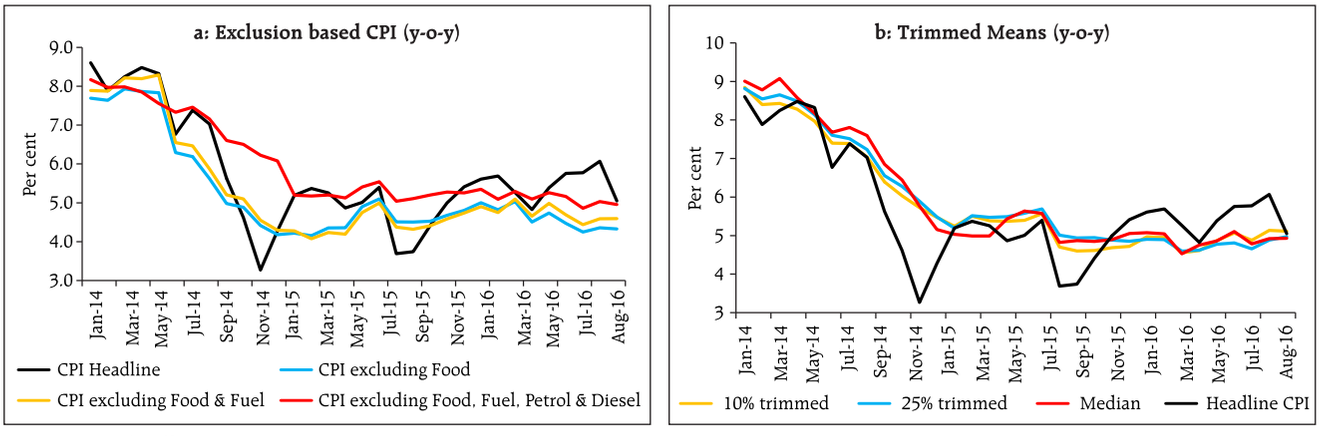
These effects will be magnified as implementation spreads at the state level, as the experience with the 5th and 6th CPC awards have shown (Box II.1 of the April 2016 MPR provides a comprehensive assessment), playing out over a period of two years. These developments will have to be carefully monitored on account of the risks of getting generalised.

Other Measures of Inflation

Since outliers like vegetables and pulses impart a strong positive skew, trimming the inflation distribution by removing specific portions of upper and lower tails of the distribution is widely used to understand underlying inflation movements[5], with the weighted median being a specific case of trimming. Trimmed means, the weighted median and exclusion-based measures of CPI inflation reveal a central tendency at around 5 per cent during April-August 2016 (Chart II.12b).

Inflation measured by other sectoral CPIs broadly tracked the movements in headline CPI. The wholesale price index (WPI), which had been in negative territory for 17 successive months, registered inflation of 1.4 per cent in Q1 of 2016-17 that rose to 3.7 per cent in August 2016. As a result, the divergence between CPI and WPI inflation, which was at 7.4 percentage points in

Chart II.12: Exclusion based CPI and Trimmed Means

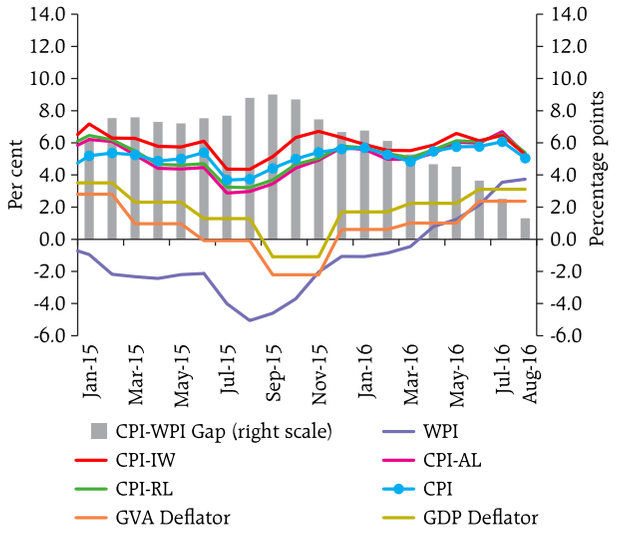


Source: CSO and staff estimates.

[4] As set out in Chapter 1, pump prices of petrol and diesel are adjusted to movements in international prices with a fortnight's lag. During April-September, these prices were revised upwards and downwards six times, yielding a cumulative increase of around ₹4 per litre in petrol and diesel prices over this period.

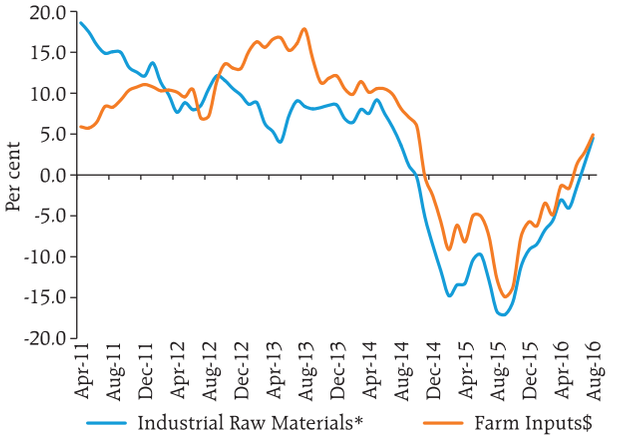
[5] Roger, Scott, (1998), "Core Inflation: Concepts, Uses and Measurement," Reserve Bank of New Zealand Discussion Paper No. G98/9 (July), Wellington, New Zealand.

Chart II.13: Measures of Inflation (y-o-y)



Source: CSO, Labour Bureau, Ministry of Commerce and Industry and staff estimates.

Chart II.14: Farm and Non-Farm Input Costs (y-o-y)



* Comprising primary non-food articles, metallic and other minerals, coal, aviation turbine fuel, high speed diesel, naphtha, bitumen, furnace oil, lubricants, electricity (industry), cotton yarn and paper & pulp from WPI.

$ Comprising high speed diesel, electricity (agricultural), fertilisers and pesticides, agricultural machinery & implements and tractors from WPI.

Source: Ministry of Commerce & Industry and staff estimates.

2015-16, narrowed down to 1.3 percentage points in August 2016. This reflected the bottoming out of the prolonged downturn in international commodity prices. Given the stickiness observed in services inflation in the CPI, and the impending HRA effects of the 7th CPC award, it is unlikely that the divergence would reduce further. GDP and GVA deflators, which had been in the negative zone for two consecutive quarters, also started rising since Q4 of 2015-16 (Chart II.13).

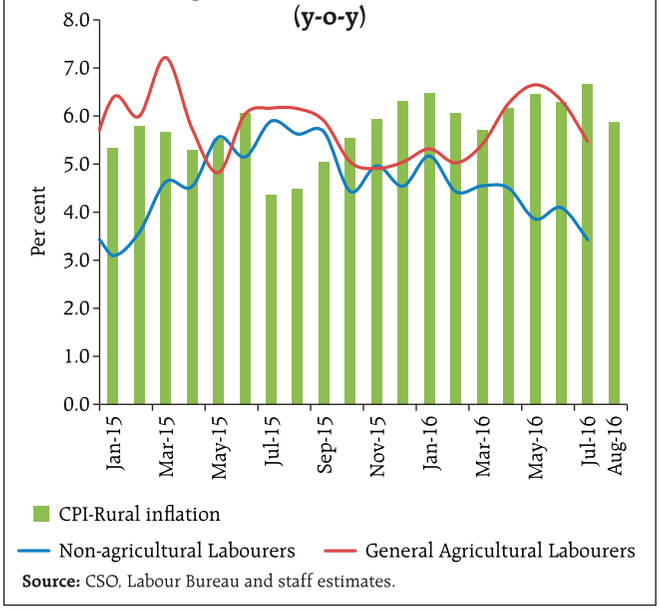
II.3 Costs

Domestic farm and non-farm input costs embedded in the WPI have risen sequentially beginning October 2015, although the rates of increase are still benign (Chart II.14). In the farm sector, price rises in respect of high speed diesel, pesticides, tractors, fodder and cattle feed have contributed to the hardening of costs. Interventions such as 'Make in India' and the Government's initiative to bring down prices of fertilisers by (a) reduction in non-urea prices for the first time in the last 15 years; and (b) increasing domestic production of fertilisers will have positive effects on the farm sector.

In the case of industrial inputs, sequential price increases in respect of mineral oil, metallic minerals and non-food articles – especially fibre and oil seeds – have started imposing cost pressures. The 75th round of the Reserve Bank's industrial outlook survey (IOS) pertaining to July-September 2016 suggests that input price pressures are building up, with the rise in raw materials costs expected to continue into Q3. On the other hand, surveys of purchasing managers in manufacturing and services – that provide contemporaneous information – suggest that input and output price pressures still remain weak by histrocial standards.

Rural wage growth exhibited divergent movements in its constituents. Rural non-agricultural wage growth has ebbed in recent months, possibly reflecting an increase in supply of non-agricultural labourers in rural areas due to weak construction activity attracting less labour migration to urban areas. In contrast, agricultural labour wage growth rose on the back of demand as sowing conditions improved. At the state level, agricultural wages increased, especially in foodgrain producing states such as Karnataka and Andhra Pradesh (Chart II.15).

Chart II.15: Wage Growth and Inflation in Rural Areas (y-o-y)



Source: CSO, Labour Bureau and staff estimates.

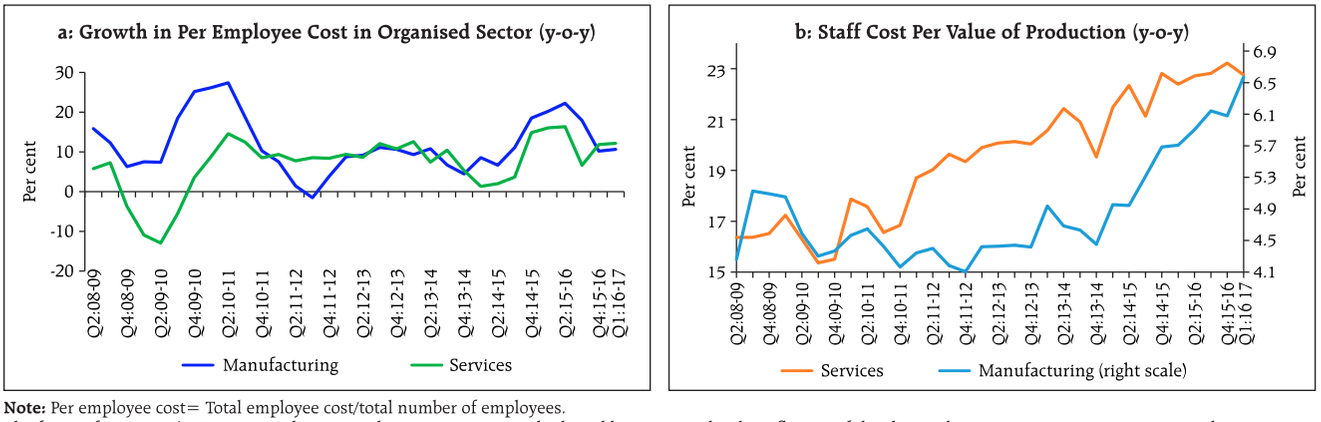
The proposed revision in basic minimum wages of the central sphere for different categories of employees (unskilled, semi-skilled, skilled, highly skilled and clerical)[6] would support rural incomes that have been depressed by drought conditions for two successive years (2014-16). At the same time, however, it would push up headline CPI inflation, as analysed in Chapter I. The expected increase in rural wages is also likely to bring on second round effects on inflation.

The Commission for Agricultural Costs and Prices (CACP) recommends MSP for agricultural commodities, including cereals and pulses, based *inter alia* on costs of production, labour and other inputs, with labour cost accounting for more than half of the total cost of production. While increases in MSPs for cereals have been moderate in the recent period – partly owing to the subdued growth in farm labour wages – the MSPs of pulses have been raised substantially on top of the sizable hike last year and are set to be raised even higher in the period ahead, with implications for the inflation outlook.

Wages in the organised sector reflected in staff costs per employee remained firm in Q1 of 2016-17 for both the manufacturing and the services sectors. On the other hand, unit labour cost measured by the ratio of staff cost to value of production, continued to rise for firms engaged in both sectors, notwithstanding some moderation in the case of manufacturing companies (Chart II.16).

Looking ahead, inflation developments are likely to be shaped by the implementation of the GST. While the creation of a unified goods and services market in

Chart II.16: Labour Cost in Manufacturing and Services



Note: Per employee cost= Total employee cost/total number of employees.
The figures for Q1:2016-17 are as per the new Indian Accounting Standards and hence, may also be reflective of the change due to revision in accounting procedures.
Source : Capitaline data base and staff estimates.

[6] The pay structure of these employees includes basic minimum wages plus a variable dearness allowance (VDA), which is a fixed amount of money given per point increase in CPI-IW as notified by the Chief Labour Commissioner (central sphere) from time to time. VDA is revised twice a year - on 1st of April and October while basic minimum wage revisions happen at an interval not exceeding five years.

the country would reduce supply chain rigidities, cut down on transportation costs and also bring down costs in general through improvements in productivity, it could also produce a short-lived pass-through to the inflation trajectory. The cross-country experience suggests that, controlling for country-specific characteristics, one-off effects tend to dissipate after a year of its implementation (Box II.1).

The impact of the implementation of GST on CPI inflation in India would largely depend on the standard rate that would be decided by the GST Council. The dual rate GST structure with a standard rate of 18 per cent and a low rate of 12 per cent (consistent with a revenue neutral rate (RNR) of about 15-15.5 per cent) is expected to have a minimal impact on inflation (GoI, 2015)[7]. If the standard rate is increased to 22 per cent[8] (consistent with an RNR of 17-18 per cent), the impact on aggregate inflation would be in the range of 0.3-0.7 per cent, concentrated in select groups like healthcare (excluding medicines). As the standard rate increases from 22 per cent to 26 per cent and 30 per cent, the impact on CPI would increase from 0.6-1.3 per cent and to 1.0-1.9 per cent (with input tax credit), respectively[9]. The general consensus is that the impact on consumer price inflation is likely to be moderate if the standard GST rate is at 18 per cent – in fact, overall price levels may go down due to more efficient allocation of factors of production (NCAER, 2009)[9].

Box II.I: Inflation Impact of GST – Cross Country Evidence

Internationally, 160 countries have some form of value added tax (World Bank, 2015). The experiences of the United Kingdom, Canada, New Zealand and Malaysia suggest that inflation did increase in the period when GST was introduced (Table 1). Eventually, the inflation impact moderated over a year, except in the case of United Kingdom where it remained elevated, due mainly to the oil crisis in 1973. Estimates of pass-through of changes in the VAT rate to consumer prices for 17 Euro zone countries for the period 1999-2013 show that, on average, the pass-through is much less than full and is highly sensitive to the type of VAT change. For changes in the standard rate, for instance, the final pass-through is about 100 per cent; for reduced rates, however, it is significantly less at around 30 per cent. The short-term effects on inflation depend upon a host of factors, including the tax rate at which GST is implemented, the tax base and efficiency of the administrative machinery.

Table 1: Inflation Before and After GST Implementation (per cent)

	t-1	t	t+1	t+2	t+3	t+4
United Kingdom *[t = Q2:1973]*	7.9	9.3	9.2	10.3	12.9	15.9
Canada *[t = Q1:1991]*	5.0	6.4	6.2	5.8	4.1	1.6
New Zealand *[t = Q4:1986]*	10.7	18.7	18.6	18.9	16.6	8.6
Australia *[t = Q3:2000]*	3.1	6.1	5.8	6.0	6.1	2.5
Malaysia *[t = Q2: 2015]*	0.7	2.2	3.0	2.6	3.4	1.9

Source: OECD.*Stat*, Reserve Bank of Australia, Reserve Bank of New Zealand and Bank Negara Malaysia.

References:

Benedek, Dora, Ruud De Mooij, Michael Keen and Philippe Wingender (2015), "Estimating VAT Pass-Through", IMF Working Paper Series, WP/15/214, September.

Government of India (2015), "Report on the Revenue Neutral Rate and Structure of Rates for the Goods and Services Tax", Ministry of Finance, December 4.

World Bank (2015), "Fiscal Policy for Equitable Growth," India Development Report.

[7] Government of India (2015), "Report on the Revenue Neutral Rate and Structure of Rates for the Goods and Services Tax (GST)", Ministry of Finance, December.

[8] In both scenarios, a high tax rate of 35 per cent was applied to about 1 per cent of CPI (that relates to luxury goods).

[9] NCAER (2009), "Moving to Goods and Services Tax in India: Impact on India's Growth and International Trade", December.

Annex Table II.1: State-wise Inflation Pressure Points
(Average y-o-y Inflation during April-July 2016)

	Cereals	Eggs	Fruits	Meat	Milk	Oils	Pulses	Spices	Sugar	Vegetables
Andhra Pradesh	8.3	11.6	7.2	8.4	6.0	6.6	34.7	14.8	12.3	9.7
Assam	-1.8	-2.9	5.0	5.9	4.5	9.7	15.5	1.4	3.5	10.3
Bihar	2.3	0.7	5.9	6.3	2.1	8.3	26.7	6.5	14.2	12.2
Chhattisgarh	2.3	7.8	3.9	5.6	4.2	2.5	39.2	3.4	16.5	9.0
Delhi	2.6	13.0	8.5	9.4	1.3	6.4	23.1	2.6	11.7	0.1
Gujarat	4.5	7.9	5.9	5.6	5.5	6.9	29.1	10.6	17.0	16.5
Haryana	2.1	8.5	2.0	4.0	2.9	3.5	22.9	4.1	12.9	7.2
Himachal Pradesh	3.9	-2.2	-0.8	2.8	3.1	6.7	19.3	5.1	4.7	-2.9
Jammu and Kashmir	2.0	0.0	4.1	4.0	6.9	8.4	15.7	5.3	2.8	-4.5
Jharkhand	6.6	5.4	5.1	5.4	2.1	8.2	24.4	6.0	10.4	16.2
Karnataka	6.5	8.9	2.3	4.8	8.7	5.7	32.3	9.5	15.1	16.3
Kerala	1.4	12.6	1.7	10.1	1.5	-27.4	26.8	14.8	28.9	13.1
Madhya Pradesh	2.5	0.7	4.7	6.8	2.2	1.9	35.2	7.4	15.9	3.9
Maharashtra	2.3	6.9	4.1	6.2	2.5	3.7	31.2	11.0	24.1	14.4
Odisha	6.6	4.1	6.3	8.8	7.0	9.2	27.0	10.4	13.2	20.0
Punjab	3.1	9.1	6.8	4.8	3.5	4.6	20.8	8.3	16.4	2.3
Rajasthan	4.6	8.9	4.7	7.1	3.2	3.9	22.0	11.3	19.4	6.9
Tamil Nadu	3.2	14.9	2.4	7.5	2.8	3.5	33.5	11.6	11.3	11.1
Telangana	5.6	13.5	13.1	8.7	5.1	7.8	37.6	15.4	17.1	12.1
Uttar Pradesh	0.8	3.7	3.7	7.3	3.1	6.9	37.4	6.5	13.6	7.0
Uttarakhand	2.1	4.6	5.1	0.7	7.0	5.4	33.4	7.2	9.6	4.7
West Bengal	1.7	7.6	9.8	9.7	3.2	9.6	13.9	5.7	12.6	20.1

Lowest Inflation — Highest Inflation
Within each food sub-group

Source: CSO & staff estimates.

III. Demand and Output

Aggregate demand slowed down in the first quarter of 2016-17, restrained by weak investment, but consumption spending is gradually improving. Aggregate supply conditions are poised to receive a strong boost from a reinvigoration of agriculture with some support from services, but industrial activity remains subdued.

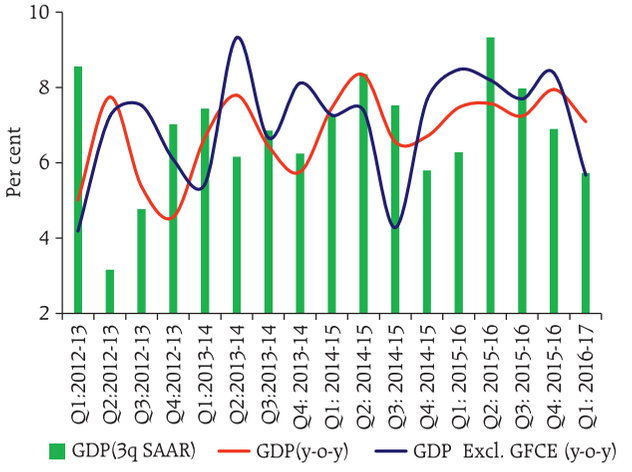
Economic activity lost some pace in the first half of 2016-17, relative to the preceding six months and a year ago. A deeper moderation has been cushioned by robust public spending. A retrenchment of investment has been underlying the slowdown; although public investment has been stepped up, crowding-in effects on private investment are not yet discernible. Private consumption spending has moderated somewhat, but a revival of agricultural activity and incomes and a sizable upward revision in wages and salaries in the public sector are set to boost it and regenerate growth impulses across the economy in the rest of 2016-17 and in the next year. While the weakness in domestic demand has sent imports into a prolonged contraction, the weakening global economy and financial market turbulence constitute the biggest risks to net exports and to overall economic activity, going forward.

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 a five-quarter low in Q1 of 2016-17, unable to sustain the strength of the upturn in the immediately preceding quarter (Table III.1).

The weakening of momentum was evident even on a seasonally adjusted basis (Chart III.1). In fact, aggregate demand was propped up by the front-loading of plan revenue expenditure; excluding the support from government final consumption expenditure, real GDP growth would have slumped to 5.7 per cent in Q1 of 2016-17, the lowest since Q4 of 2014-15 (Chart III.1). Demand conditions were undermined by a deepening

Chart III.1: GDP-Growth Rate and Momentum



y-o-y: Year on year.
3qSAAR: 3 quarter moving average of quarter on quarter seasonally adjusted annualised rate.
GFCE: Government final consumption expenditure.
Source: CSO and Staff Estimates.

Table III.1: Real GDP Growth (2011-12 Prices)

(Per cent)

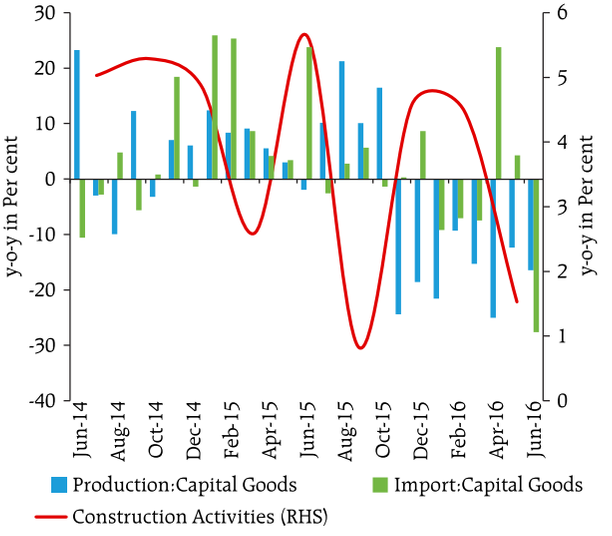
Item	2014-15	2015-16	Weighted contribution 2015-16 *	2014-15				2015-16				2016-17
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
I. Private Final Consumption Expenditure	6.2	7.4	4.1	8.2	9.2	1.5	6.6	6.9	6.3	8.2	8.3	6.7
II. Government Final Consumption Expenditure	12.8	2.2	0.2	9.0	15.4	33.2	-3.3	-0.2	3.3	3.0	2.9	18.8
III. Gross Fixed Capital Formation	4.9	3.9	1.3	8.3	2.2	3.7	5.4	7.1	9.7	1.2	-1.9	-3.1
IV. Net Exports	11.7	-36.6	-0.5	62.8	-72.5	-111.0	-6.6	-47.6	-41.3	-29.0	-11.0	93.5
(i) Exports	1.7	-5.2	-1.2	11.6	1.1	2.0	-6.3	-5.7	-4.3	-8.9	-1.9	3.2
(ii) Imports	0.8	-2.8	-0.7	-0.6	4.6	5.7	-6.1	-2.4	-0.6	-6.4	-1.6	-5.8
GDP at Market Prices	**7.2**	**7.6**	**7.6**	**7.5**	**8.3**	**6.6**	**6.7**	**7.5**	**7.6**	**7.2**	**7.9**	**7.1**

*: In percentage points. Component-wise contributions do not add up to GDP growth because change in stocks, valuables and discrepancies are not included here.
Source: Central Statistics Office (CSO).

of the contraction in gross fixed capital formation that set in from Q4 of 2015-16, besides a slowdown in private final consumption expenditure after two consecutive quarters of relatively robust growth. Weak domestic demand was also reflected in a sizable shrinking of imports, which enabled a positive contribution of net exports to aggregate demand after negative contributions for seven consecutive quarters.

Investment demand has been muted through the first half of 2016-17, juxtaposing the absolute decline in gross fixed capital formation in Q1 of 2016-17 with more recent higher frequency indicators. Capex spending remains moribund even as industry is operating marginally below the long-term average of capacity utilisation on a seasonally adjusted basis (Chart III.2). Still significant financial stress in large brown field projects, especially in sectors such as iron and steel, construction, textiles and power continues to inhibit bank credit flows. Depressed construction activity and lacklustre demand for plant and machinery more generally is being mirrored in the coincident decline in production and imports of capital goods (Chart III.3).

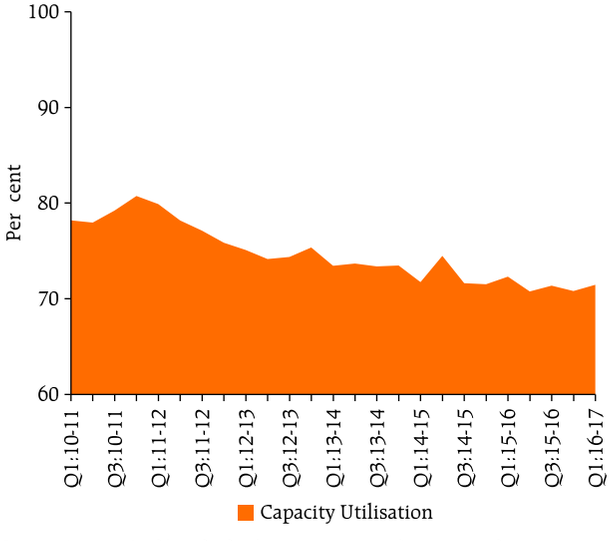
Chart III.3: Indicators of Fixed Investment



Source: CSO, Directorate General of Commercial Intelligence and Statistics (DGCI&S) and staff calculations.

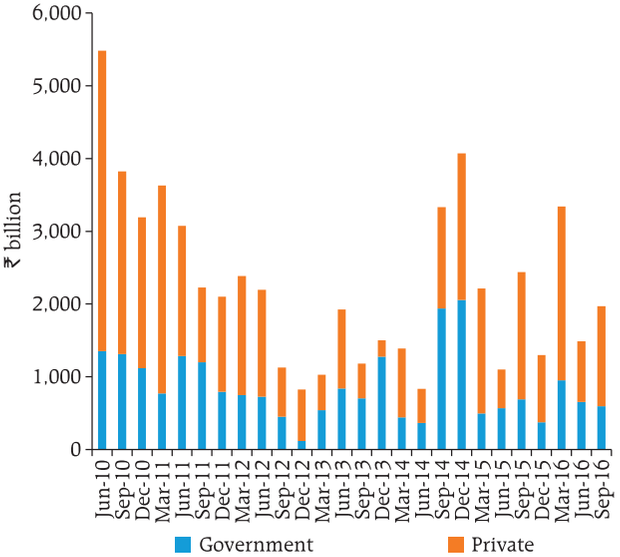
Reflecting the lacklustre investment climate, new investment intentions have slowed down by 19 per cent on y-o-y basis in Q2 of 2016-17 (Chart III.4). It needs to be noted, however, that the Project Monitoring Group is striving to galvanise new investments; it cleared 65 large projects in 2016-17 (up to September, 2016) worth ₹3.05 trillion (as compared with 89 projects worth ₹2.7 trillion in April- September, 2015-16). When these

Chart III.2: Capacity Utilisation



Source: Reserve Bank's order books, inventories and capacity utilisation survey: Seasonally Adjusted.

Chart III.4: New Investments Announced



Source: Centre for Monitoring Indian Economy (CMIE).

clearances fructify, these will increase the value of investment, with the majority of these projects in the roads, power, coal and petroleum sectors. While the stock of stalled projects declined by 44 per cent in Q1 and 28 per cent in Q2 of 2016-17 on a sequential basis – propelled by faster clearances, particularly in respect of non-environmental permissions – on-streaming of investment spending in these projects is yet to materialise, largely due to unfavourable market conditions. Meanwhile, sales of non-government non-financial companies have contracted, and both foreign direct investment and external commercial borrowings have slowed down in relation to their levels a year ago.

Even though private final consumption expenditure (PFCE) growth decelerated in Q1 in relation to immediately preceding quarters in tandem with the production of consumer goods, it continued to anchor the evolution of aggregate demand in the economy, contributing 52.3 per cent of real GDP growth. For the first half of the year cumulatively, a modest improvement in consumption spending may be taking root. Overall, consumer goods production slowed in July, but remained in positive territory for the third consecutive month on an improvement in the production of durables – reflective of the underlying resilience of urban consumption. Sales of passenger vehicles – another indicator of urban consumption demand – posted double-digit growth in July-August. Urban spending is poised to pick up with the implementation of the 7th CPC award on wages, salaries and pensions from August as well as from the ongoing preference of banks for relatively less risky retail and personal lending. Manufacturing purchasing managers index continued to point to modest expansion in employment since July 2016.

Rural incomes and consumption spending should also receive a strong boost from the satisfactory spread and intensity of the south west monsoon, with the robust improvement in foodgrains production and acceleration in sales of tractors (excluding exports) and two-wheelers in August providing lead indications. While rural wage growth in April-July was slightly slower than a year ago, the implementation of the increase in minimum wages in the central sphere (see Chapter II) should improve rural incomes, going forward.

Turning to government final consumption expenditure (GFCE) which provided strong support to aggregate demand in Q1, information gleaned from central government finances during Q2 so far (July-August, 2016) indicates this was sustained by a growth of 19.3 per cent in Plan revenue expenditure, largely in the form of spending on social and physical infrastructure[1]. Consequently, plan revenue expenditure in April-August rose as a proportion to budget estimates (BE) and on a year-on-year basis. Non-plan revenue expenditure was somewhat lower than a year ago in relation to BE for the first five months of 2016-17, with the expenditure on major subsidies and interest payments going through contractions in July-August 2016. Overall capital expenditure, however, increased in July-August, both on the plan and non-plan account, even as capital expenditure fell back marginally in relation to BE in April-August (Table III.2).

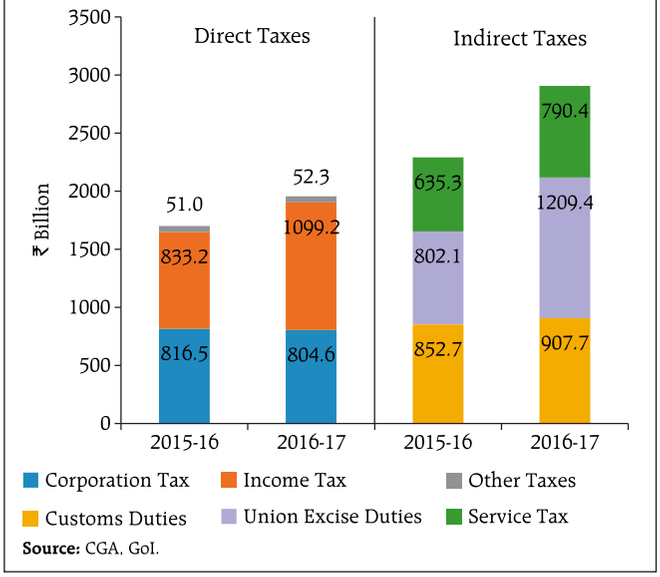
Table III.2: Key Fiscal Indicators – Central Government Finances (April-August)

Indicator	Actual as per cent of BE	
	2015-16	2016-17
1. Revenue Receipts	30.3	28.0
a. Tax Revenue (Net)	22.8	26.6
b. Non-Tax Revenue	61.5	32.5
2. Total Non-Debt Receipts	29.7	27.3
3. Non-Plan expenditure	41.6	39.6
a. On Revenue Account	42.0	39.9
b. On Capital Account	37.0	35.3
4. Plan expenditure	40.1	43.0
a. On Revenue Account	40.6	44.8
b. On Capital Account	38.9	38.1
5. Total Expenditure	41.2	40.5
6. Fiscal Deficit	66.5	76.4
7. Revenue Deficit	74.7	91.8
8. Primary Deficit	206.9	565.9

Source: Controller General of Accounts (CGA), GoI.

[1] Plan expenditure on 'information and communication technology', 'chemicals and fertilisers', 'heavy industries', 'textiles', 'urban development', 'consumer affairs, food and public distribution', 'housing and urban poverty alleviation', 'social justice and empowerment' and 'human resource development' are largely revenue expenditure.

Chart III.5: Central Government Tax Collections (April-August)



Source: CGA, GoI.

Gross tax revenue recorded significant growth during April-August, led by buoyant income tax and excise duty collections (Chart III.5). The sharp growth in income tax collections in April-August reflected the change in advance tax payment requirements for individuals[2], lower refunds by the Government than in the previous year and increase in surcharge[3] on high net worth individuals.

Within indirect taxes, while union excise duty collections were buoyed by higher consumption of petroleum products, the growth in the service tax receipts was significantly higher than a year ago due to the imposition of *Krishi Kalyan* cess at 0.5 per cent with effect from June 1, 2016. Non-tax revenue was, however, lower than last year as disinvestment failed to pick up despite conducive stock market conditions. In view of these developments, there was deterioration in the gross fiscal deficit (GFD) as a proportion to BE during April-August, mainly on account of a sharp increase in the revenue deficit.

The Medium Term Expenditure Framework (MTEF) statement indicates that in order to absorb the complete impact of pay revisions in 2016-17, the provision for salary payments made in the Union Budget will require some enhancement in the revised estimates. The first batch of supplementary demands for grants for 2016-17 announced in August entails a net cash outgo of ₹209 billion over and above the BE. Therefore, fiscal spending may have to be restrained going forward in order to adhere to the target.

The secondary impact of additional pay-out due to the Pay Commission recommendations on aggregate demand is likely to be muted as the revenue expenditure multiplier is found to be less than one in the Indian context[4], partly reflecting the dampening impact of leakages through direct and indirect taxes. Moreover, as disbursements under the Pay Commission are undertaken without compromising the ongoing fiscal consolidation process, the growth enhancing impact will be moderate unlike the 5th and 6th Pay Commission awards.

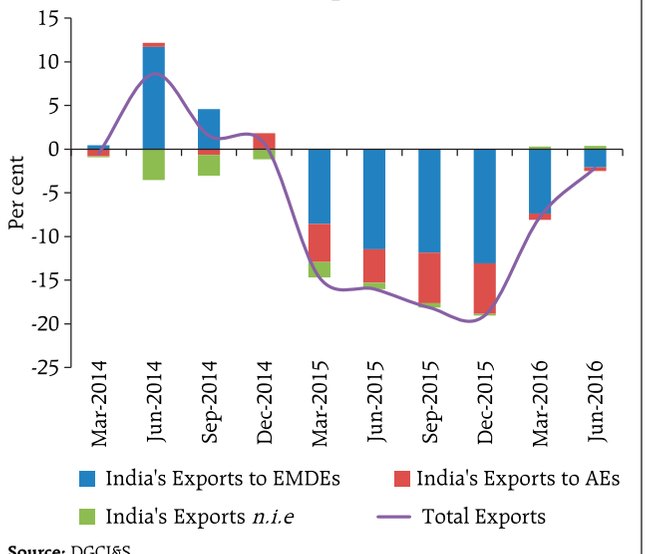
Taking into account the surge in Q1, net exports contributed to the increase in aggregate demand in the first quarter of 2016-17 through a large saving on account of cutbacks in major merchandise imports such as petroleum, oil and lubricants (POL), gold, iron and steel, and fertilisers. This was also reflected in the current account deficit narrowing to near-balance (0.1 per cent of GDP in Q1 from 1.2 per cent a year ago). Merchandise exports declined by 3 per cent in April-August in an environment of subdued global trade and output, and net terms of trade gains were eroded by the firming up of commodity prices. Emerging market economies (EMEs), which account for more than half

[2] As per the new rule, individuals are now required to make four instalments of advance tax payments from the current year as compared to three instalments earlier.

[3] The surcharge on high net worth individuals having income above ₹1 crore has been increased from 12 per cent to 15 per cent from the current financial year in line with the announcement made in the Union Budget 2016-17.

[4] Jain, Rajeev and Kumar, Prabhat (2013), "Size of Government Expenditure Multipliers in India: A Structural VAR analysis", *RBI Working Paper Series 7*. Bose, Sukanya and N.R.Bhanumurthy (2015), "Fiscal Multipliers for India", *Margin:The Journal of Applied Economic Research, Vol.* 9, pp. 379–401.

Chart III.6: Relative Contribution to India's Merchandise Exports Growth



Source: DGCI&S

of India's export receipts, have suffered a persistent decline in their import volume (Chart III.6).

Gold import volume declined in April-August to almost a third of its level a year ago due to destocking of gold purchased earlier, subdued rural demand due to two consecutive poor monsoons and possibility of some supply through informal channels. The fall in non-oil non-gold imports in the year so far, particularly in the capital goods segment, reflects the weak domestic investment climate. Consequently, the merchandise trade deficit shrank sharply to US$ 34.7 billion in the first five months of 2016-17 from US$ 58.4 billion a year ago. Net services exports declined by over 10 per cent (April-July) as all major segments, except software services, were in contractionary mode. The prospects of private transfers, which had declined by about US$ 2 billion (a y-o-y decline of 11 per cent) in Q1, are uncertain as the prolonged softness in crude prices takes its toll on remittances from the Middle East.

Disconcerting evidence has been forming for some time now that the engine of trade liberalisation that powered global output and trade since the 1980s in a rapidly integrating world marketplace is stalling. The ratio of world trade to GDP has been languishing since 2012, the longest phase of stagnation in the post-World War II period. The volume of world trade has plateaued since the beginning of 2015, even as underlying financial flows are coming off their pre-global crisis peaks. More recent evidence is pointing to a sharp drop in the demand for EME exports from AEs, particularly from the US, notwithstanding the recovery in US demand and the strength of the US dollar. While the biggest contraction of US demand is in respect of imports from China, imports from India have also fallen in value terms during 2016 so far. According to the International Monetary Fund (IMF), US imports from EMEs excluding China have been in contraction since 2015. This is being regarded as confirmation of the weakening of US manufacturing spreading to EMEs through the channel of trade[5]. Imports from EMEs by the European Union have also been contracting since 2015. Trade as a driver of world growth is on the wane, and instead a steady rise in protectionism is turning the tide of globalisation, possibly reversing it. India's trade sector has also faced considerable protectionism in major partner economies. According to the Global Trade Alert database, Indian exports have been mainly impacted directly or indirectly through various types of measures, both tariff and non-tariff, in partner countries.

III.2 Aggregate Supply

Output measured by gross value added (GVA) at basic prices moderated marginally in Q1 of 2016-17 on a sequential y-o-y basis, although it was still a little above the average quarterly GVA growth recorded in 2015-16 (Table III.3). Seasonally adjusted q-o-q annualised growth indicates, however, a strengthening of momentum in Q1 relative to the immediately preceding quarter (Chart III.7a)[6].

[5] Wheatley J. (2016), "Slump in US imports threatens to derail emerging market growth", *The Financial Times*, September 18.

[6] Stronger momentum in Q1 is corroborated by other measures such as the three quarter moving SAAR of GVA.

Table III.3: Sector-wise Growth in GVA

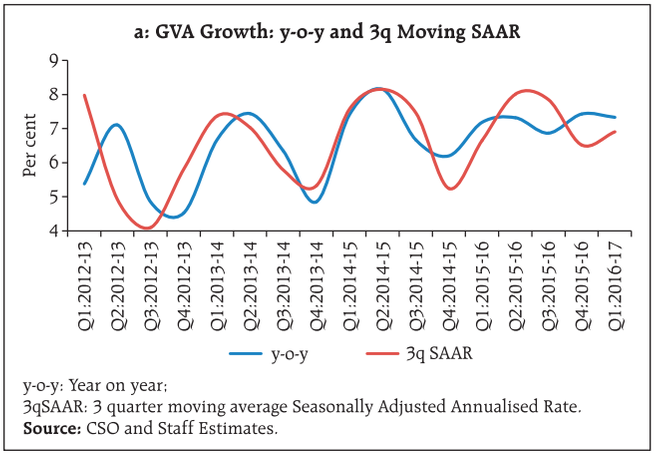
(Per cent)

Item	2014-15	2015-16	2015-16	2014-15				2015-16				2016-17
	Growth		Share	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
I. Agriculture, Forestry and Fishing	**-0.2**	**1.2**	**15.4**	**2.3**	**2.8**	**-2.4**	**-1.7**	**2.6**	**2.0**	**-1.0**	**2.3**	**1.8**
II. Industry	**6.5**	**8.8**	**22.7**	**9.2**	**6.2**	**3.4**	**6.9**	**7.1**	**8.5**	**10.3**	**9.2**	**7.7**
(i) Mining & quarrying	10.8	7.4	3.1	16.5	7.0	9.1	10.1	8.5	5.0	7.1	8.6	-0.4
(ii) Manufacturing	5.5	9.3	17.5	7.9	5.8	1.7	6.6	7.3	9.2	11.5	9.3	9.1
(iii) Electricity, gas, water supply & other utilities	8.0	6.6	2.2	10.2	8.8	8.8	4.4	4.0	7.5	5.6	9.3	9.4
III. Services	**9.4**	**8.2**	**61.9**	**8.0**	**9.9**	**11.7**	**8.3**	**8.3**	**7.9**	**8.5**	**8.1**	**8.4**
(i) Construction	4.4	3.9	8.5	5.0	5.3	4.9	2.6	5.6	0.8	4.6	4.5	1.5
(ii) Trade, hotel, transport, communication and services	9.8	9.0	19.2	11.6	8.4	6.2	13.1	10.0	6.7	9.2	9.9	8.1
(iii) Financial, real estate & professional services	10.6	10.3	21.6	8.5	12.7	12.1	9.0	9.3	11.9	10.5	9.1	9.4
(iv) Public administration, defence and other services	10.7	6.6	12.6	4.2	10.3	25.3	4.1	5.9	6.9	7.2	6.4	12.3
IV. GVA at basic prices	**7.1**	**7.2**	**100.0**	**7.4**	**8.1**	**6.7**	**6.2**	**7.2**	**7.3**	**6.9**	**7.4**	**7.3**

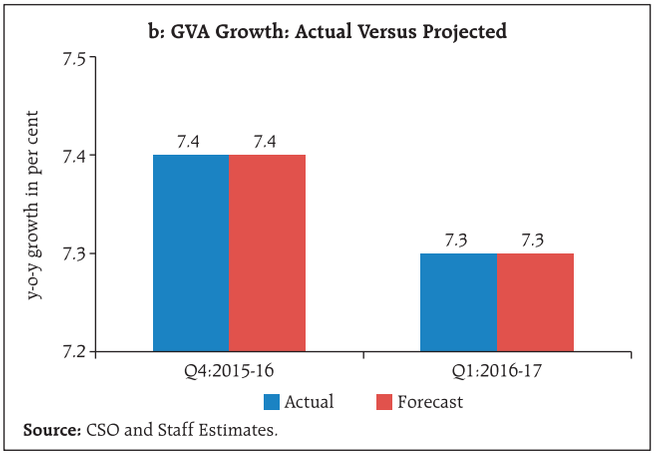
Source: CSO.

The April 2016 MPR had projected a gradual improvement in GVA growth from 7.3 per cent in Q1 to 7.7 per cent in Q2. With most of the initial assumptions underlying these projections materialising, the actual outcome for Q1 has matched the projection (Chart III.7b) (see Chapter I).Turning to Q2, the deceleration in value added in agriculture and allied activities in Q1 is well-positioned to reverse, although the upturn could undershoot the April 2016 projection slightly. The south-west monsoon commenced with a delay but soon gathered momentum and by mid-July, it had covered 89 per cent of the country's meteorological sub-divisional area with excess/normal rainfall. From the second week of August, it waned in intensity and by end-September, precipitation was 3 per cent below the long period average (LPA) and was excess /normal across 85 per cent of the country's meteorological sub-divisional area[7]. Reflecting the initial delay in the monsoon's onset, *kharif* sowing started on a low note, lagging behind last year's acreage till first week of July. It picked up vigorously thereafter and by the end of September, it was 3.5 per cent higher than last year's

Chart III.7: GVA Growth



y-o-y: Year on year;
3qSAAR: 3 quarter moving average Seasonally Adjusted Annualised Rate.
Source: CSO and Staff Estimates.



Source: CSO and Staff Estimates.

[7] The spatial distribution of South West monsoon is measured by the production weighted rainfall (PRN) index, which rose by 17 percentage points as on September 30, 2016 over its level a year ago.

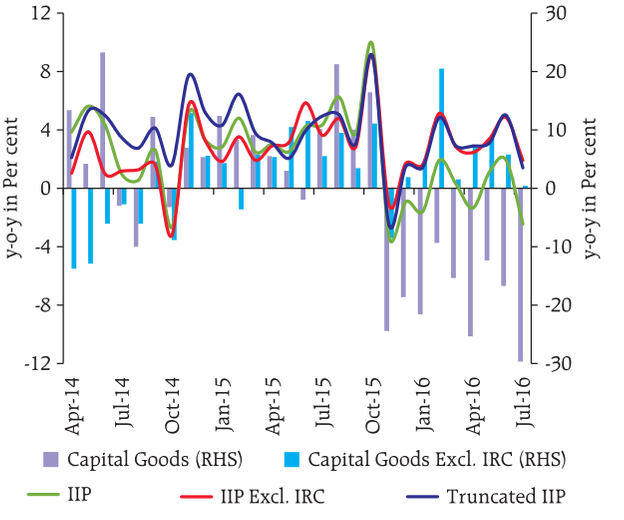
sown area, most notably under pulses (29.2 per cent), but also with respect to rice, coarse cereals and oilseeds.

This has brightened the prospects of *kharif* crops production. According to the first advance estimates, the production of *kharif* foodgrains during 2016-17 at 135.0 million tonnes was 8.9 per cent higher than last year. The production of *kharif* pulses was a record high at 8.7 million tonnes. Among commercial crops, the production of oilseeds and cotton increased by 41.0 per cent and 6.6 per cent, respectively, over last year, even as that of sugarcane contracted.

The satisfactory performance of the south west monsoon augurs well for the prospects of the *rabi* crops. The significant improvement in reservoir levels, especially in the Central and Western region, which accounts for around 64 per cent of irrigated area from these reservoirs, and the improvement in soil moisture conditions should enable the achievement of the *rabi* foodgrains target of 137.4 million tonnes (higher than that of 128.2 million tonnes last year).

Growth of value added in the industrial sector in Q1 was pulled down by a contraction in mining and quarrying caused *inter alia* by a deceleration in the production of coal and absolute declines in the output of crude petroleum and natural gas. Turning to Q2, industrial production contracted in July, though a caveat is in order. Since the second half of 2015-16, movements in the index of industrial production (IIP) have been unduly influenced by a sharp contraction in the lumpy and large order-driven output of insulated rubber cables (IRC). It has produced strong and overwhelming effects on the headline index as well as on capital goods of which it is a component. Trimmed of IRC, industrial production would have risen by 3.2 per cent during April-July 2016 instead of contracting by 0.2 per cent. This is corroborated by the movements in a truncated IIP[8] (Chart III.8). Manufacturing output contracted in July, although excluding IRC, it would have posted an

Chart III.8: Capital Goods and IIP



IRC– Insulated Rubber Cables.
Source: CSO and Staff Estimates.

expansion of 2.1 per cent. Nonetheless, manufacturing performance continues to face headwinds from the subdued business and investment environment. Illustratively, while sales of non-government manufacturing companies contracted in Q1 of 2016-17, profitability was shored up by other income and still soft input costs rather than a durable strengthening of output, with some indications of improvement in Q2. The corporate sector is challenged by high levels of leverage, relative to debt servicing capacity and concentration of risks. In this context, the vulnerability of the corporate sector to external debt has been amplified by low debt servicing capacity.

As regards other components of the IIP, electricity generation dipped in July after growing at a healthy pace in preceding months. It has fallen further in August due to contraction in thermal power generation – the first time in 16 months – with the plant load factor falling to a low of 52 per cent. Electricity demand has also been experiencing a sustained moderation in an environment of subdued offtake from the manufacturing sector as well as from stress-laden distribution companies (DISCOMs). The demand-supply gap narrowed to 0.5 per cent of total demand from 2.5 per

[8] Truncated IIP: 96 per cent of IIP excluding top 2 per cent and bottom 2 per cent of volatile items.

cent a year ago. Consequently, suppliers sold electricity in the spot exchange – volumes reached a record high of 3,580 million units in July before dipping to 3,445 million units in August – bringing down exchange-traded spot prices to ₹2.20 per kilowatt hour (kWh), lower than prices under long-term power purchase agreements (PPAs).

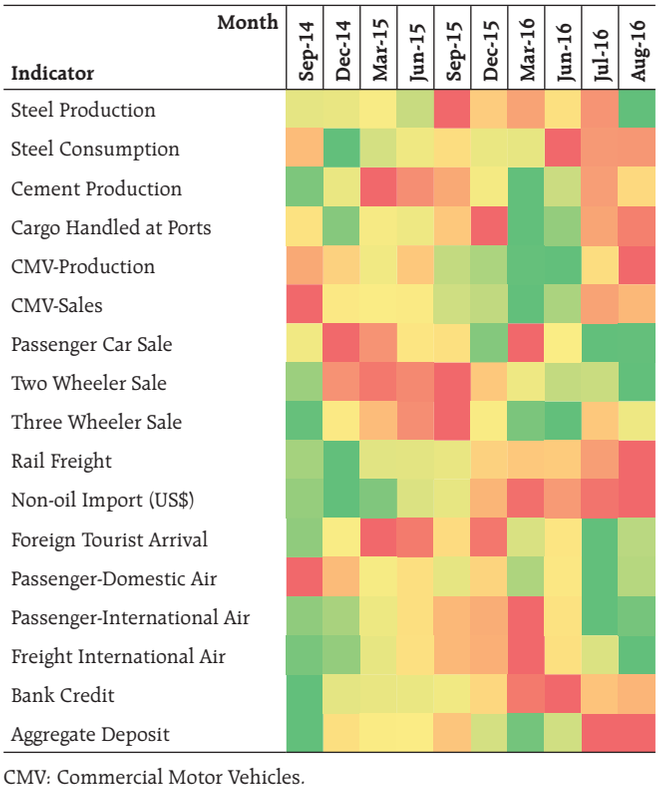
In terms of use-based activity, consumer non-durables slipped back into negative territory in July – a nine-month long slump had been interrupted by tentative positive growth in June – indicating that rural consumption is still weak. On the other hand, consumer durables have been supported by the abiding strength of urban consumption. While, basic goods decelerated, capital goods excluding IRC rose by barely 0.5 per cent in July, reflecting subdued investment demand. The recent momentum in core industries was sustained by a sharp pick-up in steel production in August 2016 reflecting *inter alia* low base and imposition of minimum import price, anti-dumping and safeguard duties. This, in consonance with the positive trend in cement production, augurs well for construction sector – even though the output of core industries as a whole was constrained by a decline in the production of coal, crude oil and natural gas, and deceleration in refinery products and electricity generation.

The environment for industrial activity should improve with recent policy initiatives like liberalisation of foreign direct investment (FDI) policy in defence, civil aviation, pharmaceutical and broadcasting. This is being reflected in the manufacturing purchasing managers index which has remained in the expansionary zone since January 2016 mainly driven by new and export orders.

Value added in the services sector, which constitutes around 63 per cent of total GVA, accelerated in Q1 on the back of stronger growth in public administration, defence and other services, supported by financial, real estate and professional services. On the other hand, activity in the construction sector slowed down and GVA growth in trade, hotels, transport and communication slowed sequentially. In Q2, public administration and defence services would have been boosted by the implementation of the 7th CPC award and one rank one pension (OROP) from August. The robust improvement in sales of two wheelers, passenger cars and tractors in recent months suggests that GVA in the transportation sub-sector is picking up (Table III.4).

Construction activity remained subdued on account of stalled projects in the sector and onset of monsoon. As monsoon winds up, the construction sector is set for a turnaround on the package of measures approved by the Cabinet Committee on Economic Affairs (CCEA) to revive stalled projects, and especially the unclogging of cash flows. Available information shows that the construction of highways and capital expenditure under Railways are picking up and there are similar signs in respect of the sales of commercial properties in main cities. Though backed

Table III.4: Services Sector: Heat Map



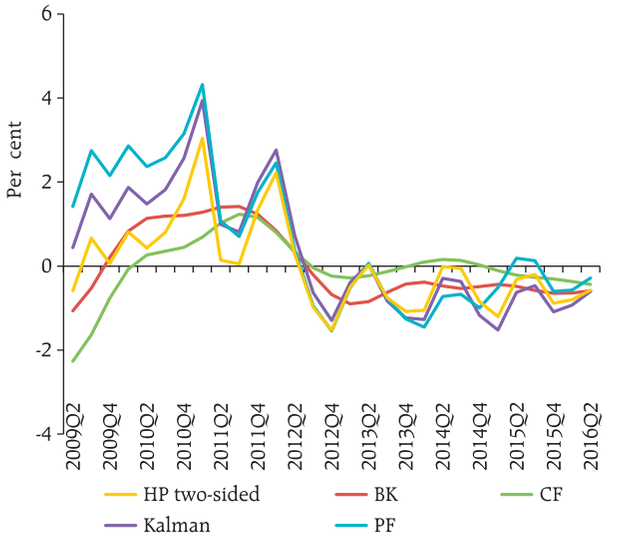
CMV: Commercial Motor Vehicles.
Note: y-o-y growth rates are mapped with green cells indicating high and red cells indicating low growth rates.
Source: Staff estimates based on data compiled from various sources.

by low base, the consumption of steel accelerated in August after two months of contraction. Port cargo continues to decelerate, mostly on account of slowdown in imports of coal as domestic production picked up, and also due to contraction in tonnage of iron ore and fertilisers. Railway freight contracted due to low haulage of coal, and foodgrains, but it is expected to turn around once *kharif* procurement of foodgrains starts. Growth of foreign tourist arrivals accelerated on account of the e-visa facility. Accordingly, the services PMI improved further, driven by new business and improved business expectations in Q2.

III.3 Output Gap

The above assessments of the formation of aggregate demand and aggregate supply provide insights into the state of the economy *vis-a-vis* the underlying business cycle and, in turn, the trade-off between growth and inflation confronting the setting of monetary policy. In this context, measurement of the potential level of output *i.e.*, the sustainable level of output in which the intensity of resource use is non-inflationary, becomes crucial. Bearing in mind that potential output is unobservable, that it has to be estimated and that these estimations are highly sensitive to the choice of period and methodology and the availability of data, staff has been employing the pragmatic approach. It combines a battery of methodologies, including different univariate filters - Hodrick–Prescott (HP); Baxter-King (BK); Christiano-Fitzgerald(CF); multivariate Kalman filter – with estimates of the production function approach in a principal components framework to derive a proximate view of potential output, while cautioning about the limitations with which these estimates have to be used (see MPRs of September 2015 and April 2016). The non-availability of a historical profile of GVA/GDP under the new series is also a major handicap to the accuracy of these estimates. Given these caveats, updated estimates of potential output suggest that the output gap – the deviation of actual output from its potential level and expressed as a percentage of potential output – remains negative, as it has been since 2015-16, but is slowly closing (Chart III.9). This is corroborated by the latest round of the Reserve Bank's order books, inventory and capacity utilisation survey which shows capacity utilisation plateauing, after declining from 2011-12 (Chart III.2).

Chart III.9: Output Gap Estimates



Source: Staff Estimates; HP: Hodrick–Prescott filter; BK: Baxter-King Filter; CF: Christiano-Fitzgerald filter; PF – Production Function

Economic activity is evolving in close alignment with staff's projections, still below its underlying potential. Persisting slack in the economy has restrained a fuller expression of aggregate demand, which remains essentially consumption-driven. The continuing weakness in investment poses a risk not only to the prospects of the recovery gaining momentum on a durable basis but also to potential output itself. There is also some evidence, anecdotal and estimation-based, that productivity is getting impaired. Key to breaking out of this low-level trap is a revival of investment, especially private, in a conducive environment of reforms in product and factor supplies that unlock productivity and competitiveness, and raise the economy's potential itself. This acquires urgency in view of the prolonged weakening of the global economy and the sense that global potential output may have become lastingly debilitated.

IV. Financial Markets and Liquidity Conditions

Liquidity conditions have eased significantly, consistent with the accommodative stance of monetary policy. Bond yields touched multi-year lows. Commercial paper (CP) and corporate bond markets witnessed stronger transmission of monetary policy relative to the credit market, with issuances of CPs and corporate bonds increasing. Bank credit growth remains sluggish, albeit consistent with the nominal GDP growth outturn.

Spells of turbulence have kept global financial markets unsettled since the April MPR, mainly sparked by worries about weakening global growth and diminishing confidence in the ability of central banks to nurture a sustainable recovery. In Q1 of 2016-17, equity, bond and commodity markets traded on a subdued note, with higher volatility and investor differentiation having widened credit spreads on EME and corporate assets. The universe of negative yields expanded rapidly in this risk-averse environment. The Brexit vote of June 23, however, took markets by surprise, causing equity, currencies and bonds to plunge across the globe. Yet, recovery too was surprisingly quick, especially in the context of a black swan type event. In Q2, volatility has subsided, commodity prices have firmed up, credit spreads have narrowed, equity markets have rallied to new highs and portfolio flows to EMEs have resumed. Although uncertainty around the Fed's decision of September 21 did push up bond yields, other market segments maintained poise and risk appetite has intensified.

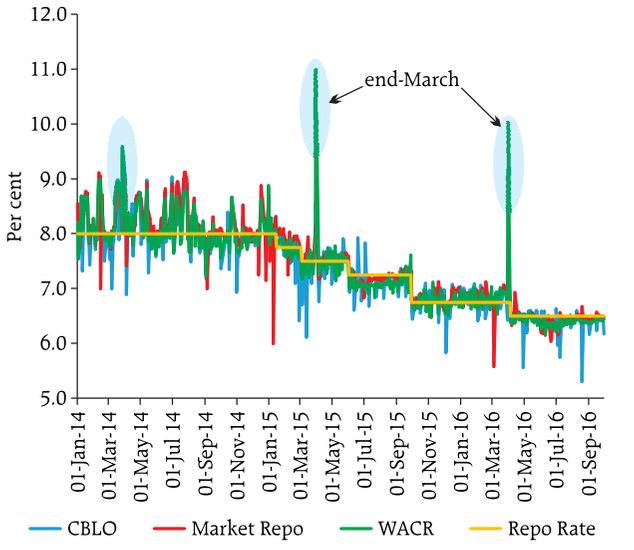
Domestic financial markets have been resilient to these global developments and have, in fact, shown greater sensitivity to domestic cues. Even in the equity and foreign exchange segments, which are most vulnerable to global spillovers, the impact of international events has been transient. The Indian rupee turned out to be among the most stable currencies, notwithstanding fears about FCNR(B) redemptions commencing in September. In the money markets, interest rates have eased in the first half of 2016-17 propelled by comfortable liquidity conditions, and volatility has fallen. Bond yields touched multi-year lows, responding to abundant liquidity and expectations of falling inflation cheered by a satisfactory monsoon. By contrast, credit markets have remained isolated in this generalised softening, with lending rate movements reportedly inhibited by asset quality concerns and balance sheet repair. Although deposit rates have also imbibed these rigidities, they have declined more than lending rates in recent months.

IV.1 Financial Markets

Q1 commenced with money markets fully transmitting the 25 bps cut in the repo rate of April 5. Liquidity conditions were influenced by restraint in government expenditure and a sustained elevation in currency demand entailing a leakage from the banking system during *rabi* procurement period of April and May. Open market purchases and term repos of varying tenors, in addition to the Reserve Bank's normal liquidity operations, assuaged liquidity pressures. Consequently, the weighted average call money rate (WACR) and collateralised overnight rates traded tightly around the repo rate with a slight softening bias (Chart IV.1). The return of currency to the system towards the end of May and a pick-up in government expenditure in June helped to ease liquidity conditions.

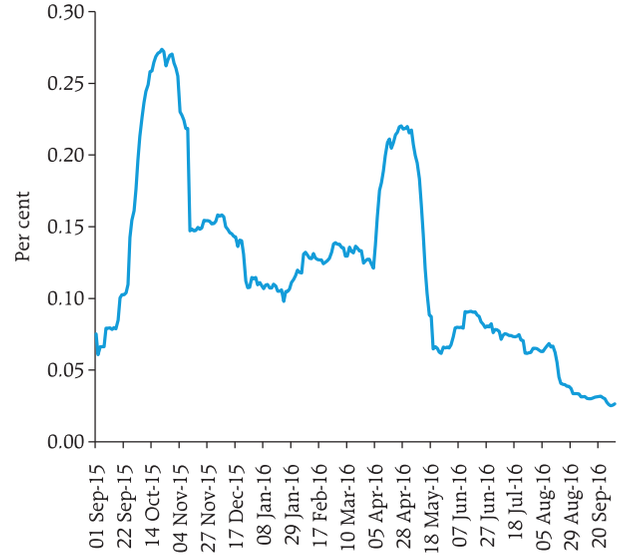
Two developments are noteworthy in the evolution of money market in this period. First, with the relaxation in reserve maintenance norms (to a daily minimum of 90 per cent from 95 per cent earlier) as part of the refinements in the liquidity management framework in April (see section IV.2), there was a moderation in banks' holdings of excess reserves (Chart IV.2). Secondly, the market response to the narrowing of the policy rate corridor to +/-50 bps on April 5 was reflected in a compression of money market

Chart IV.1: Overnight Money Market Rates



Source: RBI and CCIL.

Chart IV.3: 30-day Rolling SD of WACR

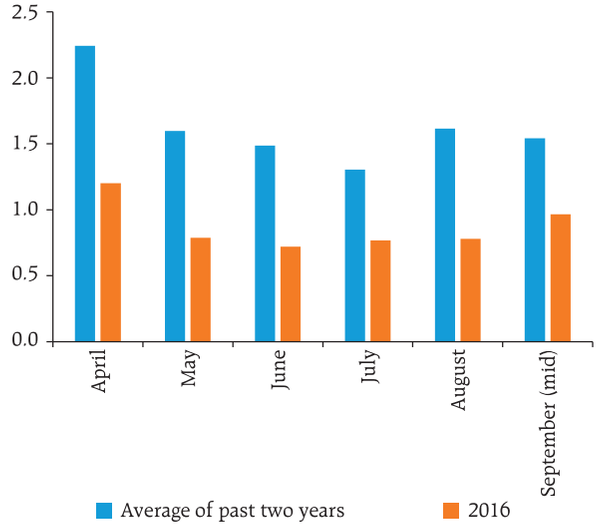


Source: CCIL and Staff Estimates.

spreads *vis-à-vis* the repo rate and a decline in volatility (Chart IV.3).

With the evolution of liquidity conditions passing a tipping point in June, a new phase was evident in Q2, aided by the return of currency to the banking system, stepped up government expenditure – necessitating ways and means advances (WMA) from the Reserve Bank – and stronger mobilisation of deposits.

Chart IV.2: Excess Reserves Maintained by Banks (Per cent of Requirement)

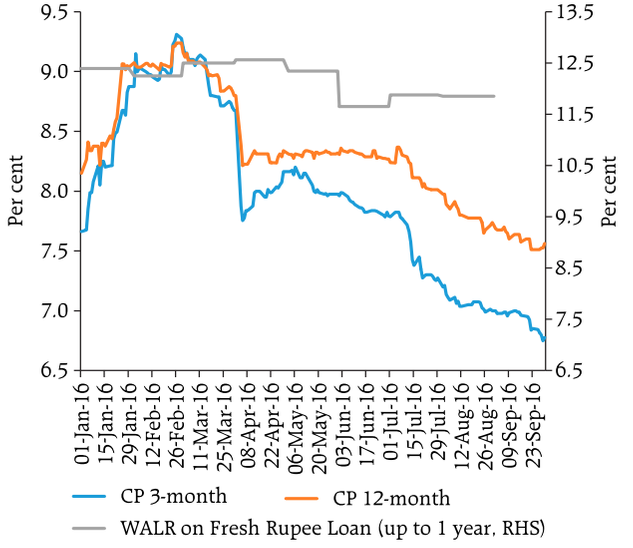


Source: RBI.

Accordingly, the Reserve Bank switched into a liquidity absorption mode with variable rate reverse repo operations, including of 28-day tenor for the first time. Surplus transfer from the Reserve Bank was quickly followed by large coupon payments and redemptions in mid-August.

The WACR remained below the repo rate throughout, tracked by other overnight money market rates. In fact, on 95 per cent of the trading days in the first half of 2016-17 (excluding Saturdays), the WACR traded marginally below the repo rate (by about 11 bps on an average). The benign effects of comfortable liquidity conditions in the overnight segments spread through the continuum of money market rates, easing term premia and softening three-month CP and certificate of deposit (CD) rates to intra-year lows. In fact, CP rates fell well below the weighted average lending rate (WALR) on fresh rupee loans of up to one-year maturity, rendering CP issuances an attractive alternative for raising working capital funds in an environment characterised by risk aversion among banks (Chart IV.4). Higher rated corporates raised ₹1.37 trillion in the first half of the year (up to mid-September 2016) through CPs.

Chart IV.4: CP and Lending Rates



Source: RBI and Bloomberg.

The implementation of the Basel III liquidity coverage ratio (LCR) has impacted liquidity in money markets across the world. In order to cushion these pressures, the Reserve Bank has been providing banks headroom by allowing carve-outs in the prescription of SLR cumulating to 11 per cent of NDTL, including 2 per cent available under the marginal standing facility (MSF). In this sense, the SLR has enabled a friction-free transition to the LCR relative to the cross-country experience (Box IV.1).

Bond markets began Q1 on a firm note as investors engaged in consolidation and profit-booking, although by early May, a softening bias set in as fears of a hike in the US federal funds rate receded and the Reserve Bank's open market operations lifted sentiment. As

Box IV.1: Basel III Liquidity Coverage Ratio and the Operating Target of Monetary Policy

The phased introduction of the Basel III Liquidity Coverage Ratio (LCR) since January 2015 across jurisdictions has altered volume and rates in the unsecured segment of the money market, posing challenges for the implementation of monetary policy (Bonner and Eijffinger, 2012; and Schmitz, 2013). Under the LCR regulation, a bank's stock of high quality liquid assets (HQLA) must exceed its projected total net cash outflows over the next 30 calendar days under a stress scenario. Any borrowing from the uncollateralised market of less than 30 days maturity attracts a run off rate of 100 per cent, *i.e.*, to be repaid within 30 days, and therefore, would require 100 per cent HQLA backing. A bank can borrow and retain cash as part of HQLA to avoid a fall in LCR, but in that case borrowed liquidity cannot be used for non-HQLA asset financing. This is observed to have altered banks' activity in the call money market in the post-LCR regime. Generalised method of moments (GMM) estimates in a dynamic panel data regression framework involving monthly data on bank-wise LCR positions relative to the prescribed norm, capital to risk weighted asset ratios (CRAR), gross non-performing assets (GNPA) as a ratio of total assets and a dummy* to capture the impact of the LCR on the money market show that banks operating closer to the prescribed LCR norm tend to borrow at a higher rate in the call market (Table 1). Banks with higher CRAR seem to have the

Table 1: Estimated Impact of LCR on Call Market Spread and Volumes

WACR Spread over Repo Rate		
Dep. Var.	**Dynamic GMM**	
	Coeff.	**P-val**
Constant	-0.090	0.18
Spread(-1)	-0.200	0.00
LCRD(-1)	0.070	0.02
CRAR (-3)	-0.004	0.00
GNPA (-3)	0.060	0.01
	Wald Chi-square	33.03 (0.00)
	AR(1)	-5.51 (0.00)
	AR(2)	-1.66 (0.10)
	Sargan stat. (2-step)	58.89
Call Market Borrowing to Total Asset Ratio		
Constant	12.180	0.05
CallVol(-1)	0.180	0.00
CallVol(-2)	-0.400	0.00
LCRD(-1)	6.150	0.08
CDratio	0.0004	0.00
	Wald Chi-square	167.1 (0.00)
	AR(1)	-2.29 (0.02)
	AR(2)	-0.35 (0.72)
	Sargan stat. (2-step)	61.1

* The dummy assigns a value of one to banks with LCR positions within 10 per cent above the prescribed norm and zero otherwise; given that the prescribed LCR in India was raised to 70 per cent in January 2016, banks operating at less than 80 per cent LCR could be expected to borrow in the call market at a higher rate relative to others.

(Contd...)

advantage of borrowing at a lower rate, while banks with higher GNPA have to pay higher rates on their call borrowings. While the WACR (and call volumes) are sensitive to the LCR regulation, the overall impact on the WACR is limited to 7 bps. Thus, the accommodation provided to banks within the prescribed SLR has been critical in mitigating adverse effects of the LCR on the WACR.

References:

Bonner, Clemens and Sylvester Eijffinger (2012), "The Impact of the LCR on the Interbank Money Market?", De Nederlandsche Bank Working Paper No.364, December.

Schmitz, Stefan W (2013), "The Impact of the Liquidity Coverage Ratio (LCR) on the Implementation of Monetary Policy", Economic Notes, Wiley Blackwell, June.

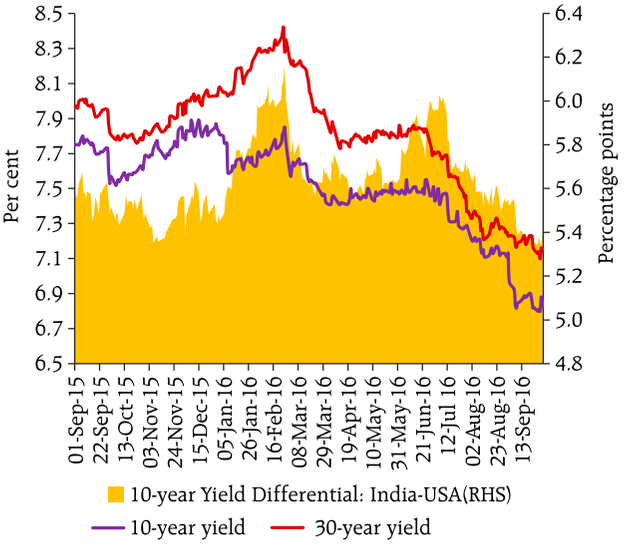
inflation moved up higher than expected, however, gilt yields hardened and rising international crude prices added an upside. Foreign portfolio investors (FPIs) sold net debt amounting to ₹106 billion during May and June. Bond markets were least impacted by Brexit, with 10-year FIMMDA generic yields moving up by eight basis points only on June 23, and softening immediately thereafter. With inflation in India rising beyond the usual seasonal upturn at this time of the year, yields remained range-bound in June, although open market purchase operations continued to provide comfort.

Starting in mid-June, gilt yields softened into Q2 with abundant liquidity and optimism generated by the satisfactory progress of the monsoon lifting sentiment, notwithstanding the peaking of inflation in July which the market had fully priced in. The post-Brexit resumption of portfolio flows into the gilt segment of the bond markets also softened yields. Trading volumes in the secondary market increased from a daily average of ₹489 billion in June to ₹1057 billion in July and ₹935 billion in August. A substantial part of the increase in activity was on account of global funds, pushed out of advanced economies by negative yields, and also profit booking by banks.

The new 10-year benchmark announced on August 29, 2016 had a dramatic effect. In the 'when issued' market, it closed at 6.98 per cent on September 2, when trading ceased in that segment, setting the stage for the OTC market. The 10-year benchmark yield touched a multi-year low of 6.80 per cent in the secondary market on September 23. In H1 of 2016-17, gilt yields have eased by more than 50 bps as against a policy repo rate cut of 25 bps (Chart IV.5). Market sentiment was also buoyed by the announcement of a number of measures by the Reserve Bank and SEBI to improve depth and liquidity in the market[1].

In the corporate bond segment, issuances fell by 4.1 per cent in Q1 indicating subdued corporate investment with a preference for refinancing rather than investing in new capacities. Corporate bond yields

Chart IV.5: G-sec Yields



Source: FIMMDA and Bloomberg.

[1] They include: allowing FPIs to trade on the negotiated dealing system- order matching (NDS-OM) platform; permitting individual investors with demat accounts with depositories to trade directly on NDS-OM; and enabling a market making scheme by Primary Dealers in designated semi-liquid securities. Amended SEBI regulations allowed FPIs to directly access the corporate bond market without brokers in September.

– especially on AAA corporate bonds – declined significantly in Q2, tracking gilts. This galvanised a spate of issuances to take advantage of the rate differential *vis-à-vis* bank lending rates. Overall resources mobilised through private placement increased by around 12 per cent in H1 (up to August) over the corresponding period of last year. While FPI investment in corporate bonds witnessed net outflows till August 2016 mainly due to narrowing of interest rate differentials and stable hedging costs, investment by mutual funds (excluding PSU bonds) increased by around 31 per cent over March 2016. Corporates also raised resources through issuances of masala bonds. These bonds are denominated in rupees and entail no exchange rate risk for the issuers. In the financial year so far, companies have raised around ₹88 billion through masala bonds. With these alternative avenues, corporates have cut down substantially on their recourse to external commercial borrowings.

Equity markets experienced choppy trading in Q1. The Brexit referendum triggered some panic FPI selling, but in the last week of the month, the Sensex recovered these losses and posted increases on the back of optimism over the progress of the monsoon and the Cabinet's approval of the 7th Pay Commission recommendations.

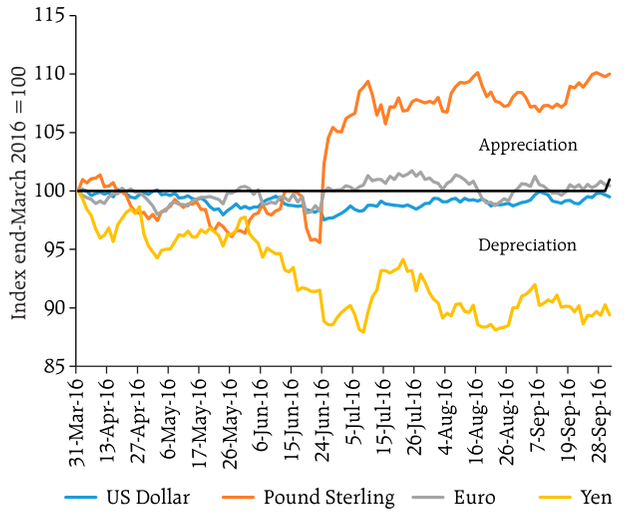
Equity markets turned up in Q2, supported by rejuvenation of FPI buying interest and recovery in global equity markets over expectations of expanded accommodation in monetary policies of systemic central banks. The prospects of the GST coming into force also lifted market sentiment. Overall, the benchmark BSE Sensex posted a gain of around 21 per cent over its February 2016 level in the first half of 2016-17. Mid-cap and small-cap stocks outperformed the benchmark indices, pointing to a greater significance of domestic macroeconomic conditions relative to the global economy for these firms. These developments have focused interest in market valuations. The price-to-earnings (PE) ratio of the Sensex was at 20.7 at end-September as against a range between 7.3 (Russia) and 25.7 (South Africa) for other EMEs.

Through the first half of 2016-17, resource mobilisation through IPOs and right issues has been high – 32 companies raised ₹162.9 billion in H1 as against ₹126.6 billion during the same period a year ago. What is interesting is that this recent buoyancy in IPOs also evinced strong retail interest – the average number of times the retail portion of the IPO subscription rose from about 2.4 in 2015-16 to 7.7 in 2016-17 so far. The gains made on listing mirrored this surge in retail participation – the average listing premium rose from 5.1 per cent in 2015-16 to 22.5 per cent in 2016-17.

In the foreign exchange market, the rupee traded with a depreciating bias against the US dollar in Q1, mainly reflecting the strengthening of the US dollar against EME and commodity currencies and the yen on the back of weak macroeconomic data out of China and renewed political turmoil in Brazil. Higher than expected inflation readings and import payment-related foreign currency buying by oil marketing companies and PSUs also impacted the rupee's movements. FPI outflows, particularly from the debt segment, kept the rupee under downward pressure, which intensified with the Brexit vote; however, the rupee recovered ground swiftly, as sentiment improved and FPI flows returned vigorously. Viewed in relation to EME peers, rupee moved in a narrow band, even as several other currencies appreciated in nominal terms, some of them going through corrections of sizable past depreciation.

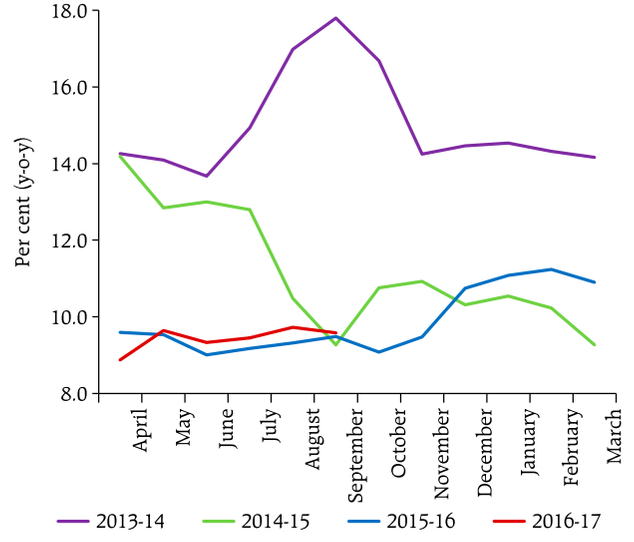
The bounce back from Brexit sustained an appreciating bias in the rupee's movements into Q2, with intermittent downsides from the strength of the US dollar. Nonetheless, an overall optimism in the rupee was evident in the strong resumption of FPI inflows in both the equity and debt markets. While the rupee traded range-bound in the rest of Q2, uncertainty reflected in one-month implied volatility increased.

Chart IV.6: Exchange Rate of Rupee



Source: RBI.

Chart IV.7: Non-food Credit Growth



Source: RBI.

The rupee moved in a narrow range against the US dollar and the euro in H1. It appreciated strongly against the pound sterling, but depreciated against the Japanese yen, mirroring cross-currency movements against the US dollar (Chart IV.6). In terms of the nominal effective exchange rate index (36-currency basket), the rupee exhibited stability through H1, whereas in terms of the real effective exchange rate index, it appreciated by 3.6 per cent since March 2016 (Table IV.1).

In the credit market, activity weakened as non-food credit growth remained sluggish through H1 (Chart IV.7). Movements in credit flows, however, need to be juxtaposed against two developments which suggest that underlying credit market activity may not have been as feeble as the headline numbers suggest. First, banks have written-off/sold loans to asset reconstruction companies (ARCs), which effectively compressed their loan books. Second and more importantly, more than half of the Ujawal DISCOM Assurance Yojana (UDAY) bond issuances during the financial year so far represent conversion/swapping of bank credit into special securities. Adjusting for the UDAY bond issuances, the flow of non-food credit to the economy during H1 (up to September 16, 2016) was comparable to that in the corresponding period of last year (Chart IV.8). In terms of industry sub-sectors, bank credit to chemicals, textiles, food processing and mining further contracted. Non-banking sources of funding for the commercial sector, both foreign and domestic, also remained subdued. As a result, the total flow of resources to the commercial sector during the year (up to September 16, 2016) was lower by about 15 per cent than a year ago.

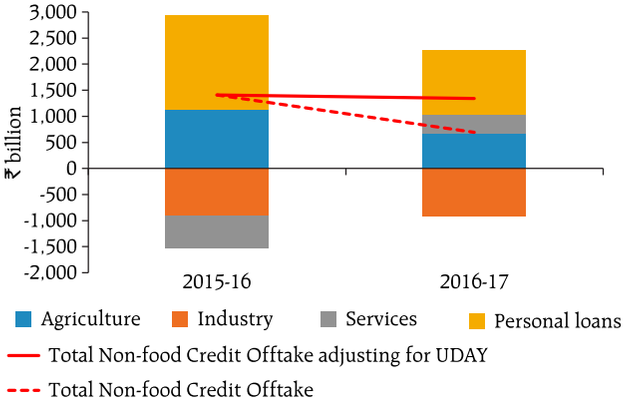
Table IV.1: Nominal and Real Effective Exchange Rates: Trade-Based (Base: 2004-05=100)

Item	Index: September 23, 2016 (P)	Appreciation (+) / Depreciation (-) (per cent)	
		September 23 over March 2016	March 2016 over March 2015
36-currency REER	114.59	3.6	-2.3
36-currency NEER	74.50	1.1	-4.1
6-currency REER	126.42	3.7	-3.1
6-currency NEER	66.97	0.7	-6.6
₹/ US$ (As on September 30, 2016)	66.66	0.5	-6.8

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

The Reserve Bank instituted a new lending rate system for banks – the marginal cost of funds based

Chart IV.8: Non-food Credit Offtake (April to mid-September)



Note: (1) Sectoral credit offtake figures are calculated by applying the proportions derived from sectoral data available up to August on the actual credit offtake number available up to mid-September.
(2) Flow to industry in 2016-17 is adjusted for bank credit substituted by UDAY assets.

Source: RBI.

lending rate (MCLR) system – effective April 1, 2016 (Box IV.2). During H1 of 2016-17, the median one-year MCLR of PSBs and private sector banks declined by 15 bps and 25 bps, respectively (Chart IV.9). Banks have, however, increased the spread and term premia over the same period, effectively leaving the WALR on outstanding rupee loans unchanged. For fresh rupee loans, the WALR declined by 5 bps (April-August). Rupee loans that are being disbursed since April 1, 2016 are priced at the MCLR, and therefore, the base rate continues to account for a substantial share in the pricing of outstanding credit.

A comparison of the behaviour of key components of the MCLR reveals that the marginal cost of funds has moderated in respect of both PSBs and private

Box IV.2: Transmission under the BPLR, Base Rate and MCLR Regimes

The benchmark prime lending rate (BPLR) system introduced in 2003 fell short of its original intent of serving as the reference rate for pricing loan products linked to the actual cost of funds. Perversely, the share of sub-BPLR lending rose as high as 77 per cent by September 2008, concentrated at longer term tenors (above three years), effectively undermining the BPLR. Residential housing and consumer durables were outside the purview of the BPLR and sub-BPLR lending became a source of distortion in terms of cross-subsidization across borrower categories.

The base rate system, which came into effect in July 2010, was meant to guard against the arbitrary pricing of loans prevalent under the BPLR system by disallowing loans at sub-prime rates. However, discrimination in the pricing of credit between new and old customers continued as banks often tweaked the spread over the base rate. The flexibility accorded to banks in the determination of cost of funds – average, marginal or blended cost – rendered assessment of transmission difficult.

The MCLR system introduced on April 1, 2016 was designed taking into account limitations of both the BPLR and the base rate regimes. Under the MCLR system, banks determine their benchmark lending rates linked to marginal cost of funds. The MCLR consists of four components: (a) marginal cost of funds (*i.e.*, marginal cost of borrowings comprising deposits and other borrowings, and return on net worth), (b) negative carry on account of cash reserve ratio (CRR), (c) operating costs and (d) term premium/discount for prescribed maturities. The MCLR plus spread is the actual lending rate for a borrower. The spread comprises two components, *viz.*, business strategy and credit risk premium. In principle, the role of each component of the MCLR can be monitored and analysed. Different components of the MCLR vary widely across banks at any point in time, reflecting: (i) differences in the composition and maturity profile of their liabilities – current, savings and time deposits - and the extent of reliance on retail *vis-a-vis* wholesale customers, which has a bearing on the cost of funds; (ii) divergences in the operating cost environment of banks arising from differences in the use of technology, quality of human capital and the geographical spread of bank branches; and (iii) the return on net worth expected by banks.

An inter-temporal comparison of monetary policy transmission shows that the magnitude of transmission varies across regimes and policy cycles. The transmission of monetary policy is marked by long and variable time lags with asymmetric market responses to policy impulses – generally higher during a tightening

(Contd...)

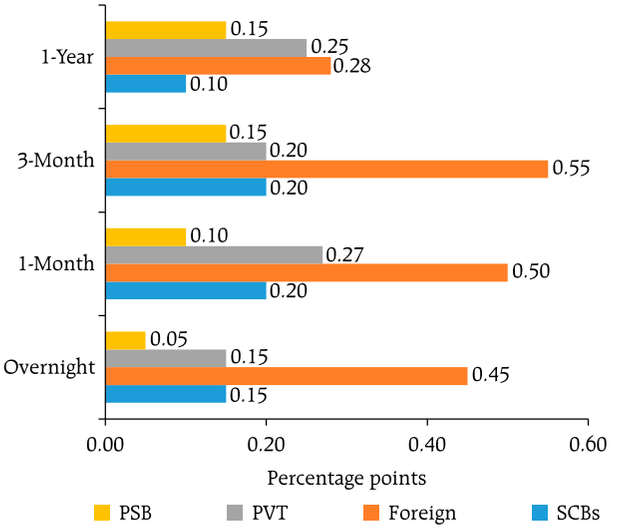
Table 1: Transmission Under Different Regimes and Policy Cycles (Change in median rate in basis points)

Phase	Policy Variables			Public Sector Banks			Private Sector Banks			Foreign Banks		
	CRR	Repo Rate	Reverse Repo Rate	BPLR	Base Rate	MCLR (1 Year)	BPLR	Base Rate	MCLR (1 Year)	BPLR	Base Rate	MCLR (1 Year)
Tightening												
Apr 2004- Sep 2008	450	300	150	300			337			132		
Easing												
Oct 2008- Feb 2010	-400	-425	-275	-200			-37			13		
Tightening												
Mar 2010-June 2010	100	50	50	0			0			0		
Jul 2010- Mar 2012	-50	325	375	300	275		262	283		12	250	
Easing												
Apr 2012-June 2013	-150	-125	-125	-25	-50		0	-8		25	-30	
Tightening												
July 2013-Dec 2014	0	75	75	0	0		33	25		0	30	
Easing												
Jan 2015-Mar 2016	0	-125	-125	0	-55		-8	-50		0	-62	
Apr 2016- Sep 2016	0	-25	25	-7	-5	-15	-125	0	-25	0	-13	-28

phase and lower during an easing phase, irrespective of the prevailing regime for pricing of credit (Table 1). In the current environment, factors that continue to impede transmission include: (i) fixed interest rates offered on savings deposits (though deregulated) which, along with current accounts, constitute around 35 per cent of aggregate deposits, thereby stifling transmission to more than a third of deposits; (ii) no reduction in interest rates on small savings in Q2 of 2016-17, followed by a marginal reduction of 10 bps in Q3, notwithstanding a notable decline in G-sec yields; (iii) stressed asset quality of banks and pricing of risk premium reflecting risk aversion; and (iv) sluggish demand for bank credit.

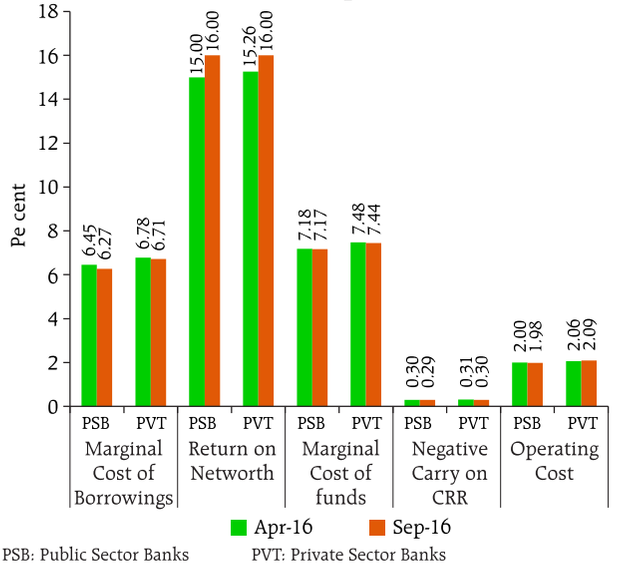
sector banks, driven down by the marginal cost of borrowings (Chart IV.10). On the flip side, the expected return on net worth has increased from an already elevated level.

Chart IV.9: Reduction in Median MCLR during 2016-17: First Half



Source: RBI.

Chart IV.10: MCLR Components - Median



PSB: Public Sector Banks PVT: Private Sector Banks

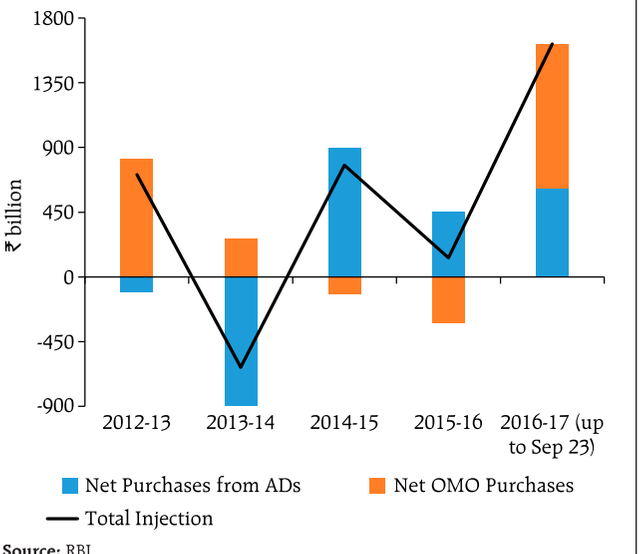
Source: RBI.

IV.2 Liquidity Conditions and the Operating Procedure of Monetary Policy

Under the amended RBI Act, 1934 and related notifications, the Reserve Bank is enjoined to set out the operating procedure of monetary policy and any changes thereto in the public domain. This operating procedure – embodied in the Reserve Bank's liquidity management framework – was published in the April 2015 MPR, Box IV.I. The central premise of the operating procedure is to achieve the operating target of monetary policy – to align the weighted average call money rate (WACR) with the repo rate through active liquidity management, consistent with the stance of monetary policy. Based on continuous assessment of the performance of the operating framework in pursuit of this objective and the evolving nature of liquidity demand in the economy, major changes were introduced in the framework in April 2016, which included: (a) narrowing the liquidiy adjustment facility (LAF) corridor around the policy repo rate from +/- 100 bps to +/-50 bps; (b) smoothening the supply of liquidity through timely use of open market purchase/ sale auctions in conjunction with normal liquidity facilities and fine-tuning operations; (c) progressively lowering the *ex ante* liquidity deficit in the system to a position closer to neutrality; and (d) reducing the minimum daily maintenance of the CRR from 95 per cent of the requirement to 90 per cent.

Since the introduction of these refinements in the liquidity management framework, the Reserve Bank has injected liquidity of ₹1.01 trillion through open market operations (OMOs) in the first half of the year. Including the liquidity impact of foreign exchange market operations, the net injection of permanent liquidity was of the order of about ₹1.6 trillion (Chart IV.11), which has significantly offset the influence of the two key autonomous drivers of liquidity – cash balances of the Government and currency demand (Chart IV.12).

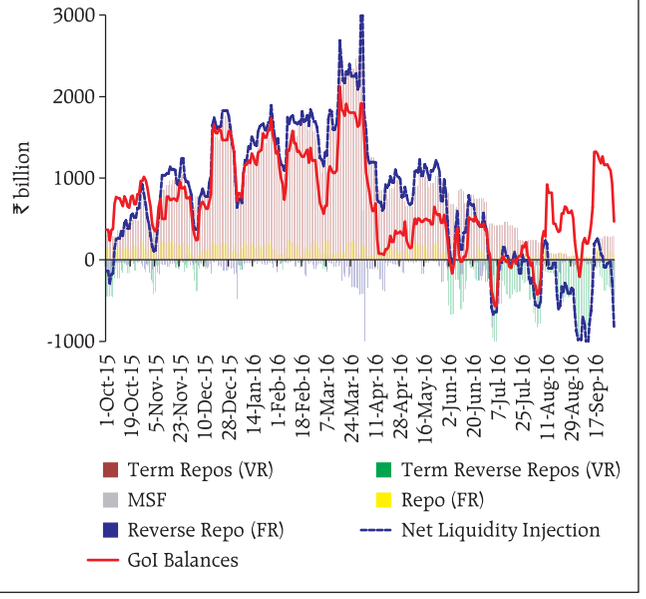
Chart IV.11: Liquidity Injection during H1 of Financial Year



Source: RBI.

In Q1, currency demand increased by ₹600 billion in the first three weeks of April. Accordingly, ₹300 billion was injected through open market purchases in April and ₹400 billion in May to accommodate the higher liquidity deficit in the system, given the access to the LAF averaging around ₹1 trillion. Gyrations in

Chart IV.12: Net LAF and GoI Balances



liquidity conditions were influenced by fluctuations in Government cash balances and other frictional factors which were evened out through fine-tuning operations involving variable rate repo auctions of tenors ranging between 5 days and 21 days.

In Q2, with the Government taking recourse to WMA and overdrafts (ODs) in the first week of July, the liquidity conditions moved to a surplus. Fine-tuning term reverse repo auctions – the key instrument for absorbing surpluses – exceeded ₹1 trillion around this time. Easy liquidity conditions persisted in early August, reaching near balance when the Reserve Bank transferred its surplus to the Government on August 11. With government spending picking up, subdued currency demand during July and August, and proactive front-loading of liquidity by the Reserve Bank in anticipation of potential pressure associated with redemptions of FCNR(B) deposits kept liquidity conditions in surplus mode. In the early part of September, with the Government resorting to WMA again, the net LAF absorption reached ₹1 trillion. In anticipation of liquidity pressures arising from advance tax payments in September, the Reserve Bank conducted an OMO purchase auction of ₹100 billion on September 8. Liquidity deficit returned to a surplus mode by the end of the month.

Structural and cyclical factors impeding transmission to bank lending rates, particularly stressed balance sheets of banks and sluggish credit growth, may require a review of the MCLR implementation by banks, given the context of significant softening of long-term yields. In this scenario, the Reserve Bank would continue to manage liquidity proactively and consistent with the stance of monetary policy, while taking timely and appropriate measures to insulate the system from shocks.

V. External Environment

Global economic activity and trade remain subdued in 2016 so far. While advanced economies (AEs) confront persisting slack and low inflation, several key emerging market economies (EMEs) have had to contend with slower economic activity and sluggish investment.

Since the MPR of April 2016, global growth and trade have weakened and new risks to the outlook have slanted the balance further to the downside. Industrial activity, in particular, has slumped, going into contraction in some AEs. Rising protectionism is threatening to accentuate the compression of trade volumes. While commodity prices have firmed up, the outlook remains subdued. Crude oil prices rose to a recent peak in Q2 of 2016 but mostly on supply disruptions across geographies. In Q3, this upturn has been curbed by higher inventories. Prices of precious metals have been buoyed by safe haven demand, a telling insight into the state of the global economy. Food prices remain elevated on harvest failures in several parts of the world. Inflation remains subdued in AEs and has started to edge down in EMEs.

International financial markets were shocked by the outcome of Brexit referendum in Q2, with equity markets plunging worldwide, currency volatility heightening and investors herding into safe havens. Markets quickly stabilised, and moved up in Q3. However, incoming data can dispel this uneasy calm, as the uptick in bond yields – out of a widening negative universe – in the run-up to the Fed's September meeting has shown. Equity prices regained lost ground and currencies recovered, but uncertainty surrounding the monetary policy stances of systemic central banks will likely continue to impart volatility to currency and equity markets. Capital flows are returning to EMEs, though foreign direct investment has not sustained the pace it achieved a year ago.

V.1 Global Economic Conditions

The US economy slowed in the first half of 2016, despite the higher than expected upturn in Q2. The impetus from private consumption, non-residential fixed investment and exports was offset by drops in inventory accumulation, residential fixed investment and government spending. Investment in Q2 declined for three consecutive quarters as companies cut back spending on oil wells, equipment and inventories. In Q3, factory activity contracted for the first time in six months in August amidst slumping orders and production. Labor market conditions, on the other hand, rebounded to positive territory in July from a six-month slump and continued to improve in the rest of Q3 with low levels of layoffs in August and a drop in jobless claims to a two-month low in September.

In the Euro area, growth decelerated from Q1 to Q2, both sequentially and y-o-y. Net exports and consumer spending supported growth, but fixed investment and inventories operated as drags. Industrial production contracted in July. The re-emergence of stress in some parts of the banking sector in Q3 tightened financial conditions. However, economic sentiment improved in September in its major economies. The Japanese economy decelerated in Q2 after a modest improvement in Q1, as weak domestic consumption and sluggish external demand prompted companies to cut capital spending. In the UK, economic growth was stronger in Q2 than Q1, even as industrial growth was partly offset by a fall in construction activity. The outlook for Q3 is subdued with the fuller effects of Brexit yet to play out (Table V.1).

Among major EMEs, growth performance in recent quarters remains divergent. The recent uptick in commodity prices has provided some relief to commodity exporters, while net terms of trade gains for commodity importers are moderating. In China,

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

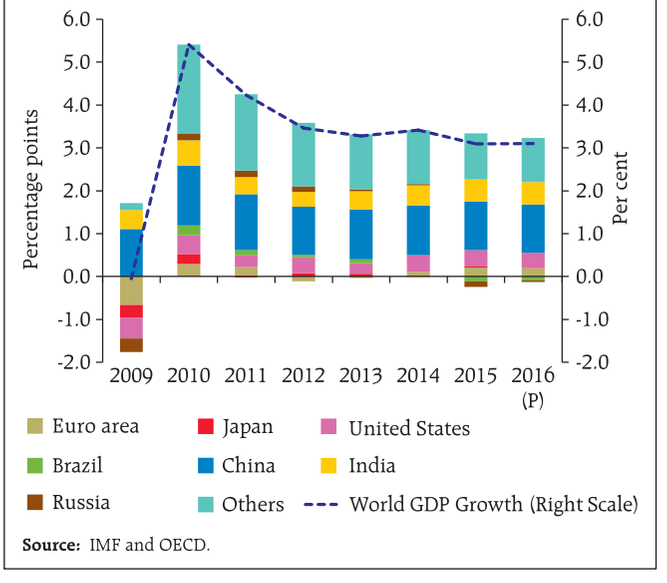
(Per cent)

	2015: Q2	2015: Q3	2015: Q4	2016: Q1	2016: Q2	2016 (P)	2017 (P)
Advanced Economies (AEs)							
US	2.6	2.0	0.9	0.8	1.4	2.2	2.5
Euro Area	1.6	1.2	1.6	2.4	1.2	1.6	1.4
Japan	-1.9	2.1	-1.7	2.1	0.7	0.3	0.1
UK	2.0	1.2	2.8	1.6	2.8	1.7	1.3
Canada	-0.5	2.2	0.5	2.5	-1.6	1.4	2.1
Emerging Market Economies (EMEs)							
China	7.2	7.2	6.0	4.8	7.2	6.6	6.2
Brazil	-9.1	-6.2	-5.1	-1.7	-2.2	-3.3	0.5
Russia*	-4.5	-3.7	-3.8	-1.2	-0.6	-1.2	1.0
South Africa	-2.0	0.3	0.4	-1.2	3.3	0.1	1.0
Korea	1.6	4.8	2.8	2.0	3.2	2.7	2.9
Thailand	2.1	3.6	3.4	4.0	3.2	3.0	3.2
Malaysia	3.6	3.6	4.8	4.0	2.8	4.4	4.8
Mexico	3.3	2.8	1.8	2.0	-0.7	2.5	2.6
Saudi Arabia**	-4.7	2.1	5.9	2.8	-	1.2	2.0
Memo					**2015**	**2016 (P)**	**2017 (P)**
World Output					3.1	3.1	3.4
World Trade Volume					2.7	1.7	1.8 - 3.1

P : Projection, * year-on-year, **: Seasonally Unadjusted.
Source: Bloomberg, IMF, WTO and Eurostat.

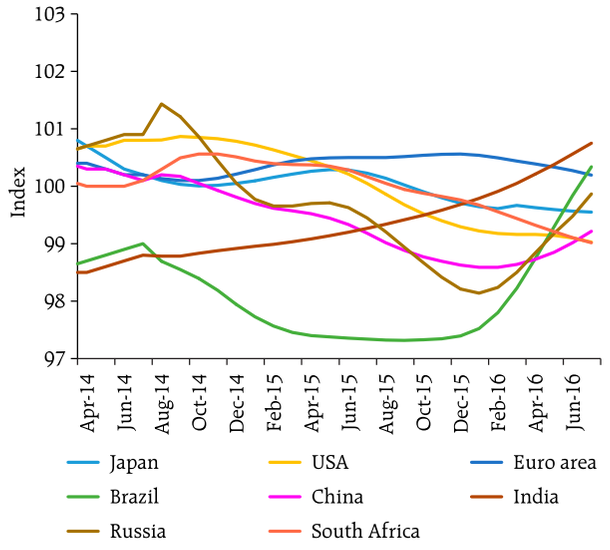
growth held steady at 6.7 per cent y-o-y in Q2 on the back of strong policy stimulus. Private investment growth, however, shrank to a record low. In Q3, factory output and retail sales grew faster than expected in August, underpinned by housing market and government infrastructure spending. By contrast, the Brazilian economy continues to face deep recession in the midst of political uncertainty undermining consumer and business confidence, but the recent uptick in commodity prices could alleviate some stress. In Russia, recessionary conditions are diminishing as reflected in the economy contracting at a slower rate in Q2 on the support of a modest pick-up in the industrial sector and transportation services. The South African economy continued to weaken in Q2, following a contraction in Q1, due to slowing demand from China and low commodity prices. China and India are projected to contribute more than half of global growth in 2016 (Chart V.1). The OECD's composite leading indicators point to stable growth in the US, the Euro area and Japan, and a pick up in growth momentum in China, Russia, Brazil and India (Chart V.2).

Chart V.1: Relative Contribution of Major Economies to World GDP Growth



Source: IMF and OECD.

Chart V.2: OECD Leading Indicators



Source: OECD.

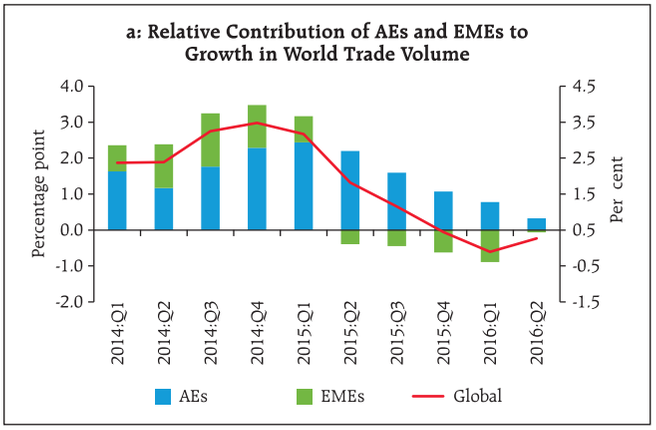
Global trade decelerated further in H1 of 2016 in an environment of subdued demand and rising protectionism, exacerbated by uncertainties surrounding Brexit, the Fed's monetary policy stance and volatile financial markets (Chart V.3a). While the pace of contraction in trade volume of EMEs reduced markedly in Q2, the slowdown in the trade volume of AEs has continued since Q1 of 2015. Within EMEs, trade volume contracted in all major regions in Q2, except Central and Eastern Europe where weakening currencies have given a significant boost to exports. The pace of contraction reduced sharply in Emerging Asia, with currency depreciation supporting exports in a number of countries, and stimulus driven demand boosting imports in China (Chart V.3b). The World Trade Organisation projects that global trade volume growth in 2016 would be the lowest since the global financial crisis.

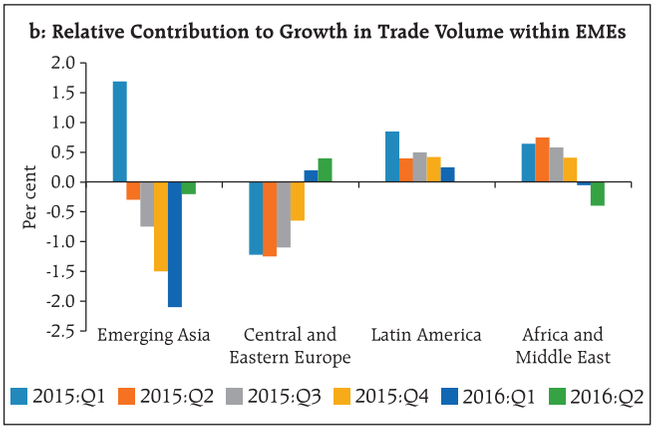
V.2 Commodity Prices and Global Inflation

Global commodity prices have been largely driven by supply conditions even as demand remains soft, barring those of precious metals lifted by safe haven buying. Crude oil prices rallied between January and May on account of supply disruptions in several OPEC countries and North America and a softening of the US dollar, but eased thereafter on the build-up of inventories, particularly in the US. Prices have remained range bound since early September (Chart V.4a).

Prices of precious metals have rallied on strong investor demand, weak dollar and safe haven buying. Persistently weak US economic data have been driving up investment demand for precious metals, with Brexit providing a further boost. Post Brexit, gold prices surged to a two-year high and have remained elevated so far. Iron ore prices, which soared in 2016 due to stimulus and property boom driven demand from China, have subsided lately due to increased supply from Brazil and

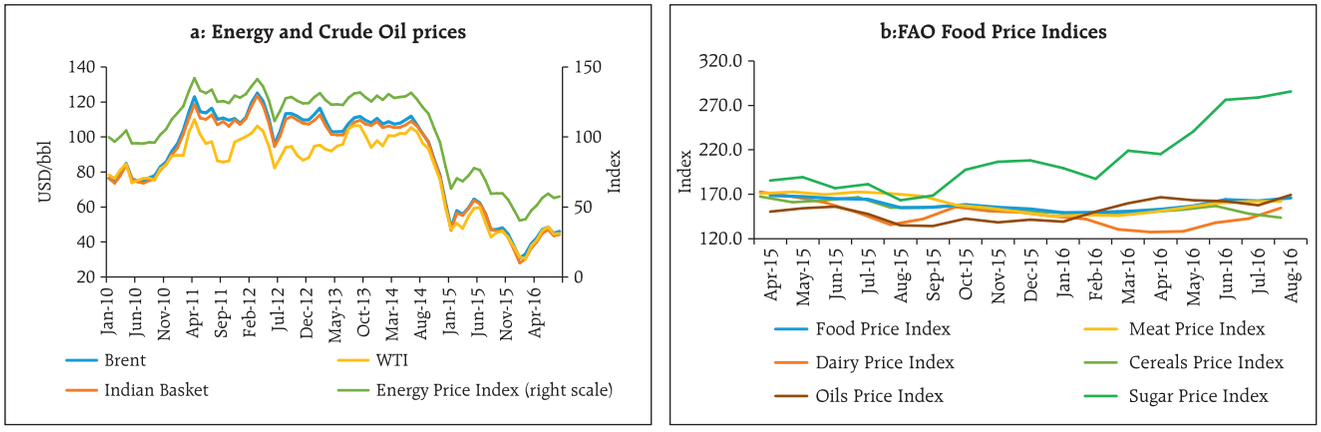
Chart V.3: World Trade Volume





Source: Based on CPB Netherlands Bureau for Economic Policy Analysis database.

Chart V.4: Global Commodity Prices



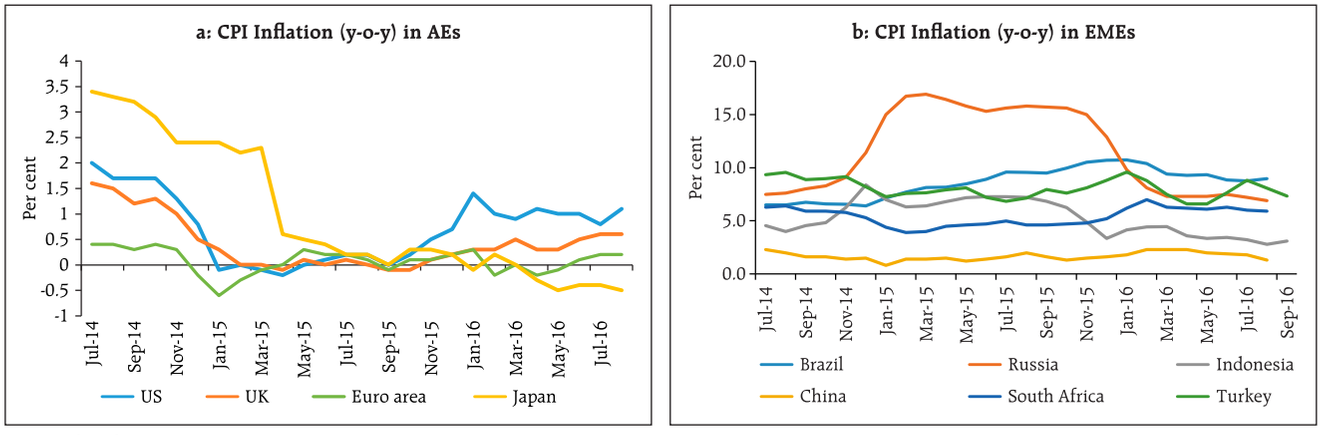
Source: World Bank, PPAC and FAO.

Australia. Food prices have been generally trended upwards since January 2016, with sugar, in particular, showing a sharp increase due to drought in Brazil (Chart V.4b).

Global inflationary pressures remain contained by weak global growth and soft commodity prices. In AEs, the general price level remained virtually unchanged despite monetary easing, although core inflation was firmer (Chart V.5a). In the US, barring medical care and shelter, most of the remaining sectors of the economy faced negative price pressures. In the Euro area, deflation risks increased as the economic outlook deteriorated and business and consumer sentiment weakened, with declining energy prices, strengthening of the euro, subdued wage growth and weak productivity growth accentuating these risks. Japan has also remained in deflation mode for the past five months, induced by faltering consumption and an unrelentingly strong yen.

By contrast, inflation remains diverse among major EMEs. In Brazil, Russia and South Africa, inflation has been well above the target due to weak currency, food inflation and structural rigidities, though these pressures have been easing in recent months. On the other hand, China, Korea, Indonesia, Malaysia and Thailand face benign and ebbing inflationary situations

Chart V.5: Global Inflation



Source: Bloomberg.

(Chart V.5b). By and large, inflation in EMEs has benefitted from low commodity prices, ebbing currency depreciation pressures and slack in demand, both at home and abroad (Box V.1).

Box V.1: Exchange Rate and Commodity Prices Pass-through to Inflation in EMEs

Exchange rate and commodity prices are two important transmission channels of inflation across open economies. By what percentage inflation changes in response to a percentage change in exchange rate and commodity prices – the pass-through – is, however, determined by several factors, of which the credibility of monetary policy in anchoring inflation expectations is an important one (Taylor, 2000). It is imperative to have a good measure of this pass-through in order to understand the inflationary process and fashion appropriate monetary policy responses. In this context, recent years have seen increased EME currency volatility, driven by policy and political uncertainties emanating from several parts of the globe. There has also been a significant decline in global commodity prices, particularly crude oil, following supply-demand mismatches, though supply disruptions have led to some firming up since January 2016. How much of these currency and commodity prices movements have influenced inflation in some select EMEs is examined by estimating a reduced form equation derived from a partial equilibrium micro-founded pricing behavior of firms. Specifically, the pricing decision of a firm is determined by marginal costs, mark-ups, exchange rate changes, wage costs and income in the exporting and importing countries. In reduced form, this can be specified as:

$$p_t^d = \beta + \alpha_1 e_t + \alpha_2 c_t^f + \alpha_3 pc_t^f + \alpha_4 c_t^d + \alpha_5 y_t^f + \alpha_6 y_t^d + \varepsilon_t$$

where, p= consumer prices; e = exchange rate; c = costs; pc = commodity prices (crude oil), y = income (demand) and superscripts d and f are domestic and foreign country, respectively.

Estimates carried out in difference form for a panel of 17 EMEs[1] employing a battery of estimation methods for the period 2005:Q1 to 2016:Q2 reveal that exchange rates, commodity prices, exporting country's costs and domestic demand influence inflation in these EMEs (Table 1). However, the extent of this influence has declined in the post-crisis period, even while inflation has become more persistent. The pass-through of exchange rate depreciation is far stronger than that of appreciation. Despite the weakening of pass-through, inflation in EMEs has benefitted from the decline in commodity prices and relative currency stability in the post-crisis period.

Table 1: Regression results

Variable	Full Sample	Asymmetric ERPT	Pre-Crisis	Post-Crisis
$\Delta p_t^d\ (-1)$	0.24*	0.23*	0.13*	0.24*
$\sum_{i=0}^{3} \Delta e_t(-i)$	-0.09*	Dep^: -0.11* App^: -0.05*	-0.12*	-0.09*
$\sum_{i=0}^{1} \Delta c_t^f(-i)$	0.31*	0.33*	0.36*	0.31*
$\sum_{i=0}^{1} \Delta pc_t^f(-i)$	0.02*	0.02*	0.03*	0.01*
$\sum_{i=0}^{2} \Delta y_t^d(-i)$	0.01*	0.01*	0.03*	0.01**
$ec\ (-1)$	-0.03*	-0.02*	-0.04*	-0.02

Staff estimates; *Significant at 5 per cent; **Significant at 10 per cent; Dep^: Depreciation; App^: Appreciation; ec: error correction; ERPT: exchange rate pass-through.

Note: Long-run cointegration is estimated using dynamic ordinary least squares and the short-run using Arellano-Bond generalised method of moments. The Sargan test for over indentifying restrictions and Arellano-Bond autocorrelation test are found to be satisfactory for all the models.

References:

Aron, J., Macdonald, R. and Muellbauer, J. (2014), "Exchange rate pass-through in developing and emerging markets: A survey of conceptual, methodological and policy issues, and selected empirical findings", *Journal of Development Studies*, 50(1), pp.101-143.

Taylor, B. J. (2000), "Low inflation, pass-through and the pricing power of firms", *European Economic Review*, 44(7), pp. 1389–1408.

[1] Brazil, Chile, China, Colombia, Czech Republic, Hungary, India, Indonesia, South Korea, Malaysia, Mexico, the Philippines, Poland, Russia, South Africa, Thailand and Turkey.

V.3 Monetary Policy Stance

Globally, monetary policy stances remained accommodative in Q2 of 2016. In Q3 so far, some AEs have eased further, as Brexit paralysed markets and added to global uncertainty. The Fed has kept its policy rate unchanged since end-2015; however, in its September meeting, it indicated that the case for a rate hike has strengthened. After pausing for several months, both the UK and Japan have renewed monetary easing as a response to Brexit. The Bank of England cut its policy rate in August and also expanded its asset purchase programme. The Bank of Japan doubled its exchange traded funds (ETF) purchases in July to contain the surge in yen to an almost two year high. In September, it shifted its policy focus from targeting base money to targeting 10-year government bond yields at zero per cent. The ECB has kept its monetary policy stance unchanged since the last cut in the policy rate in March 2016.

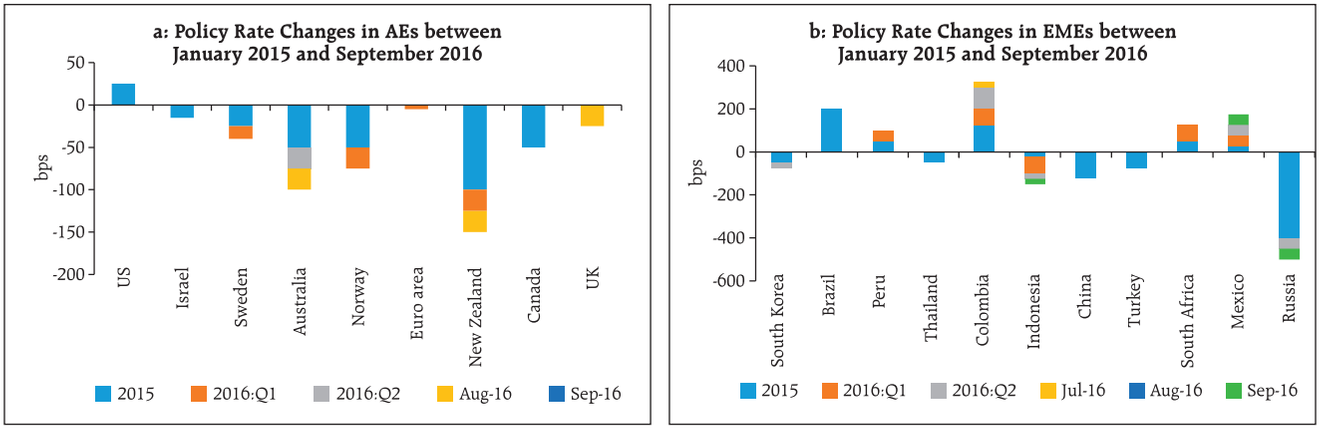
Monetary policy stances in EMEs have varied. South Korea and Indonesia cut policy rates in Q2, with the latter easing further in September to support the economy as expectations of a rate increase by the US Fed diminished. Russia cut its policy rate by 50 basis points each in June and September on ebbing inflationary pressures. In contrast, Colombia and Mexico increased policy rates by 200 bps and 150 bps, respectively, during 2016 so far to counter inflationary pressures emanating from depreciating currencies. Brazil kept its policy rate unchanged in the face of a crippling recession even though inflation remained well above the target (Charts V.6a & b).

V.4 Global Financial Markets

Global financial markets rebounded from mid-February through June 23 as positive sentiments prevailed due to continuing accommodative monetary policy stances by central banks in AEs and the widely held expectation that the UK would remain in the European Union. Better than expected global economic conditions, recovery in oil price, stimulus in China, and pushing back of a rate hike by the US Fed reinforced the calm in the financial markets. The unexpected outcome of the Brexit referendum surprised financial markets in June. The initial reactions were severe with large movements in bond yields, equity prices and exchange rates. However, financial markets stabilised quickly, stock markets climbed to intra-year highs in August, and bond yields came off recent lows with volatility easing.

Equity markets gained steadily during Q2 of 2016, as risk sentiment improved despite Brexit uncertainties and US economic data providing mixed signals. However, the sharp sell-off around the world triggered

Chart V.6: Policy Rates



Source: Bloomberg.

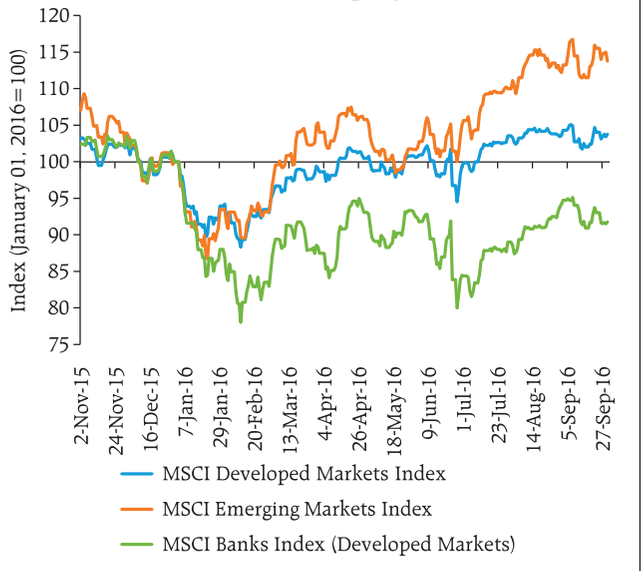
by Brexit on June 23 led to a record loss of US$ 3 trillion in market capitalisation in the next two trading days. Volatility surged immediately, but also receded quickly when markets realised that the exit would be a long drawn process. Equity markets subsequently recouped losses, barring UK and European banks. Japanese equity markets rebounded quickly as various measures to stabilise markets were announced. Euro area equity prices, which dropped by around 9 per cent immediately after Brexit, gradually returned to mid-June levels. The impact was less pronounced in the US, as market expected a delay in policy tightening by the Fed even as US payrolls data and corporate earnings beat expectations.

EME equity markets performed relatively well in Q2 of 2016 supported by global low policy rates and low volatility. In May, they were impacted by anticipation of a rate hike by the Fed and concerns relating to growth and political risks in some economies. The initial risk-off and flight-to-safety response to the Brexit referendum in June was fully offset by mid-July. In Q3, equity prices have gained by about 4.4 per cent in AEs and 8.3 per cent in EMEs (Chart V.7).

Sovereign bond yields, which had been falling in major AEs, rose in the later part of April due to a global sell-off triggered from Europe, which spread to the US. In May, bond markets traded range-bound, though US treasury securities remained more attractive relative to sovereign securities of other AEs offering negative yields. Post Brexit, increased risk-off behaviour of investors led to a sharp fall in bond yields across major AEs that continued till about mid-July. Thereafter, yields recovered and hardened till mid-September on concerns over major central banks' ability to continue with unconventional asset purchases. They have recently softened again after the FOMC held rates unchanged in September.

Bond yields in EMEs have also eased, buoyed by dovish monetary policy stances of some central banks and rise in commodity prices. Inflows to EME bond markets were modest in May on rising prospects of a Fed rate hike and concerns about growth and political

Chart V.7: Global Equity Markets

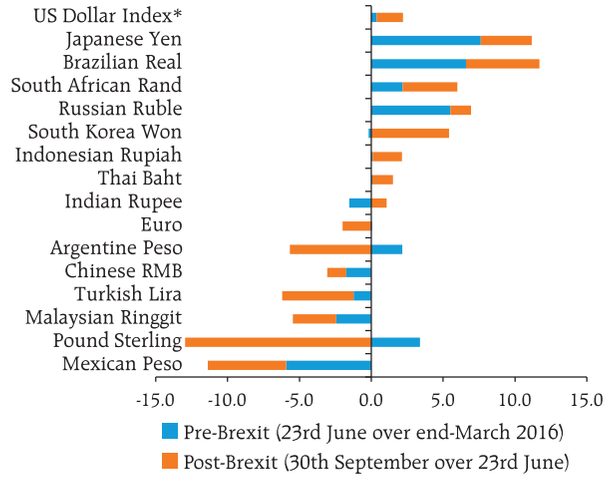


Source: Bloomberg.

risks in a number of EMEs. However, in June, inflows turned up sharply following dovish signals from the ECB and reduced expectations on tightening by the US Fed, barring some transitory sell-offs around the Brexit referendum. The search for yields in the bond markets of EMEs has further intensified in Q3, with investors taking advantage of record low interest rates in AEs and chasing carry trade. Consequently, yields consistently eased in major EMEs, except in Turkey and South Africa.

In currency markets, the divergence in growth and monetary policy in AEs remained the major driving factors. The US dollar depreciated against trading partner currencies during March to late April, largely reflecting revised expectations on the path of the US policy rate. It strengthened subsequently with the widening of long-term bond yield spreads between the US and the Euro area. The appreciation of the yen against major currencies continued through Q2 and Q3, reflecting changing perceptions about monetary policy in Japan *vis-a-vis* other reserve currencies, and on safe haven flows. The pound sterling, which strengthened against the US dollar in April, started weakening in May on Brexit concerns and fell sharply on the day of the outcome. Since then, it has depreciated by 12.4 per cent against the US dollar (Chart V.8).

Chart V.8: Exchange Rate (+)Appreciation/ (-)Depreciation in Major Currencies *vis-a-vis* US Dollar



* Nominal broad Index available up to September 23, 2016.
Source: Bloomberg.

Emerging market currencies have remained susceptible to both global and domestic factors. While the Chinese renminbi has depreciated modestly since April, the Turkish lira and the Mexican peso have weakened significantly. The South African rand has turned weaker since mid-August due to economic weakness and escalation of political concerns. By contrast, the Brazilian real gained against the US dollar in Q2 and Q3, driven by global liquidity, bottoming commodity prices and changing domestic political dynamics. The Russian ruble, which rallied between January and June, has stabilised, barring some pressures in mid-July and early August due to bearish oil market conditions and political tensions.

In sum, risks to global economic activity and trade are skewed to the downside. While EMEs seem to be recovering, growth in major AEs remains subdued. Inflation is expected to remain benign. Financial markets, despite the recent calm, remain vulnerable to swings in investor sentiment, driven by policy and political uncertainty.

SPEECHES

*The Independence of the Central Bank**

Raghuram G. Rajan

Good afternoon. It is great to be invited to speak at St. Stephen's College. In 1980, I toyed with the idea of joining my best friends in applying for admission to the BA in Economics here. Because I had worked so hard for the IIT exam, however, I succumbed to the sunk cost fallacy and studied Electrical Engineering. I don't regret a moment of that misspent youth but I hope you will grant me temporary membership of your club today!

Over the last few weeks, I have outlined the RBI's approach to inflation, distressed debt, financial inclusion, banking sector reform, and market reform. Today, I'd like to first discuss why central banking is not as easy as it appears (just raise or cut interest rates!) and why it needs decisions, sometimes unpopular or hard-to-explain ones, to be made under conditions of extreme uncertainty. This will then lead in to my arguments about why we need an independent central bank.

To set the stage, think back to the summer of 2013. After Chairman Bernanke hinted that the United States might end quantitative easing, capital started flowing out of emerging markets, especially those deemed to have weak macroeconomic fundamentals. India, with high fiscal deficits, high current account deficits, and near double digit inflation, was deemed one of the 'Fragile Five' countries. The rupee plunged as debt investors scurried to safe havens. The talk in international markets was that the rupee could reach a hundred to the dollar, and some international commentators, knowing little about India, talked about an Indian 'crisis'.

In early August 2013, I was appointed to succeed Dr. Subbarao as Governor of the Reserve Bank of India. From the Finance Ministry, I went to the RBI to prepare for the transition.

We had to get back the confidence of international investors. And that meant convincing them that India was still an attractive place to invest in, despite the then paralysed economic reforms. Furthermore, they had to believe that the rupee would retain its value going forward.

So I went from room to room asking RBI staff what they were working on, and what ideas for financial sector reform they were prepared to contemplate. We packaged our ideas into a reform program over the medium term that could change the narrative on India, especially given the fiscal reforms the government had initiated.

To bolster the value of the rupee, we had to give investors more certainty that future inflation would be low. After all, it was primarily India's higher inflation with respect to the rest of the world that led to periodic abrupt falls in rupee value. Then Deputy Governor and now my successor, Dr. Urjit Patel, agreed to prepare a report on how we could move to a new inflation-focused monetary regime. That would help very much in the medium term, but in the short run we had to establish that we were not heading towards crisis. The easiest way to demonstrate that was to show we could raise plenty of foreign exchange.

My thought turned to an iffy scheme that had been presented to me in North Block. Essentially, bankers had told us they would bring plenty of dollars in as FCNR(B) 3 year deposits, which they would convert to rupees and invest in India. In return, they wanted a cheap rate at which they could convert rupees back into dollars 3 years hence. So long as the Reserve Bank could be trusted to provide the forward dollars, this was a great deal for the banks – they got rupee interest income and a guaranteed cheap price at which they could swap maturing rupees back into dollars.

* Remarks by Dr. Raghuram G. Rajan, Former Governor RBI, on September 3rd 2016, at St. Stephen's College, New Delhi.

As I have said elsewhere, I did not think much of this scheme when I first heard of it, dismissing it as a clever ploy by bankers to get a subsidy from a country in trouble. But it refused to go away, and my old colleagues at the finance ministry thought it worth a try as the crisis of confidence worsened.

I too became more favourable after thinking carefully about it. First, I weighed the balance of risks. If we did not move the rupee back to fundamental value, every 1 rupee rise in the dollar-rupee rate would costs us ₹40,000 crores more in import costs. Assuming the rupee was undervalued by ₹3 for a couple of years, this would mean a loss of lakhs of crores to national income. In contrast, even if the scheme was wildly successful in attracting inflows, the payout would only be in the tens of thousands of crores. Of course, there might be cheaper ways of restoring confidence but it was not clear what they were.

Discussions with my soon-to-be colleagues at the RBI threw up another rationale. The bankers who proposed the scheme were saying that if the money came in, the rupee would appreciate, and it would cost us less to offer the forward subsidy. This was self-serving and not quite right. What was right was that if we changed the narrative on India, and the rupee continued appreciating between the point when the money came in and the point we covered our liabilities to the bankers in forward markets, it would cost us significantly less. In fact, we might even make money on the deal. But what if the rupee plunged after the dollars flowed in? There were no certainties here.

The bottom line was that the scheme was a measured risk, with a probability that the RBI would lose money, a certainty that the bankers would make money, but also a reasonable chance that the country would be significantly better off. Having obtained the concurrence of the Finance Ministry, the RBI Governor had to decide.

Policy making is about deciding in the face of uncertainty, after weighing the alternatives as best as one can. On the day I was to take over, with no good options on the table, I had to choose the least bad one. I decided to go ahead.

The afternoon of September 4th 2013, we announced the package of measures. The FCNR(B) scheme drew in $26 billion, more than any of us anticipated. But more important, confidence picked up, the rupee continued strengthening beyond when the money came in, partly because the global investor mood as well as Indian electoral projections also changed, and we covered our forward swaps cheaply. We are fully covered for outflows today and have made money on the deal. The rupee has been one of the most stable emerging market currencies since then.

Of course, in hindsight it seems like it was the obvious thing to do because it worked. The reality is we will never know for certain! Perhaps it was the other elements of the package, perhaps it was everything together. Autobiographies are always written as if the author had it all mapped out with perfect foresight, ignoring the risks and uncertainties at that time. This misleads, as much as those beautiful photographs of a past holiday abstract from the heat, the mosquitoes, and the lack of connectivity. Policy making invariably involves taking measured risks in the face of uncertainty.

Clearly, we do not want to be in the position we were in August 2013 ever again. Macroeconomic stability is of paramount importance for India. Equally clearly, drawing from this experience, the central bank must have the resources, the knowledge, and the professionalism to act when the situation warrants. In the rest of this talk, I want to explain why this means India needs a strong and independent RBI to ensure macroeconomic stability. Then I will discuss what I think is needed to ensure such independence going forward.

The Need for Macroeconomic Stability

Growth is good, but growth with stability is better, especially in a poor country where so many people live at the margin. For the RBI, it means

ensuring growth does not exceed our potential, adopting prudential policies that reduce our risk, and building sufficient buffers that the country is protected against shocks.

Having your cake and eating it too: Interest Rates and the Exchange Rate

This mission, however, exposes the central bank to criticism. If we try and bring down inflation, interest rates will remain higher than borrowers desire. If inflation comes down, the currency will depreciate less than some exporters desire. If we push the banks to clean up, banks may be less tolerant towards habitual non-payers. Whatever we do, someone will object. The RBI then becomes the favorite scapegoat for underperformance – if exports are not picking up, it is because interest rates are too high and because the exchange rate is too strong.

Unlike the complainants, the RBI does not have the luxury of economic inconsistency. If we start buying dollars in a big way to depreciate the exchange rate, we will be able to buy fewer government bonds if we are to maintain control over liquidity. The consequence will be higher interest rates in bond market. Moreover, the depreciated exchange rate will mean higher inflation, which in turn will mean higher policy interest rates given the inflation objective the government has set for us. Once again, this means higher interest rates. Just look at Brazil or Russia to understand you cannot have a significantly depreciated exchange rate and lower interest rates at the same time if you want stable growth!

First Year Economics: There is no free lunch. RBI Dividend Policy

A fundamental lesson in economics is there is no free lunch. This can be seen in the matter of the RBI dividend: Some commentators seem to suggest that public sector banks could be recapitalised entirely if only the RBI paid a larger dividend to the Government. Let me explain why matters are not so simple. If what follows is complicated, trust me, it is. But pay attention, students, especially because it is about your money. I am sure you will understand.

How does the RBI generate surplus profits? We, of course, print the currency held by the public, as well as issue deposits (*i.e.* reserves) to commercial banks. Those are our fixed liabilities. As we issue these liabilities, we buy financial assets from the market. We do not pay interest on our liabilities. However the financial assets we hold, typically domestic and foreign government bonds, do pay interest. So we generate a large net interest income simply because we pay nothing on virtually all our liabilities.

Our total costs, largely for currency printing and banker commissions, amount to only about 1/7th of our total net interest income. So we earn a large surplus profit because of the RBI's role as the manager of the country's currency. This belongs entirely to the country's citizens. Therefore, after setting aside what is needed to be retained as equity capital to maintain the creditworthiness of the RBI, the RBI Board pays out the remaining surplus to the RBI's owner, the Government.

The RBI Board has decided it wants the RBI to have an international AAA rating so that RBI can undertake international transactions easily, even when the Government is in perceived difficulty – in the midst of the Taper Tantrum, no bank questioned our ability to deliver on the FCNR(B) swaps, even though the liability could have been tens of thousands of crores. Based on sophisticated risk analysis by the RBI's staff, the Board has decided in the last three years that the RBI's equity position, currently around 10 lakh crores, is enough for the purpose. It therefore has paid out the entire surplus generated to the Government, amounting to about ₹66,000 crores each in the last two years, without holding anything back. This is of the order of magnitude of the dividends paid by the entire public sector to the Government. In my three years at the RBI, we have paid almost as much dividend to the government as in the entire previous decade. Yet some suggest we should pay more, a special dividend over and above the surplus we generate.

Even if it were legally possible to pay unrealised surplus (it is not), and even if the Board were convinced a higher dividend would not compromise the creditworthiness of the RBI, there is a more fundamental economic reason why a special dividend would not help the Government with its budgetary constraints.

Here's why: Much of the surplus we make comes from the interest we get on government assets or from the capital gains we make off other market participants. When we pay this to the government as dividends, we are putting back into the system the money we made from it – there is no additional money printing or reserve creation involved.[1] But when we pay a special dividend to the government, we have to create additional permanent reserves, or more colloquially, print money. Every year, we have in mind a growth rate of permanent reserves consistent with the economy's cash needs and our inflation goals. Given that budgeted growth rate, to accommodate the special dividend we will have to withdraw an equivalent amount of money from the public by selling government bonds in our portfolio (or alternatively, doing fewer open market purchases than we budgeted).

Of course, the Government can use the special dividend to spend, reducing its public borrowing by that amount. But the RBI will have to sell bonds of exactly that amount to the public in order to stick to its target for money creation. The overall net sale of Government bonds by the Government and the RBI combined to the public (that is, the effective public sector borrowing requirement) will not change. But the entire objective of financing Government spending with a special RBI dividend is to reduce overall Government bond sales to the public. That objective is not achieved!

The bottom line is that the RBI should transfer to the government the entire surplus, retaining just enough buffers that are consistent with good central bank risk management practice. Indeed, this year the Board paid out an extra 8,000 crores than was promised to the Government around budget time. Separately, the government can infuse capital into the banks. The two decisions need not be linked. There are no creative ways of extracting more money from the RBI – there is no free lunch! Instead, the Government should acknowledge its substantial equity position in the RBI and subtract it from its outstanding debt when it announces its net debt position. That would satisfy all concerned without monetary damage.

If what I have said just now seems complicated, it is, but it is also the correct economic reasoning. Similar detailed rationales lead us to turn down demands to cut interest rates in the face of high inflation, to depreciate or appreciate the exchange rate depending on the whim of the moment, to use foreign exchange reserves to fund projects, to display forbearance in classifying bad loans or waived farmer loans as NPAs, and so on…

We have been tasked with a job of maintaining macroeconomic stability, and often that task requires us to refuse seemingly obvious and attractive proposals. The reason why we have to do what we have to do may not be easy for every unspecialised person, even ones with substantial economics training, to grasp quickly. Of course, we still must explain to the best of our ability but we also need to create a structure where the public trusts the central bank to do the right thing. This then is why we need a trusted independent central bank.

Central Bank Independence

In this environment, where the central bank has to occasionally stand firm against the highest echelons of central and state government, recall the words of my predecessor, Dr. Subbarao, when he said 'I do hope the Finance Minister will one day say, 'I am often frustrated by the Reserve Bank, so frustrated that I want to go for a walk, even if I have to walk alone. But thank God, the Reserve Bank exists.' I would go a little further. The Reserve Bank cannot just exist, its ability to say 'No!' has to be protected. At the same time, the central bank

[1] This is not strictly true. Our earnings on foreign exchange assets come from outside the system, so when we pay this to the Government as dividend, we are printing additional money. We do account for this.

cannot become free of all constraints, it has to work under a framework set by the Government. This requires a number of actions.

Outline Responsibilities of the RBI

When the responsibilities of the RBI are fuzzy, its actions can continuously be questioned. Instead, if the constitutional authorities outline a framework for the responsibilities of the RBI, it can take actions consistent with those responsibilities and be held to outcomes. The inflation objectives recently set for the RBI by the Government are an example of what is needed. Critics can lambast the RBI if it fails continuously to meet the objectives, but if they want it to lower interest rates even when the RBI barely meets its objectives, they should instead petition the Government to change the objectives.

Similarly, the RBI Board has adopted a risk management framework which indicates the level of equity the RBI needs, given the risks it faces. The dividend policy of the RBI then becomes a technical matter of how much residual surplus is available each year after bolstering equity. Frameworks thus reduce the space for differences.

The RBI's role in macroeconomic stability is, however, still fuzzy. While RBI clearly has responsibility for the safety and soundness of credit institutions and the stability of the external account, there are some areas that are hazier. For example, with an inflation focused framework, the RBI's ability to be accommodative depends on fiscal prudence from the center and states. How much should the RBI warn on fiscal profligacy, including the building up of contingent liabilities, and when should such warning be seen as interfering in the legitimate decisions of the elected representatives of the people? This is an area where clarity would be useful.

Strengthen Oversight

The freedom the RBI has to take operational decisions such as the FCNR (B) swap arrangement, *albeit* invariably in consultation with the Finance Ministry, is important. However, there are always government entities that are seeking oversight over various aspects of the RBI's activities. Multiple layers of scrutiny, especially by entities that do not have the technical understanding, will only hamper decision making. Instead, the government-appointed RBI Board, which includes *ex-officio* government officials as well as government appointees, should continue to play its key oversight role. In this regard, all important RBI decisions including budgets, licenses, regulation, and supervision are now either approved by the Board or one of its sub-committees. Vacancies in the RBI Board, which have remained unfilled for many months now, should be filled quickly so that the full expertise and oversight of the Board can be utilised.

It is also important that Parliament understand what the central bank is doing. The Governor and Deputy Governors interact regularly with various parliamentary committees, but we have also initiated a six-monthly interaction with the Parliamentary Standing Committee on Finance, where the Governor reports on the activities of the Bank, and the Committee offers its views and concerns.

Rank of RBI Governor

There is a reason why Central Bank Governors sit at the table along with the Finance Ministers in G-20 meetings. It is that the Central Bank Governor, unlike other regulators or government secretaries, has command over significant policy levers and has to occasionally disagree with the most powerful people in the country.

It is dangerous to have a *de facto* powerful position with low *de jure* status. Today, the RBI Governor has the salary of the Cabinet Secretary. He or she is appointed by the Prime Minister in consultation with the Finance Minister. The Governor's rank in the government hierarchy is not defined but it is generally agreed that decisions will only be explained only to the Prime Minister and the Finance Minister. There is an informal understanding in India that the Governor has

the room to make needed decisions. In the interests of macroeconomic stability, none of this should be changed, though if these issues are ever revisited, there may be some virtue in explicitly setting the Governor's rank commensurate with her position as the most important technocrat in charge of economic policy in the country.

Communication

I do not fool myself into thinking that reporters and TV cameras follow me around everywhere because I am a magnetic speaker. They follow RBI Governors around because they may offer market-moving information on policy. Fortunately, I have escaped unintentionally saying anything that moves markets.

At the same time, while different RBI Governors have different approaches to communication, no one can dispense with it. Unlike a developed country, where the Central Bank Chairman can offer periodic Delphic pronouncements about the course of monetary policy, and occasionally remonstrate with Parliament or the government about the course of fiscal policy, in our developing democracy the RBI Governor has to continuously make the case for the actions the central bank is taking, including the many structural reforms that are underway.

Indeed, communication is as much about educating as it is about informing. For instance, even as I explained to entrepreneurs and retail borrowers why interest rates were not falling faster, I had to use the price of dosas to explain to pensioners why they were actually better off earning lower nominal but higher real interest rates. Public understanding can help ease the way for reforms, as well as increase support for policies. The RBI Governor therefore has to explain again and again.

Occasionally, of course, the Governor has to warn about the dangers of certain courses of action or certain tendencies in the economy for growth and macroeconomic stability. Finally, the Governor is also a role model for the youth in this country, and should therefore not duck the responsibility to urge them to follow the highest standards of citizenship when he or she is invited to speak directly to them.

Conclusion

My parents could give me a wonderful childhood and a great education in this country. We all grow up with such debts, and public service is a way to partially repay them. However, the last few years, working with dedicated colleagues at the RBI and the Finance Ministry, have been so fulfilling that I think I have received rather than given. I believe we have undertaken important reforms in payments, in banking, in the conduct of monetary policy and liquidity management, in financial markets, and in the resolution of distress, as well as within the RBI itself. Only time will tell whether they will have lasting impact, but I tried to do the best job I could, without fear or favor. This is the last public speech I will give in India for a while – my successor has to take over the RBI's communication and I want to get out of his way. It has been an honor to work for the country and especially to talk to people like you, its future. Thanks for listening to me.

*Challenges in Developing the Bond Market in BRICS**

R. Gandhi

I. Introduction

I notice that the Seminar is on developing bond markets in BRICS. Though bond markets include both the government securities market and the corporate bonds market, I would dwell upon only on corporate debt market. The reason is simple. The government securities market in the BRICS countries have attained a definite positions, whereas the corporate bonds market are at nascent stage.

2. For example, India's Government securities market – by whatever criterion – is as developed as any other emerging market. It compares favourably with many AE markets as well; despite its thin investor base (on which we need to work more), in terms of instruments, transparency, trading and settlement systems and liquidity, the government securities market has grown in a big way. So, I am clear in my mind that at this stage of our development, our focus should be on corporate bond markets.

3. We do not have a well developed corporate bond market, and this fact is widely recognised. Not as well recognised is the fact that even in developed economies, corporate bond markets are not as developed and as liquid as Government bond markets. It is not uncommon in advanced economies that the corporates' primary source of funds is not corporate bond market, but the credit market. Many European countries including Germany, Japan and China have achieved economic success based largely on a bank financed model. So when we talk of developing corporate bond markets we must be realistic about our goals. More importantly, we must not be blinkered in squeezing bank finance to force-feed the corporate bond market. We would do well and act wisely if we keep our efforts in this perspective.

4. With the caveats out of the way, let us get back to the issue at hand. What is happening in the global space? In an era of negative interest rates and unconventional monetary policies, with a substantial amount of global debt offering sub-zero yields, the focus is back on emerging markets (including BRICS) as investors are in search of yields.

5. Emerging economies produce 39 per cent of global output, yet they account for only 14 per cent of the global corporate bond market value. This suggests that emerging economies may be able to better utilise corporate bonds to finance their private sector and, consequently, their growth. Furthermore, as the landscape for bank-intermediated financing transforms under regulatory reforms and technological advances, the need and opportunities for domestic corporate bond markets development are apparent.

6. An IMF study on increasing corporate leverage indicates that over the period 2004-2014, non-financial corporate debt of emerging markets had grown from $4 tn to over $18 tn. Over this period the share of bonds in corporate debt has grown from 9 per cent to 17 per cent. The shift from bank finance to bond finance is slow but steady.

7. Is this trend likely to sustain? More generally, would this rise in corporate borrowing survive a reversal of the decade-and-a-half long accommodative liquidity in advanced economies? Of the $3 tn of corporate bonds in EMs, about $0.8 tn is foreign currency borrowing. If we take this as an indicator of international capital flows into EM bonds over the last decade, the indicative answer to our question is that EM corporate bond market could still continue to grow, *albeit* slower. The outflow of international capital from EM bond markets, if AEs tighten policy, would not be trend reversing.

* Special address delivered by Shri R. Gandhi, Deputy Governor at the Seminar on "Challenges in Developing the Bond Market in BRICS" conducted jointly by CII and MoF, Government of India in Mumbai on Sep 27, 2016. Assistance provided by Shri T. Rabishankar, CGM, Manoj Kumar, DGM, Siddhartha Mishra, DGM and Vivek Singh, AGM is gratefully acknowledged.

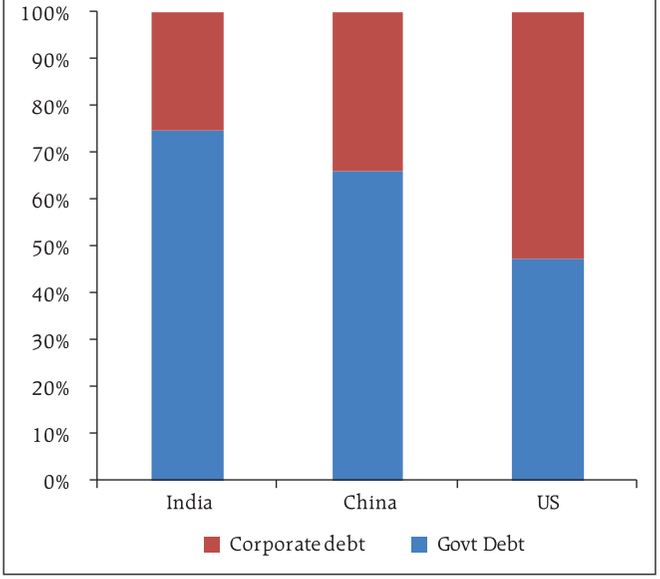
8. Now, to the all important question. What ails the corporate bond market? I will try to answer this in the context of India. Broadly speaking, high Government borrowing crowding out private debt, excessive regulatory restrictions on the investment mandates of financial institutions, corporate preference for bank financing for historically idiosyncratic reasons (*e.g.* the cash credit system), tepid investor interest for whatever reasons in all but the best rated instruments, the absence of a well-functioning bankruptcy code, *etc.* are some of the key factors. However, most of these issues are not a deal breaker as far as market development is concerned and are being tackled by the Government and other regulators.

9. Let me now touch upon the current scenario of bond markets in BRICS and India in particular, major challenges and the way forward.

II. Overview of the bond market

10. In terms of Govt debt to GDP ratio, an indicator of maturity of debt market, barring Russia, other BRICS nations have a relatively deep Sovereign debt market. It ranges from 66 per cent in Brazil to 18 per cent in Russia. India has a Govt. debt to GDP ratio of 66 per cent (Chart 1).

Chart 1: Debt to GDP Ratio (Per cent)



11. China's bond market has seen a rapid growth in recent times making it the third largest bond market of the world after US and Japan. China's bond market size is about $ 6.2 trillion. India's bond market is estimated to be about $ 1.1 trillion (Dec 2015: source ADB). Unlike US, where the corporate debt market is bigger than the Govt debt market, India and China have bigger sovereign debt segment with Sovereign debt to corporate debt ratio at 2.7 and 2.1 respectively.

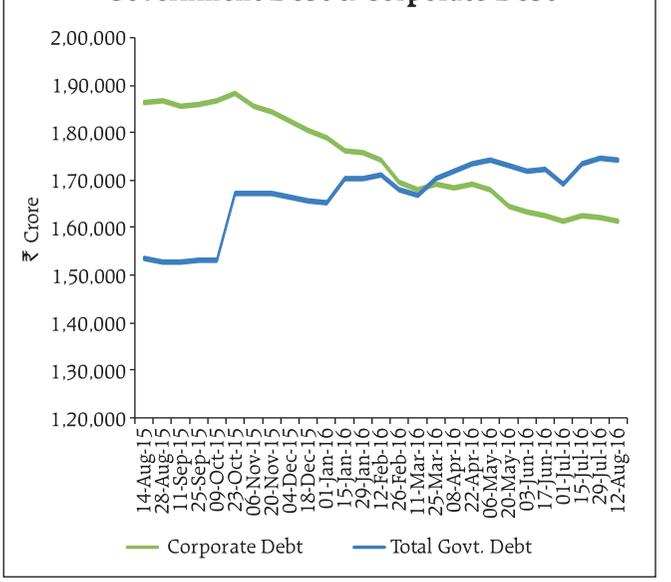
12. A snapshot of India's debt market is given in the Table below:

	Outstanding (₹ billion)	Average Daily Trading volume in Aug 2016 (₹ billion)
G-Sec	45,000	965
Spl securities	2,000	Nil
FRB	17	Nil
T-Bill	4,300	45
SDL	17,600	29.5
Corporate Debt	20,600	52

FPI investment in Debt

13. India has taken a calibrated approach to letting in foreign portfolio flows into her debt market. Over time, the FPI debt portfolio has been getting more stable with a steady inflow of long-term investors (Chart 2).

Chart 2: Outstanding FII investment in Government Debt & Corporate Debt



Obviously, it would be preferable from the point of view of financial stability that the FPI investor base consists largely of this category of investors rather than speculative capital or arbitrage funds. We would need to work towards that outcome.

III. Corporate Bond Market

14. Indian Corporate Bond market has seen some growth in recent years, both in terms of number of issues and amount. The outstanding issues which were at 12,155 as at end March 2011 increased to 22,374 by end March 2016. During the same period, the amount outstanding increased from ₹ 8,895 billion to ₹ 20,193 billion. While the types issued included fixed rate bonds, floating rate bonds, structured notes and other types, the fixed rate bonds were predominant both in number and value. Another characteristic of the issuances was that almost all issuances were by financial sector entities. Yet another peculiar feature of our Corporate Bond market is that private placements are the norm. The public issuances which were ₹ 94.51 billion in 2010-11 increased to ₹ 338 billion in 2015-16. The private placements which were ₹ 2187.85 billion in 2010-11, were ₹ 4580.73 billion in the year 2015-16. The secondary market trading which was at ₹ 6053 billion in 2010-11, was at ₹ 10224 billion in 2015-16.

15. I will elaborate what I consider the major tendencies of this market, if only to give us an idea of where reform efforts need to be directed.

16. The primary issuance of corporate bonds is dominated by private placements. More than 95 per cent of total issues are privately placed. This is not, *per se*, a shortcoming as long as there is transparency regarding such issues. As long as information about such issues and their life-cycle performance (particularly default history) is publicly available, investors should be able to take informed decisions. What is required here is a public database that is freely accessible. Effort of authorities has been towards building a trade repository of both primary and secondary activities.

17. Another significant character of India's corporate debt market is the dominance of financial institutions. Bulk of the issuance is in the so-called BFSI Sector (Banking, Financial Services and Insurance). Banking and financial services account for 74 per cent of all primary issues in FY 2015 (NSE, ISMR 2015). Non-financial corporates account only for 19 per cent of all outstanding issuance. Clearly, access of non-financial corporates is limited and needs to be encouraged. It is in this context that RBI's recent announcement to push large borrowers to the bond market assumes significance.

18. But this in itself would not be enough. Most of the corporate issuance in India is of top credit quality, with AA- or better accounting for about 80 per cent of all issuance while BBB or worse accounted for only 14 per cent in FY 2016 (CRISIL IDM 2015). What this shows is that the corporate bond market is largely accessible to the top rated borrowers. Efforts in this respect should be focused on facilitating access of low credit (high yield sounds better) borrowers to this market. For this to happen, loosening investment guidelines of insurance and pension funds would not be enough, what is required is to create an investor category to distribute risk widely. Risk taking culture assumes importance if we were to achieve this objective.

19. Thin secondary market activity not only affects transparency of the market, it also makes the process of price discovery suspect. Trading volumes have been increasing, from about ₹ 5 bn (average daily) in FY 2009 to about ₹ 45 bn in FY 2015 (CRISIL IDM 2015). But this is less than a tenth of the volumes in the G-sec market. It is unrealistic to expect that corporate bonds will trade as much as G-secs. Yet we must continue efforts to achieve a reasonable degree of transparency into the market.

20. Several measures have been taken by GoI, RBI and SEBI to aid the growth of corporate debt market in India. The impact of such development measures is evident in the growing primary issuances and also the growth

in the secondary market volumes. Measures such as rationalising the listing norms, simplification in issuance procedures and processes, standardisation of market conventions, setting up of reporting platform, implementation of DvP settlement of corporate bond trades, allowing banks to hold corporate bonds from the infrastructure sector on their balance sheet as HTM assets and issuing long term bonds without the requirement for maintaining reserves have had an encouraging impact on the market.

21. Some of the other major bottlenecks can thus be listed as below:

i. Indian market has traditionally been a bank dominated system with corporates relying more on loan financing compared to bond financing. Weaning corporates away from banks has proved to be a difficult task.

ii. Internationally insurance companies are among the largest participants in the corporate bond market. However, in India, institutional investors like Insurance companies, PFs, EPFO who have large assets under their management still have several constraints in the nature of investment mandates resulting in limited participation of such entities. Pension Funds and Insurance companies prefer Government securities as they have to provide safe and guaranteed returns.

iii. Unavailability of credit risk transfer mechanism in the corporate bond market also works as a deterrent. Though CDS has been introduced in India, there is no activity in the market. One of the major constraints is restriction on netting of MTM position against the same counterparty for capital adequacy and exposure norms.

iv. The absence of robust bankruptcy laws is also reckoned as one of the major reasons for lack of investor interest in corporate bonds.

v. Lack of centralised database which enable investors to get complete information about corporate debt market at one place.

vi. Lack of functional trading platform with CCP facility.

22. To address these issues, recently Khan Committee has made various recommendations which are being examined and implemented by the regulators and the GoI. Some of the recommendations which have been implemented are:

i. Enhancing Credit Supply for Large Borrowers through Market Mechanism –for exposure beyond a threshold.

ii. Allowing banks to provide partial credit enhancement (PCE) of 50 per cent of the bond issue size subject to the PCE provided by any single bank not exceeding 20 per cent of the bond issue size.

iii. Issuance of rupee denominated bonds overseas (Masala Bonds) by banks as AT1 and T2 capital.

iv. Permitting brokers in repo in corporate bonds.

v. Allowing FPIs to trade directly in corporate bonds.

vi. Initiating the process of accepting corporate bonds under Liquidity Adjustment Facility (LAF) of RBI.

vii. Setting up of electronic book platform for issuance of privately placed bonds for size of ₹ 500 cr and above.

viii. Setting up of centralised database of corporate bonds.

IV. Challenges and way forward for development of bond market

23. I would not be able to tell you anything new about the way we need to proceed that has not been told by many of the learned committees that have studied this market in depth, most recently the Khan Committee under the aegis of the FSDC. What I would try to do is just highlight what I feel are a few of the more important actions we need to take.

a. Tackling the problem of 'Original Sin' hypothesis

24. One of the challenges for improving the depth of the debt market will be the ability to tackle the **'original sin' hypothesis** - which in its strongest form alludes to inconsequential bond markets in EME due to their inability to raise money in its own currency outside its border. India has started the 'masala bonds' which is picking up but the process still has some way to go.

b. Managing and transferring risk – Credit Default Swaps

25. Another important challenge that all emerging economies face in the development of a vibrant and robust bond market is the issue of managing risk. Take for example, the Chinese treasury yields which are generally low signifying investor confidence. In corporate debt, the defaults have been low so far. However, as more and more borrowers enter the market, the default rate is going to be higher. While the borrowing cost for highly rated companies has been low, bond market for the risky borrower is becoming expensive. From the investor's perspective, credit derivative markets like CDS should be available so as to give confidence to investor to fund risky borrowers. Experience with CDS in India has been poor with few deals reported. It is of paramount importance to have an active credit derivative market to accurately price risk to take the bond market to the next stage.

c. Market Infrastructure

26. One of the prerequisite for a prospering bond market in any economy is an efficient and safe market infrastructure in place to make it easy for investors to buy or sell bonds. With DvP already in place, the concern of safety is by and large addressed. Efforts to go for CCP guaranteed settlement needs to weigh its advantages with the likely high cost of such guarantee. Similarly, electronic platforms for trading need to be developed, but one must keep in mind that the large number of bonds, compared to G-secs, would be a hindrance to order matching systems. Would quote-driven systems be preferable?

d. Issuer Diversity

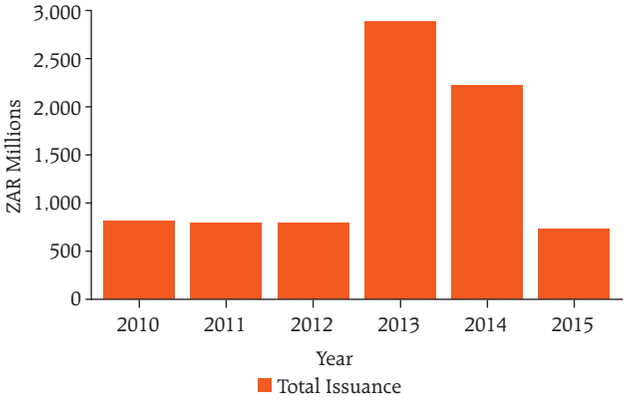
27. In India, currently more than 85 per cent of the corporate bond issuance is undertaken by high rated (A and above) issuer. Our attention to credit enhancement mechanisms would go some way in channelling demand from entities like insurance and pension funds who need to protect their credit exposure. But what is also required is to create conditions to attract new investors into the market. Retail investors could absorb the credit risk through wider dissipation. We might also have to look at less risk averse external investors.

e. Municipal Bonds

28. Unlike India, some of the BRICS nations especially South Africa has a well developed Municipal bond market (Chart 3).

29. With a stellar rise in urban population, India's infrastructure has failed to keep pace with urbanisation and the situation is ripe for Municipal corporations to look beyond conventional sources of funding (like grants, tax, *etc*). Municipal bonds can be explored as

Chart 3: South Africa Municipal Issuance



Source: Bloomberg.

an option for infrastructure financing by addressing the various supply and demand side constraints.

30. To end this talk, I would like to emphasise that for a market to evolve a lot of things need to fall in place – investor interest, issuer preference, developments in the economy, legal conditions, *etc.* What Government and regulators can do is to create the enabling conditions, so that when issuer and investor enthusiasm coincides they are not discouraged by impeding regulation or poor infrastructure.

31. Thank you for your attention.

Information Technology & Cyber Risk in Banking Sector – The Emerging Fault lines *

S. S. Mundra

Good Morning!

At the outset, I would like to compliment CAFRAL for organising this International Seminar on Cyber Risk and Mitigation for banks and FIs, a topic which has assumed centre stage, not only in India but globally. Let me begin by quoting John Chambers, former CEO of CISCO, who famously summed up the significance of cyber risk for the enterprises thus: **'There are only two types of organisations, one who have been hacked and others who don't know that they have been hacked.'** I observe that the schedule of the seminar is fairly comprehensive and I am sure that the participants would benefit from both – the presentations as well as from mutual deliberations and sharing of their unique experiences on the subject. In my address today, I intend to focus on two key dimensions of cyber security in banks: a) Internal Information Technology Security & b) Network vulnerabilities.

Evolution of IT in Indian banks

2. I would begin by briefly tracing the evolution and adoption of Information Technology by banks in India. As regulator of the banking system in the country, Reserve Bank of India has played a very important role in technology adoption by banks. Rangarajan Committee on Mechanisation in Banks (1984) could be considered as the harbinger of adoption of technology for Indian banks. Thereafter, various committees / working groups have recommended gradual adoption of technology and need for associated safeguards in the sector. The journey of basically commenced with the advent of Ledger Posting Machines, moved to Total Branch Automation and then to Core Banking Solution (CBS). In the 1990s, the new generation private sector banks were mandated to commence their operations in fully computerised environment. As Gordon Moore's prediction of doubling of overall processing power of the computers every two years kept coming true, more and more applications in the banking space got pushed to the computerised environment.

3. RBI also played a very pivotal role in developing the payment market infrastructure and facilitating use of technology in the banking sector by setting up institutions like the IDRBT, NPCI, CCIL *etc.* Currently, these institutions provide the platform for running mission-critical and secured payment system applications like RTGS, Secured Financial Messaging System, Negotiated Dealing Settlement System *etc.*

4. Information Technology Act enacted in the year 2000 gave a further fillip to conducting of transactions in a computerised environment by providing a legal underpinning. Internet penetration gradually increased which led to increasing use of internet as a channel for delivery of banking products and services. The exponential growth of mobile phone users in the country also fast-tracked their usages as a delivery channel. The latest in the long line of innovations in the banking technology space is Unified Payment Interface (UPI), which has pushed the boundaries on remittances. To cut a long story short, technology adoption has increased manifold and today no bank can survive without robust technology, customer friendly digital products, hassle free user experience and continuous innovation.

Fintech Revolution

5. With the advent of Fintech related innovations across the globe, well established banks are challenged

* Keynote Address by Shri S. S. Mundra, Deputy Governor, Reserve Bank of India at the 'International Seminar on Cyber Risk and Mitigation for banks' organised by CAFRAL in Mumbai on September 7, 2016. Assistance provided by Shri R. Ravikumar is gratefully acknowledged.

once again. Today most of the banking needs can be managed through the mobile. Card based payments also have matured with the advent of pre-paid cards, tap and go, virtual card, multi-currency card, QR code based payments, *etc.* Technology has moved from being an enabler and differentiator to being an ultimate necessity and a way of life. By the end of this year, a handful of payment banks would have commenced their operations in India, stretching the banks on technology front. Some technological advancement that are gradually making a foray into financial sector include **big data, artificial intelligence, block chain technology and internet of things**. Let me mention a few examples.

6. Banco Santander has expressed its intention to provide secure transactions using voice recognition *via* its banking app. RBS has trialled 'Luvo', an AI customer service assistance to interact with staff and to potentially serve customers in near future. Japan's Softbank, in collaboration with Paris-based robotics experts, Aldebaran has developed Pepper, the world's first humanoid robot. Pepper is already being used in customer services industries as a replacement to an information booth or the welcome desk. Mizuho Financial Group Inc. bank has reportedly introduced Pepper to its flagship branch in Tokyo in 2015 to deal with customer enquiries, while Mitsubishi UFJ Financial Group has tested 'Nao', a humanoid robot to interact with customers. Taking cue from their Japanese counterparts, I understand that HDFC Bank in India is also intending to introduce similar automation *via* robotics.

7. To buttress the point around increasing reliance on technology in the banking sector in India, let me reel out some statistics. As per the latest RBI Annual Report, the share of electronic transactions in total transactions in volume terms has moved up to 84.4 per cent from 74.6 per cent in the previous year. Likewise in value terms, their share has also inched up to 95.2 per cent from 94.6 per cent. At end-March 2016, the national electronic funds transfer (NEFT) facility was available through 130,013 branches of 172 banks, in addition to business correspondent (BC) outlets. NEFT handled 1.2 billion transactions valued at around ₹83 trillion (approximately $ 1.3 tn) up from 928 million transactions for ₹60 trillion (approximately $ 0.9 tn) in the previous year. In March 2016, NEFT processed the highest ever monthly volume of 129 million transactions. Similarly, the internet banking and mobile banking based payments are increasing at a rapid pace. I have already mentioned the UPI earlier. In this context, it will also be appropriate to mention the huge enrolments under Aadhaar (a unique identifier for residents in the country) with linkage to individual bank accounts, which in association with UPI has created an underlying potential to enable some kind of '**account number portability**' going forward. This can transform the banking sector in a way that cannot be fathomed now.

8. While everyone appreciates the ease of doing 24 X 7 banking transactions in a quick and efficient manner, the backbone for enabling such advanced technology based solutions is provided by the IT architecture of the banks. To optimally leverage new technology for providing new digital products, the IT systems at banks needs to be robust, capable of handling increasing volumes in a secure manner, providing connectivity to various applications accessing the bank's core banking solution in a safe manner and at the same time ensuring confidentiality of customer information. Recognising these challenges, Reserve Bank of India has been providing guidance to banks on managing the adoption of technology. Towards this end, one of the major initiatives of RBI was the setting up of Working Group on Information Security, Electronic Banking, Technology Risk Management and Cyber Frauds (under Shri Gopalakrishna). The Group made important recommendations in nine broad areas *viz.* IT Governance, Information Security, IS Audit, IT

Operations, IT Services Outsourcing, Cyber Fraud, Business Continuity Planning, Customer Awareness programmes and Legal aspects. The guidelines, since issued by the RBI, clearly underlined that implementation of these recommendations needed to be risk based and commensurate with the nature and scope of activities engaged into by individual banks as well as the level of dependence of the business processes on technology. Board level committees in the banks had been mandated to monitor the implementation of these guidelines in their respective banks. While substantial progress has been made in the past few years, I believe that banks still have to travel a lot of distance before the requirements are fully met. Given the centrality of technology in the functioning of banks today, this can no longer be treated as mere matter for compliance but has to be viewed as a core business issue.

Supervisory concerns

9. With computerisation of various activities within a bank, as a regulator and supervisor, we have come to expect much higher capability from banks in generation of relevant management information for decision making purposes. However, one feels that there is a substantial gap between the promise and the delivery. Let me highlight a few specific areas.

10. One of the primary areas of concern for the financial world is to ensure that the banking system is not abused by the unscrupulous elements for money laundering purposes. Regulations on Know Your Customer / Anti-Money Laundering are robust across jurisdictions. However, we often find banks not having robust systems to comply with the regulations. At the time of on-boarding of the customers, banks are required to assess their customers, their business and expected turnover in their account, source of such transactions *etc.* In recent times, we have come across several instances of banks having allowed transactions in their customers' accounts without any due consideration to their declared business profiles. The accounts received multiple RTGS/NEFT inward transactions and several such remittances were sent out of these accounts as well. Several accounts were abused to send money abroad in the form of advance import remittances. Despite the disproportionate activity in such accounts, the monitoring mechanism of banks fell short of our expectations. I wonder why banks are not able to devise fool proof **technology-based solutions to identify such transgressions**. As you may be aware, RBI had to impose penalties on 13 banks for non- compliance with extant KYC/AML instructions including failure to categorise their customers in line with their risk profiles.

11. Another area that comes to my mind is the process for **system-based identification of NPAs**. We feel there is much scope for improvement in this area. While we appreciate that the banks use multiple systems, the rules are elaborate and at times qualitative, posing challenges to capture the parameters in computer systems; however, with the progress in technology this problem should have been solved much earlier. What we expect is a robust system based identification of NPAs, not only for the regulator's use, but also for the banks' internal use so as to facilitate timely recovery / resolution.

12. The third area that I would like to touch upon is the Automated Data Flow project, wherein it was envisaged that banks would enable their systems for automatic flow of data for regulatory reporting purposes. I understand that ADF implementation has not progressed to the desired extent and despite significant progress on technology front, quality, consistency and timeliness of data submissions remains to be an issue.

13. I can go on. One common thread I see in all the above cases is the **lack of Board level oversight and commitment from the executive management**.

Technology service providers, particularly product vendors also have a role to play. It is important that the technology they provide is capable of meeting the regulatory requirements on a continuous basis and gaps, if any, are addressed within a short span of time and such upgrades flow seamlessly and in a cost effective manner to all of their clients.

Recent Cyber incidents

14. Let me now turn towards some of the recent cyber incidents pertaining to the financial world.

- On August 2, 2016, Bitfinex, a Hong Kong exchange for the trading of digital currencies, announced that some of its customer accounts were hacked and bitcoins stolen. The value of the stolen bitcoins has been reported to be approximately US$65 million or more. As a consequence the value of bitcoins came down and the trust on the digital currency shaken.
- In the beginning of the year, Bangladesh Bank was the target and an attempt was made to steal US$1 billion and ultimately the attackers could successfully get away with US$81 million. Recently, in India too, a similar attempt was made on a commercial bank by generating fraudulent payment instructions on the Nostro accounts and transmitting them over SWIFT messaging system. Though monetary loss could be prevented with proactive follow-up with the concerned paying / intermediary banks, the incident has reinforced the fact that the various stakeholders have not learnt the lessons yet. We have also come across instances of fraudulent messages confirming documentary credits being transmitted using SWIFT infrastructure. Although, the latter incidents were mainly a result of failure of internal controls and non-adherence to 'four eyes principles', it is also on account of reliance on disparate systems whereby SWIFT transactions could be done without originating a corresponding transaction in the CBS.
- In another incident involving shared mobile wallet of a bank, vulnerabilities were observed in the application itself which led to exploitation by the attackers. The originator of the transfer could get the amount reversed back to him without corresponding debit in the recipient's account in a large number of transactions (total amount involved was around ₹12 crore). Bank was not performing any real time reconciliation and noticed it only when there was a spike in transactions which led to detection during reconciliation. The vulnerabilities exploited in the incident could have been averted, had the launch of the product not been rushed through.
- In another incident, an e-payment validation website of a large bank was hacked. Surprisingly, the bank was not aware of the incident till it was notified by a law enforcement agency. There was a Facebook post by a person from a neighbouring country claiming responsibility for the operation. Though the hacking incident did not result in any pecuniary loss as the site attacked was only performing validations of inputs entered by end users, nevertheless it demonstrates a serious security breach.

15. As may be seen from the examples quoted above, the cyber threat landscape is widening. This is natural, given that the money no longer moves only in physical form, but mostly through electronic means. It opens avenues for unscrupulous elements to devise ingenious methods for stealing it. One of the key targets by the attackers is the credential of the customers, as it provides the key to the *'khazana (treasure)'*. Recent

experience shows involvement of organised gangs and nation-state actors having huge financial backing. On the other hand, the cost of orchestrating such attacks is coming down. There are several reports indicating **availability of credentials of customers for sale in dark web**, which is really scary.

Improving Cyber resilience

16. Globally, the focus has now shifted to cyber security. Cyber security is no longer an isolated incident affecting one industry / one country. Several cyber-attacks in recent times have been designed to achieve political /religious objectives as also for securing funds for promoting terrorism. This has assumed frightening dimensions as it has an important bearing on financial stability. The importance accorded to the issue can be gauged from the fact that global standard setting bodies as well as reputed central banks have been committing extremely large resources to address this menace.

17. Several countries have taken steps to improve their cyber resilience. Committee on Payments and Market Infrastructures and Board of the International Organisation of Securities Commissions (IOSCO) have issued Guidance on cyber resilience for financial market infrastructures in June 2016 after consultation with stakeholders. Financial Policy Committee (FPC) of the Bank of England launched the CBEST initiative – a Vulnerability Testing Framework. Following their meeting in June 2013, the FPC issued a recommendation requesting that Her Majesty's Treasury and the regulators work with the core of the UK financial system and its infrastructure to put in place a programme of work to improve and test resilience to cyber-attack. The committee also noted it was important that boards of financial firms and infrastructure providers recognised their responsibility for responding to those attacks. Recently, in May 2016, Hong Kong Monetary Authority launched a Cyber security Fortification Initiative(CFI). The CFI mainly comprises following three pillars:

a. Cyber Resilience Assessment Framework;
b. Professional Development Programme; and
c. Cyber Intelligence Sharing Platform.

18. In India too, we have been working on strengthening the defence against cybercrimes. Government of India has taken several steps to tackle the menace of cyber-attacks and important institutional arrangements have been made. Indian Computer Emergence Response Team (CERT-In) has been established which monitors Indian cyberspace and coordinates alerts and warning of imminent attacks and detection of malicious attacks among public and private cyber users and organisations in the country. Banks / Financial Institutions have been identified as critical infrastructure for the purpose. A National Cyber Coordination Centre has also been established.

19. RBI has issued **instructions on cyber security framework** in banks on June 2, 2016. I am sure many of you would have had a chance to look at the instructions. Among others, the circular expects banks to put in place a board approved cyber-security policy, to prepare a cyber-crisis management plan, to make arrangement for continuous surveillance, to reckon the security aspects while procuring / connecting / implementing hardware, software, network devices *etc.*, to ensure protection of consumer information, to share unusual cyber security incidents with RBI, to assess the gaps in cyber security preparedness on the basis of baseline requirements articulated in the circular and to set up a Cyber Security Operations Centre. The Reserve Bank also has set up an **Expert Panel on IT Examination and Cyber Security** (Chairperson: Smt. Meena Hemchandra) drawing representatives from the industry as members. The Panel is providing assistance in IT examination/cyber security initiatives of banks, review examination reports and suggest actionable items. RBI also launched a detailed IT examination programme in October 2015. This is proposed to be

extended to more than 30 major banks during 2016-17 and to cover all banks by 2017-18. The Reserve Bank also proposes to set up a **Cyber Security Lab**, which will assist IT examiners in conducting analysis of cyber security of banks. RBI is also in the process of operationalising its IT subsidiary (the Reserve Bank Information Technology (ReBIT) Pvt Ltd.). The mandate for ReBIT, among others, is to focus on issues around IT systems and cyber security (including related research) of the financial sector and to also assist in the audit and assessment of the entities regulated by the Reserve Bank.

20. I am also pleased to note that IDRBT has released a comprehensive check-list on cyber security prepared by a panel of experts drawn from industry and academia in July 2016. I observe that the checklist covers wide-ranging aspects of cyber security like enterprise control, IT infrastructure security, Endpoint security, Security monitoring as also outsourcing security. I trust the banks/ financial institutions would find it very useful when they try to benchmark the practices obtaining at their own institutions against the best practices indicated in the checklist.

Expectations from banks

21. Let me now share some of the expectations from banks. First and foremost, we expect the Board of Directors to get actively involved in the Technology related aspects. IT strategy needs to be closely aligned with the business strategy. With strides in technology, it would be difficult for Boards that do not have members having expertise in technology related areas to effectively adopt technology. **Technology risk, including cyber-risk, is to be treated just like any other inherent risks faced by the banks *viz.* credit, market, operational risks** and thus, Board needs to articulate what is their risk appetite, which residual risks they would like to carry and what kind of mitigation strategy they would like to follow. In the name of technology adoption, while banks are proactive in procuring various latest gadgets, what we observe across institutions is that the configurations of such devices are seldom given sufficient importance and left to the vendors. Vulnerabilities exist in hardware, middleware, software, OS, applications, network devices, communication devices *etc.* It is, therefore, important to pay sufficient attention while procuring / implementing any new devices/ solutions. **Cyber criminals are also increasingly exploiting the vulnerabilities in the smart phone software by infecting the Operating systems with malware**. The banks which are big on mobile banking as a service delivery tool must also look to guard against this emerging risk.

22. Another area of concern is the **patch management**. OEMs release patches after known vulnerabilities are escalated to them and if the patches are not rolled out in time, we are practically leaving the door open for exploitation. User management leaves much to be desired- practice of shared passwords, no passwords, free administrator level access, dated authorised users list are quite common place. Often, there is no robust process for creating new users, reviewing the list and deleting inactive users. Then, there is the issue of implementing physical security. I have seen physical access control systems being in place but usage not insisted upon. Further, the dependence on the vendors is increasing and many a times only the vendors know how the system is to be operated. Customer information is stored at vendors' facility without adequate safeguards. Another curious thing I note is that while the banks claim that they do not get skilled resources, the same vendor provides some critical services to multiple banks. This raises a question as to whether the banks know what they get from their outsourced vendors, including the quality of delivery. Timely decision to scale up capacity is very important to ensure continued availability of services and business growth.

People and processes need to be given adequate importance, for without capable hands even best of the systems is bound to fail. Monitoring is paramount – whether the port that was opened for a specific purpose was closed in time, who analyses the important logs that are created religiously, how incidents are responded to, whether the security operations centre (SOC) is integrated with inputs from various systems, whether the exceptions thrown out are escalated to appropriate levels *etc.*

23. **The security culture at banks needs to change for the better**. In a brick and mortar environment, if the safe is not having good locking system, or the walls are showing some cracks, roof is leaking, banks do notice. In a digital world, is it not important to look at such leaks, cracks and vulnerabilities and take appropriate action? Phishing attacks on customers are increasing. Is it not the responsibility of banks to educate their customers and build some work around to prevent the fraudsters to escape so easily? Considering the inability of the customers to withstand organised electronic crimes, **RBI has put in a place a framework for limiting the liability of customers in unauthorised electronic banking transactions as a customer protection measure**. Similarly, whether it is technology service provider or SWIFT like infrastructure provider, is it not the vendor's responsibility to ensure that their agents meet all the electronic security requirements at all times and that the environment is secure enough to carry out the stated business? I feel society as a whole need to recognise the emerging digital landscape and do their bit to ensure that our digital world, while it brings convenience and comfort to all the consumers, does not compromise the security.

Conclusion

24. In conclusion, I would like to recapitulate some of my observations.

- Cyber security has emerged as an important area of attention world over, particularly for the financial sector
- **Cyber incidents are increasingly shifting towards targeting of financial institutions instead of end users**. A manifestation of this trend is evident in Carbanak, a major advanced persistent threat (APT) attack against financial institutions around the world. The surprise factor in this APT attack was the criminals' change in approach and careful planning whereby rather than using the usual cybercriminal method of stealing consumer credentials or compromising individual online banking sessions with malware, the Carbanak gang targeted banks' internal systems and operations, resulting in a multichannel robbery that is estimated at $ 1 billion .
- Cyber risk cannot be brought down to zero. Hence a quick restoration plan with least damage post breach is crucial. **There is a need to evolve a blueprint of co-ordination between financial institutions and public authorities in such an eventuality**.

25. The pace of expansion of digital world is increasing and hence, technology adoption should be conscious, purposeful and value adding. For improving the IT security, the banks need to focus on increased staff/ customer awareness and training. Cautioning the staff and the customers to refrain from opening suspicious emails, emails from unknown persons, entering personal account details on fake websites, vishing *etc.* can be effective first steps in this endeavour.

26. While the financial sector has been ardently working for decades to prevent fraud and strengthen the detection and protection mechanisms, the threats to their internal operations networks has been considered to be low until attacks like Carbanak happened. Under the emerging circumstances, the banks need to be mindful of likely attacks from within the bank's internal core systems and try to plug such

vulnerabilities. Banks need to practice 'Cyber Hygiene' and I hope the Board and Top Management develop early sensitivity to this important task. The CISO also has a very important role in supporting the Board and Senior management in this initiative by focussing on IT governance, information security audits, customer communication, fraud management and legal aspects. **Our view is that CISO's role needs to be enhanced from an operational level to strategic level.**

27. I wish the Seminar all success and hope that the deliberations would be mutually beneficial to everyone and would help crystallise ways and means for a more secure, efficient and transparent banking sector going forward.

Thank you!

*Financial Inclusion in India – The Journey so far and the Way Ahead**

S. S. Mundra

Shri Santhosh Kumar Gangwarji, Honorable Minister of State for Finance, Government of India; Shri Ashwani Kumar, Chairman, IBA & CMD, Dena Bank; Shri Rajiv Rishi, Deputy Chairman, IBA & CMD, Central Bank of India; Dr. Madnesh Kumar Mishra, JS(DFS) & Mission Director-Financial Inclusion, GOI; delegates to the Workshop; ladies and gentleman! At the outset, I would like to compliment Department of Financial services, GOI and IBA for organising this workshop on Financial Inclusion under the BRICS Forum. It is indeed a pleasure for me to speak to you from this Forum today.

2. Financial Inclusion is a much cherished policy objective for us in India and our economic policy has always been driven by an underlying intent of a sustainable and inclusive growth. Although I would not dwell at length about the virtues of financial inclusion before this learned audience, I would still like to draw reference to a profound ILO Declaration of Philadelphia (1944) which states that *'Poverty anywhere is a threat to prosperity everywhere.'* The policy makers in India too *i.e.* Government of India and the RBI, had an early realisation about the implications of *poverty for financial* stability and have endeavored to ensure that poverty is tackled in all its manifestations and that the benefits of economic growth reaches the poor and excluded sections of the society.

3. I wish to use this Forum to brief you on our journey towards the goal of universal financial inclusion in India, the challenges encountered and the way forward. But before, I get into the subject proper; let me for the benefit of our international participants, state our definition of Financial Inclusion.

> **'Financial Inclusion is the *process of ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups such as weaker sections and low income groups in particular at an affordable cost in a fair and transparent manner by mainstream institutional players'.***

Role of RBI in Financial Inclusion

4. As I said earlier, RBI has been pursuing the goal of financial inclusion for a long time. RBI's financial inclusion efforts can be traced back to the 1960s when the focus was on channelising of credit to the neglected sectors of the economy and weaker sections of the population. While the Government of India nationalised the banking operations of few commercial banks in two tranches in 1969 and 1980; RBI also took initiatives like laying down priority sector lending requirements for banks, Lead Bank Scheme, establishment of Regional Rural Banks (RRBs-1975-76), Service Area Approach (1989), Self-Help Group-Bank Linkage Programme (1989-90), setting up of Local Area Banks *etc.*, all aimed at making available benefits of banking services to the masses.

5. Although these measures resulted in impressive gains in enhancing the outreach of banking services and extent of credit to the population, there were certain structural challenges which impeded the progress of financial inclusion. On the supply side, absence of technology was a major impediment as it restricted expansion of banking services to far-flung areas of the country comprising of 600 thousand plus villages. In the absence of technology, developing a cost-effective delivery model also remained a challenge.

6. Since 2006, RBI has adopted a planned and structured approach to address the issues of financial inclusion. RBI's approach has been to focus both on the demand as well as on the supply side. This has in a

* Address delivered by Shri S. S. Mundra, Deputy Governor, Reserve Bank of India at the BRICS Workshop on Financial Inclusion in Mumbai on September 19, 2016.

large way been possible due to the availability of technology and its gradual adoption within the banking processes. Let me elaborate on some of these measures and consequent achievements.

7. Institutionalisation of the framework of Banking Correspondents (BCs) has been a major step towards enhancing access of banking services. RBI advocated a combination of 'Brick and Mortar' structure with 'Mouse and Click' technology for extending financial inclusion in geographically dispersed areas.

8. On the regulatory side, the banks were mandated to open at least 25 per cent of their new branches in unbanked rural centers. Taking into account the difficulties encountered by common people in meeting the 'Know Your Customer (KYC)' requirements for opening bank accounts, several measures were taken. For example, RBI allowed banks to accept self-certification for opening of basic service bank accounts. RBI has encouraged banks to open Aadhaar[1] Enabled Bank Accounts by linking Aadhaar numbers of individuals, wherever available, with the Basic Savings Bank Accounts opened for them, so that their credit histories can also be built up over time.

9. Co-terminus with the above efforts, RBI also encouraged banks to adopt a structured and planned approach to financial inclusion with commitment at the highest levels through preparation of **Board-approved Financial Inclusion Plans** (FIPs). The first two phases of FIPs implemented over 2010-13 and 2013-16 were interspersed with the implementation of PMJDY by the Government of India during 2014-15, whereby the supply side efforts received an extra push.

Snapshot of Progress

10. Let me quote some numbers.

i) The number of banking outlets in villages went up from 67,694 in March 2010 to 5,86,307 in March 2016 after RBI permitted appointment of BCs and laid out a roadmap for spreading banking services in rural India through a mix of bank branches and BC outlets. In addition, the number of urban locations covered through BCs has also surged from 447 in March 2010 to 1,02,552 in March 2016.

ii) The Basic Savings Bank Deposit Accounts (BSBDAs) have gone up from 73 million in March 2010 to 469 million as on March 31, 2016. Under the PMJDY alone, until June 1, 2016t, 220 mn accounts have been opened with an approximate balance of ₹384 bn.

iii) There were 47.31 million small farm sector credit accounts and 11.3 million small non-farm sector credit accounts with an outstanding of ₹5130.7 billion and ₹1493.3 billion outstanding respectively as on March 31, 2016. The number of small farm and non-farm sector credit accounts stood at 24.3 million and 1.4 mn respectively in March 2010.

iv) The total number of transactions in BC-ICT accounts which were around 26 million during 2010-11 have increased to 826.81 million as on March 31, 2016.

11. For most other countries these numbers may appear overwhelming, however, we still have a long way to go here in India and we are extremely mindful of that. There are plenty of challenges – low volume of transactions in the basic bank accounts, inactive BC outlets, inaccessibility, poor connectivity *etc.* Last year, RBI had set up an Expert Committee on Medium Term Path for Financial Inclusion under ED (Deepak Mohanty) which was tasked to draw up a medium term and long term roadmap for FI. The committee has made about 80 actionable recommendations which are being pursued by RBI.

12. Following a paradigm shift in the Financial Inclusion landscape, a need was felt for convergence of the FI efforts of various stakeholders. Accordingly, RBI has reconstituted the high-level inter-institutional Financial Inclusion Advisory Committee (FIAC) for

[1] Aadhaar is a unique identifier for all individuals in the country.

undertaking a continuous review of the policies on FI; monitoring of the progress in Financial Inclusion and the financial literacy; evaluation of its impact through conduct of study/surveys and for preparation of a National Strategy for Financial Inclusion.

Other recent measures

New Banking Entities permitted in the Financial Inclusion Space

13. RBI has granted in-principle approval to some entities to set up differentiated banks namely 'Small Finance Banks' (SFBs) and 'Payments Banks' to further the cause of financial inclusion in the country. Other than serving as vehicles for savings, SFBs and Payments banks are expected to enhance the supply of credit to small business units, small and marginal farmers, micro and small industries and other entities in the unorganised sector and enable provisions for cost-efficient remittance services in a secured technology driven environment respectively.

Role of payment system in promoting financial inclusion

14. Considering the strong linkage between financial inclusion and the payment systems, RBI has taken several steps. Some of these include encouraging use of Mobile Banking, pre-paid instruments in the form of digital wallets and mobile wallets, operationalisation of the Aadhaar Bridge Payment System (ABPS) and Aadhaar-Enabled Payment system (AEPS) *etc.*

Increasing Brick and Mortar Presence

15. While there is considerable improvement in access of banking services through a mix of physical and virtual mode, it is believed that there should be a fair balance between the number of BCs and brick and mortar branches for better alignment of the inclusion efforts. Accordingly, it is mandated to open physical bank branches in all villages above a population of 5000 in a phased manner. We feel this would also enable banks to not only provide quality financial services but also timely support to their BC network.

Creation of BC Registry and Certification

16. The BC Model is a critical lynchpin of our Financial Inclusion initiative. We believe that to support the BC structure, a vital first step is developing a BC Registry. This would not only ensure greater oversight on the functioning of BCs but would also provide more confidence to the end customers. A scheme for graded certification/ training programme for BCs is also being introduced to enable the BCs with a good track record and advanced training to handle complex tasks that are beyond deposits and remittances.

Financial Inclusion Plans for banks (2016-19)

17. To sustain the momentum of achieving the financial inclusion objectives by setting FIP targets for banks, the third phase of Financial Inclusion Plans for the next three years 2016-19 has been initiated. Under the third phase, the focus is on more granular monitoring of the progress made by banks under FIPs at district level.

Demand Side Interventions

18. Having spoken about the progress and some recent measures taken by RBI on supply side, let me talk about an equally important, but less focussed, demand side aspects of Financial Inclusion. As I mentioned earlier, banks have opened about 440 million accounts under the push from RBI and the PMJDY and hence, it is right time to focus on the demand side which is to focus on enhancing capabilities so that the individual is in a position to not merely avail the offered services, but is also capable of demanding preferred products and services suitable to her need/choice. Our belief is that unless the demand side measures adequately supplement the supply side measures, the goal of financial inclusion would remain the proverbial 'wild goose chase'.

Financial Literacy Centres (FLCs)/ Rural Self Employment Training Institutes

19. Banks in India have been mandated to set up FLCs for extending financial literacy. Currently, about 1380 FLCs across India are functional which adopt a tailored approach to conduct of camps. Special focus is given on people newly inducted into the banking system. Besides this, tailored camps are conducted for five different target groups *i.e.* farmers, small entrepreneurs, SHGs, School students and senior citizens. Going forward, given the challenges of skewed distribution of existing FLCs in a few states, limited outreach and to have an exclusive focus on financial literacy at the ground level, we are encouraging banks to set up CFLs (Centres for Financial Literacy) at the block level on a pilot basis in a few states.

20. The Rural Self Employment Training Institutes (RSETIs) have been set up by various banks all over the country at the district level. The key objective of RSETI is 'Short term training and long term hand holding with assistance to credit linkage for trainees'.

Direct Benefit Transfer and Aadhaar Seeding of accounts

21. An important driver for enhancing the demand side of financial inclusion is Direct Benefit Transfer (DBT). It has the potential to be game changer. If entitlements under various state sponsored schemes starts directly flowing into the bank accounts of individuals under DBT mode, it can act as a catalyst to encourage saving habit leading to build up of investment and seed capital for availing productive credit.

Let me now come to the way forward.

Way Forward

22. I feel in order to motivate and nudge consumers to begin seeking formal financial services, there is need to focus on what I have named 3 Ps- Products, Processes and People. Let me elaborate.

a) **Suitable Products-**The traditional approach of '*take it or leave it'* is not going to work for the people who are new to the financial system. Many of them do not have a continuous income stream. Their incomes are generally seasonal and hence erratic. Also, many have only a meagre amount to save and their needs are widely different from those of regular consumers. All these necessitate a customer centric product design taking into consideration the lifecycle needs of customers at every stage. Simultaneously, it is also important to prevent **mis-selling of financial products** to the newly inducted customers without due consideration around suitability. I have also noticed overzealousness in few quarters to provide credit to the new entrants to the fold of the financial sector. It is important to ensure that this overzealousness does not result in **over-indebtedness**. We must be mindful of the fact that these individuals have entered the formal financial system after a lot of pushing and prodding and it would be difficult to bring them back into the formal financial sector, if they leave feeling cheated/dejected.

b) **Transparent Processes-** Another area of concern is transparency in the processes. By transparency, I mean an objective communication about the products, procedures, documentation and other necessary formalities to be completed while making a financial transaction. Transparent processes result in greater trust and confidence in the financial system.

c) **Committed People-** Both the suitable products, and the transparent processes need to be complemented by committed people who are willing to listen keenly, empathize with the consumers and willing to walk that little extra to welcome the customers into the formal financial system.

The 3x3x3Matrix

23. I believe once the above 3 Ps are in place, a focus on **3x3x3 matrix** would be important for enhancing financial capability of individuals and for achieving financial inclusion. The 3x3x3 matrix refers to three sections of the society which need a greater focus, pitching of products based on three kinds of surpluses that people generate and the three types of institutions that have a central role to play.

The Three Section approach – Improving Credit Absorption Capacity

24. Firstly, in India, when we talk of inclusive growth, there are three sections that would warrant special focus. i) the small and marginal farmers, share croppers, ii)micro and small industries and iii) the low salary earners in the unorganised sectors. Collectively, this section makes a significant part of the population that needs enhancement in their financial capabilities. Also, these sections are extremely important contributors to the country's GDP and labour force.

25. The credit absorption capacity of the farmers can be enhanced through consolidation of fragmented landholdings by ushering in land reforms or through pooling of land holdings in an SHG format. Efforts to enhance the credit absorption capacity must also be supplemented through financial literacy and vocational training initiatives, comprehensive insurance cover against failure of crop & innovative practices in farming. Farmers also need to be sensitised about the concept of financing against warehouse receipts to avoid distress sale of produce at low prices.

26. Enhancing financial capability of mainly the micro and small entrepreneurs from amongst the larger MSME fold would help these entrepreneurs to move away from the informal to the formal sources of finance. Micro and small entities are typically enterprises with little or no credit histories and with inadequate expertise in preparing financial statements *etc.* They would, hence, need to be served with relevant products and at low cost by employing innovative credit scoring models.

27. There is also a pressing need to scale up the skills of the low salary earners in the unorganised sector through training inputs. Integrating the skill development initiatives with secondary and intermediate level education would address the challenge of low education levels and also provide school dropouts with employability skills. Dearth of formal vocational education, high school dropout rates, inadequate skill training capacity, negative perception towards skilling, lack of industry ready skills even in professional courses, continue to stand out as some of the major causes of poor skill levels in the workforce. It is heartening to note Government's commitment in encouraging entrepreneurship in the country through the new national skill development mission.

The Three Surpluses Approach – Suitability in products and services

Let us now look at what I call as 3 surpluses.

28. The first group is the one that generates adequate surpluses. These people should be sensitised about different avenues to invest so as to reach their financial goals with ease. These may include investing in the capital market through shares, mutual funds, gold bonds *etc.* The second category of people generate meagre surpluses. They are the people who will be most suited for products like recurring deposits, SIPs *etc.* The third category comprises of people who have recently come into the financial system, who live on subsistence income and do not generate any meaningful surpluses. Our role as far as this group is to encourage them to use the basic bouquet of financial products like BSBDA for daily transactions as well as introduce them to electronic remittance channels. Similarly, customised basic term insurance and pension products currently being made available to this target Group under the Government of India initiatives can also go a long way in providing them some financial security in the longer term.

The Three Institutions approach – Endless opportunities

29. The first category of institutions is whom I would call 'Existing & Included'. It refers to the banks which have traditionally been leaders in bringing people in the formal financial system. These 'included' institutions must look to deliver on the promise of ensuring the 3 Ps. Under the second category are institutions whom I refer to as 'Existing, but not included' in the FI Grand Plan in a structured way. They are financial Intermediaries like NBFCs and MFIs that have a good last mile reach and should be leveraged upon. The third type is of the new institutions that will start operations soon. Three SFBs have already started their operations. Seven other entities hold in-principle approvals. We believe that they will be able to bring in technology backed innovative last mile practices to serve their customers. The bottom-line is that a coherent approach must be worked out so that the relative strengths of the three types of institutions can be leveraged upon.

Conclusion

30. The vision for Financial Inclusion as envisaged by the Committee on Medium Term Path to Financial Inclusion is that by 2021, empowered by formal finance, over 90 per cent of the hitherto underserved sections of society would become active stakeholders in economic progress. This is very much possible but it would require focussed efforts both on the supply side as well as on the demand side. There is a strong business case in catering to the underserved sections of the society, given the vast developments in the frontiers of digital technology.

31. In conclusion, I would say that the cherished goal of universal Financial Inclusion can be achieved only through synergistic efforts between the mainstream financial entities and fringe players like rural co-operatives, NBFCs, MFIs, credit societies, NGOs ,*etc.* All of them have to play a complementary role in championing the cause of financial inclusion. Time is ripe to weave a financial inclusion tapestry where all these institutions can fit in a manner which brings about their contribution in the most efficient manner. This is where the efforts of the Government and RBI are currently focussed. I hope we can draw some useful lessons from the experiences of other countries within the BRICS Forum and build upon them as we continue our journey towards attainment of universal financial inclusion.

Thank you!

*Financial Stability in a Weak Global Environment**

S. S. Mundra

At the outset, I extend a very warm welcome to Dr. Hans Genberg, Executive Director, the SEACEN Centre and all the participants of the 7th SEACEN High Level Seminar for Deputy Governors, Financial Stability and Supervision [DG (FSS)] and the delegates of the 7th Annual SEACEN DG Meeting (FSS). It is, indeed, a matter of great honour and privilege for the Reserve Bank of India to host this Seminar and the Annual Meet.

The theme of the seminar, 'Financial Stability in a Weakening Global Economic Environment', is very topical and befitting, given the volatile recovery the world economy is experiencing. Even almost eight years since resorting to the extraordinary monetary and fiscal measures to counter the after-effects of the Global Financial Crisis, authorities are still left wondering about relationships between key parameters such as unemployment and inflation, as some of the time-tested tool kits have discernibly failed. The recent speeches by FED Chair and her colleagues are a testimony[1]. Against this backdrop, it is important to remain mindful of the uncertainties, stay as vigilant and as prepared with ex-ante institutional framework, policy measures and decisions as one can be, to tide against the possible forces of destabilisation.

Global Environment

1. To state that the world economy is in a fragile state would be an understatement. Whatever parameters one may look at – growth, inflation, employment, trade, *etc.*, all point to weakness in one geography or the other. What, however, is really confounding is that the growth and inflation in the Advanced Economies continue to remain elusive despite the sustained easy money policy and relentless bond buying programmes pursued by the monetary authorities. The underlying premise of making abundant liquidity available at low interest rates to incentivise investments and consequently, to spur real economic activities and to trigger the virtuous cycle of growth, employment and income generation and subsequent reversal of interest rate cycle, has failed. However, it would be imprudent to be completely dismissive of the accommodative monetary policy stance of the monetary authorities as initially these measures had helped to calm the financial markets and revive confidence. The flattening observed in the Phillips curve makes a case for relooking at the implied relationship between full employment and inflation. For instance, in the US, though the unemployment rates declined, the inflation continued to be below the target level of 2 per cent.

2. The vast hoard of liquidity made available due to continued accommodative policy stance has drummed down the yield to the negative terrain. Markets and investors have appeared to respond to the prospects of the continued low interest rate environment by renewing their search for yield by moving into riskier assets, which has supported elevated valuations. That being the case, there is a strong possibility that any reversal of the rate stance by Fed Reserve would reverse flows away from the riskier asset classes, trigger sell-offs and cause market disruptions much as witnessed during the taper tantrum in summer of 2013. In a

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* Address delivered by Shri S. S. Mundra, Deputy Governor, Reserve Bank of India at the 7th SEACEN High Level Seminar for Deputy Governors in–charge of Financial Stability and Supervision held in Mumbai on September 22, 2016. Assistance provided by Ms. Rekha Salilkumar and Shri Sanjeev Prakash is gratefully acknowledged.

[1] The Federal Reserve's Monetary Policy Toolkit: Past, Present, and Future – speech by Dr. Janet Yellen, Chair of the Board of Governors of the Federal Reserve System at a symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming on August 26, 2016.

The 'New Normal' and What It Means for Monetary Policy – speech by Governor Lael Brainard, member of the Board of Governors of the Federal Reserve System at the Chicago Council on Global Affairs, Chicago, Illinois on September 12, 2016.

globally integrated world, these sell-offs would not remain restricted to the advanced economies alone, thus making reversal of policy rate by Federal Reserve as one of the important risk events that the world is looking at anxiously.

3. Similarly, Japan continues to be trapped in the decade long vicious cycle of 'low-growth -low inflation -low inflation expectations'. Growing sovereign and corporate debt levels as well as rising valuations in commercial real estate in many jurisdictions raise concerns amid growing signs of a downturn in the credit cycle. The recent runs on several large UK commercial property funds illustrate the risks associated with deteriorating real estate values in few entities with structural vulnerabilities. Further, there are also concerns around asset quality and profitability of large banks in many advanced economies, including in the euro area. The prospect of increasing non-performing corporate and real estate loans has potential to further erode valuations and impede raising of further capital by these banks. The protracted low interest rate environment would also have deleterious consequences for the pension funds and asset managers significantly eroding the capability of defined-benefit funds to meet their future liabilities. Though, the World has survived BREXIT as a risk event, but how it will manifest in the trade relations, investments and business sentiments going forward would be keenly observed.

State of Emerging Economies

4. Emerging economies present a more heterogeneous ecosystem, though growth here also has been relatively weak than the long term average. The interest rates are high due to persistently high inflation, but at the same time the higher yields have helped them attract the much needed capital flows from the advanced economies. Higher capital flows has strengthened their currency with the resultant weakening of exports and has triggered some sort of a race for competitive depreciation among these economies. 'Beggar thy neighbour' is the mantra they seem to be following. One, however, needs to be mindful of the risk of quick reversal of capital flows if these economies do not have strong fundamentals and a commitment to structural reforms. China has been trying to retrace its growth path, however, excessive corporate leverage, which has fuelled excess capacity, casts doubt on its sustainability. The moderating economic growth and rising corporate debt levels have begun to put pressure on banks' asset quality and may force Chinese authorities to take appropriate measures to repair the fragile bank balance sheets. Any adverse development in the Chinese economy holds the potential for sending shock waves across other jurisdictions.

5. Brazil and Russia have also seen downturns due to sharp fall in commodity prices, especially oil. The uncertainty with regard to oil prices continue to persist as the demand supply dynamics have become mostly non-existent, leading to supply glut and plummeting prices.

Impact on Financial Stability

6. It is against this uncertain backdrop that we are discussing financial stability. The co-existence of very low interest rates and still lower economic activity in the advanced economies makes a strong case for revisiting the theory around transmission ability of policy rate and the efficacy of the transmission channels. Financial stability is characterised by a condition, in which the financial system functions normally, allocates the resources judiciously and undertakes intermediation between the financial sector and the real sector uninterruptedly. Most importantly, financial stability portends a situation in which the system would be resilient to shocks, if any, through a self –correcting mechanism. As central bankers with a

direct/indirect mandate to preserve financial stability, our efforts, therefore, must be aimed at strengthening the financial institutions and markets and their ability to transmit and intermediate effectively through robust capital position, improved profitability and resilient systems and control.

7. The monetary easing pursued by the authorities worldwide in the aftermath of the crisis was ostensibly with the objective of tackling the freeze in the credit markets, driving growth and for tackling unemployment. Nevertheless, if near- zero/negative policy rates are not helping achieve the desired outcomes and only having a steroid effect on the financial markets, then the reversal of that stance seems inevitable. Under the circumstances, the timing and quantum of reversal must be as non-disruptive as possible.

8. The immediate reaction to the reversal of the rate cycle in the advanced world would be realignment of the capital flows and strengthening of dollar that can impact the already delicate exports and global trade, given the current political penchant towards protectionism. As yields harden, the rising debt burden would have fiscal implications. The resultant high cost of credit and higher cost of intermediation would adversely impact the overall growth and can push the economies back to the disinflationary mode.

Indian Experience

9. As I said earlier, emerging markets have different dynamics at play and they are rather dispersed across the spectrum than being a homogeneous group. Therefore, it is a bit difficult to discuss them as a class. Let me, however, use this opportunity to talk about India- how we are placed in the current environment and what are the specific issues/challenges that we are faced with.

10. While generally sharing the problem of high corporate leverage with most emerging markets and as well as with the developed world, India presents some exceptions. These exceptions are in the form of moderately higher growth, favourable demographics and persistent inflation. The accommodative policy stance and other conventional and unconventional monetary and fiscal measures taken in the immediate aftermath of Global Financial Crisis have been long unwound. We have been fighting a battle against high inflation and have been on a tight monetary policy regime for some time. You may be aware that we have moved to a CPI-based Inflation targeting regime sometime back and our monetary stance and liquidity management is being calibrated accordingly. India also enjoys demographic dividend in form of a young, growing population and hence, the domestic demand is likely to continue growing for the foreseeable future. In fact, we need to grow at a higher pace consistently if the demographic advantages are not to be frittered away. India has been the beneficiary of the capital flows as it is seen as a promising investment destination and the Government and Reserve Bank of India are committed to continue to press the advantage by ushering in necessary reform measures.

11. While the economic fundamentals of the country are on a much sounder footing than three years ago, like the rest of the world we are also wary of the impending market volatility that could emerge from crystallisation of any of the risk events that I alluded to earlier. A significant area of concern for some EMEs, especially for us in India, is slowdown in inward remittances from non-residents. The depressed oil prices have created stress in the oil-exporting countries in the Middle East which has a significant population of migrant Indians. Already a feeble trend of decline in remittance is established and if the oil prices remain

depressed for an extended period of time, immigrant population may lose their jobs, face retrenchment and the consequent repatriation may lead to social tensions back home.

12. The key goal that we have set for ourselves is to restore order and normalcy as soon as possible so that the financial system could continue to subserve the needs of the real economy on an on-going basis. The GDP growth of 7.1 per cent (Q1 2016-17), the current level of oil prices and measures to contain gold import has helped us move towards current account surplus , the rupee has been reasonably stable and macros are more or less comforting.

13. In a dynamic environment, being in a relatively safe zone cannot be a reason enough for complacency. As I mentioned earlier, we hold potential for achieving still higher rates of sustainable economic growth. We are mindful of the need for more structural reforms to address issues relating to capital formation, infrastructure creation, low capacity utilisation, fiscal consolidation, subsidy management *etc.* As a bank dominated financial system, it is important for us that the banks have the ability to undertake intermediation in a productive and efficient manner. Hence, an efficient transmission of cuts in policy rate to end borrowers has also been on our active agenda. But the stress in the bank balance sheet has been a hurdle with provisioning for bad debts taking a toll on the bottom line. This is mainly on account of a RBI drive for balance sheet repair in the banking system resulting generally from corporate balance sheet distress. We firmly believe that once the banks have a healthier balance sheet, they would be ready for dispensing credit and aid growth.

14. Especially for augmentation of the capital in Public sector banks, we have been closely engaging with the government. Several measures have been taken by us to deal with the asset quality issues in the banking system. A centralised repository of large credits has been operationalised which enables to have a correct picture of indebtedness of large corporate houses. Several other tools like JLF/ SDR/ 5:25/ S4A[2] *etc.* were brought in to help the banks for revitalisation of stressed assets on their books. A framework for enhancing credit supply for large borrowers through market mechanism has also been unveiled recently with the underlying aim to limit concentration risk of large borrowers while facilitating access of borrowers to funds from the bond market. In order to curtail exposure of banks to large corporates, the single and group exposure norms have been made stricter and made more expensive beyond a limit. These measures are meant to implicitly facilitate better credit flow to micro, small and medium enterprises (MSMEs) and retail sector.

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[2] Framework for Revitalising Distressed Assets envisages a corrective action plan that incentivises early identification of problem cases, timely restructuring of accounts considered to be viable and taking prompt steps by banks for recovery or sale of unviable accounts. All lenders of a consortium are required to form a Forum named Joint Lenders Forum (JLF) to plan for resolution of a stressed borrower as soon as a defined stress parameters is reported by any lender.

5/25 Scheme
To enable banks to offer finance for long-gestation projects in the infrastructure/core industries sector, they have been allowed to extend structured long term project loans with periodic refinancing option.

Strategic Debt Restructuring (SDR)
The SDR guidelines enable banks to effect change in ownership where the existing promoters are found to be wanting. At the time of restructuring, lenders are required to incorporate an enabling clause to convert their loans into equity if the borrower fails to achieve the viability milestones/critical conditions. Subsequently, the banks may bring in a new promoter to turnaround the borrower company.

Scheme for Sustainable Structuring of Stressed Assets (S4A):
S4A scheme is meant to strengthen the lender's ability to deal with stressed assets and converting part of the debt into equity without necessarily changing the control of the company. The existing debt is to be segregated into 'sustainable' and 'unsustainable portions'. Sustainable debt should not be less than 50 percent of current funded liabilities and capable of being serviced with existing cash flows without changing tenor and interest rate on the loan. Unsustainable portion can be converted into equity / convertible preference shares / optionally convertible debentures.

15. In sum, there is realisation that the banking sector needs to be declogged and a multitude of options must be made available for better and efficient credit dispensation. Measures have also been taken to enhance resolution mechanisms, strengthen the existing payment and settlement system and to leverage technology to achieve greater financial inclusiveness. A set of differentiated banks have already been licensed for better penetration of financial services and to meet requirements of specific sectors. The framework for non-bank financial companies has been strengthened and work is currently in progress to study the entire gamut of regulatory issues relating to Fin Tech in view of the growing significance of Fin Tech innovations and their interactions with the financial sector as well as the financial sector entities. Talking of Fin Tech, I am also reminded of Cyber Risk which has emerged as a major vulnerability for the financial institutions across the world as the trend has shifted from targeted attacks on individuals to institutions. Cyber-attack on Bangladesh Central Bank is a case in point. Regulation of peer to peer lending platforms is another item on RBI's active agenda, which can potentially bring complementarity to banking services.

Conclusion

16. Before I conclude, let me raise a couple of issues which can be worthy debating during the course of the seminar.

a. While we have been assiduously pursuing implementation of the regulatory reforms set out in the wake of GFC, have we convinced ourselves fully about the unintended consequences for the emerging markets *e.g.* availability and cost of credit for smaller entities, contraction in operations by foreign banks having implications for specialised high end products like derivatives, withdrawal of correspondent banking relationships *etc.*?

b. How far is imposing risk weight on sovereign exposures of banks currently being discussed by standard setting bodies actually justified in jurisdictions where the large part of the banking sector itself is publicly owned and required by statute to hold government securities in their investment portfolio? It is also important to note here that most of the sovereign debt in our jurisdiction is issued in home currency.

c. Since the reversal of policy stance in the US has potential to create global market disruptions, it would be appropriate to take that decision keeping the global context in view rather than the domestic context.

d. Pace and timing of some of the reform measures are apparently disproportionate to the stage of development of the markets in EMEs. The stiff deadlines set out for adoption of reform measures pertaining to OTC derivatives and resolution of CCPs are cases in point.

e. Some jurisdictions are overlaying parallel policy prescriptions on top of the multilaterally agreed reform measures which undermine the effectiveness of collaborative framework.

The above posers lead one to ask a broader question: 'whether the reform measures have plugged the vulnerabilities and created a more stable financial system or have they created new vulnerabilities and fragilities for the system?' I think only time can answer that question.

17. To conclude, howsoever confident we might feel of various endeavours made by us to build strong systems and processes, their ultimate test would only happen during the times of turbulence. The base we build by putting in place well-thought out institutional framework and policy measures will provide the bulwark against forces of disruption. More importantly, irrespective of the global environment, we must keep revisiting and reorienting the framework and mechanics at periodic intervals so that the risk events can be managed with minimal damage. I once again welcome you to India and wish you an enjoyable stay in Mumbai and fruitful deliberations during the seminar.

Thank you!

*Setting The Priorities Right**

S. S. Mundra

At the outset, I would like to thank Ms. Bhattacharya and State Bank of India for inviting me to speak at this important and eagerly awaited event on the annual calendar. It is a privilege to speak before this august gathering.

In context of the theme of the conference *i.e.* 'Laying the Foundations for India's Growth', I would say that there are reasons to be optimistic on several fronts: Growth, inflation, demography, entrepreneurship, democracy, political stability, innovation and establishment's commitment. There are many eminent speakers & practitioners with better insights and qualification who will speak on some of these issues. However, it is always helpful to also assess possible constraints. The idea is that collective wisdom should be applied to find the most optimal solution. With this objective, I intend to raise few questions for further deliberations during the conference and beyond. For a change however, I would refrain from much spoken area of stressed assets.

(A) Economics of Banking

Since the Conclave is meant for both Bankers and Economists, let me begin with something to engage the Economists.

- Credit is a necessary & probably most important ingredient for economic growth.
- **Is there a measurable co-relation between credit growth and GDP growth?**

I have been trying to seek answer to this question for some time now. Few explanations which I came across are:

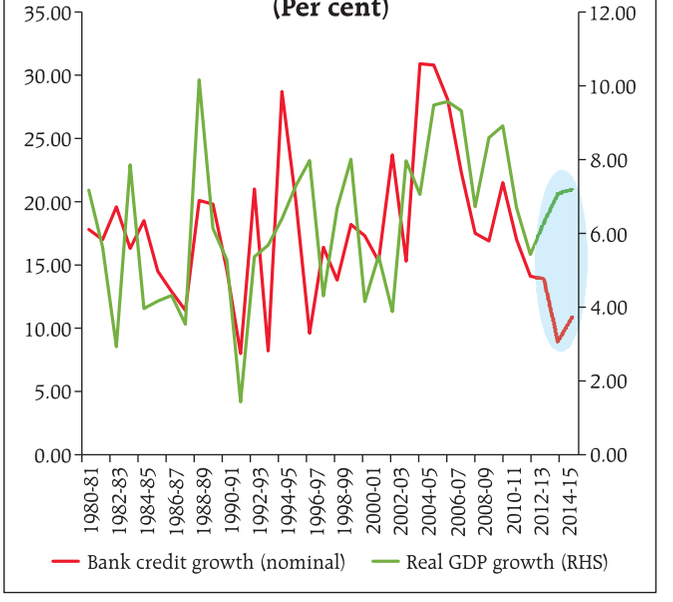
- The historical average credit multiplier to nominal GDP over FY01-14 is 1.6 x.
  (Source: CEIC, DB Research)
- Another model projects credit growth on the basis of GDP growth and inflation as per following equation:

  Credit = 2.36*GDP+ 0.36*CPI or Credit =1.93*GDP + 0.83*WPI
  (Source: ICICI Bank Research)

  A long run actual relationship between real GDP Growth and bank credit growth is depicted below (Chart 1):

Probably, the link between bank credit and GDP has weakened over the years as banks started accommodating companies through other sources like CPs, bonds, *etc.* and other non-bank entities also enhanced their share. But still 'Banks' remain the main source of finance for the economy. Perhaps the co-relation is more relevant between the banks' total accommodation to companies and real GDP rather than only credit & GDP.

Chart 1: Real GDP Growth[2] and Credit Growth
(Per cent)



[1] Keynote Address delivered by Shri S. S. Mundra, Deputy Governor, Reserve Bank of India at the 3rd SBI Banking and Economics Conclave in Mumbai on September 28, 2016. Assistance provided by Shri Sanjeev Prakash is gratefully acknowledged.

[2] Real GDP growth rate from 1980-81 to 2011-12 are derived from data of 2004-05 base and from 2012-13 to 2015-16 are from 2011-12 base.

Table 1: Total Credit Deployed – Banks and Non-banks

(₹ in billion)

As at the end	Outstanding					Credit from Non-Bank System/ per cent share	Banking System	Total
	Loans of NBFCs	Loans of HFCs	Corporate Debt instruments	Commercial Papers	External Commercial Borrowings			
Mar-14	4918.64	4639.42	14673.97	1066.10	7965.52	33263.65	61006.95	94270.6
Mar-15	6070.79	5623.15	17503.20	2561.20	8337.89	40096.23	66900.45	106996.7
Mar-16	7469.93	6811.18	20192.96	2602.40	8615.68	45692.15	72732.03	118424.2

Source: Supervisory Returns (RBI & other regulators)

However, the composition of credit to the economy itself has been changing as depicted above (Table 1). While Credit from banking system has gone up by 19.22 per cent between March 14 and March 16, the credit from the non-bank system during the same period has gone up by 37.4 per cent.

Then, do we see any co-relation with the total credit supply rather than bank credit alone? (**Yes/ No/ May be**)

Added Complications

- Trade credit plays an important role but not captured in a similar way as other components
- Double count in respect of NBFCs/HFCs
- Migration from GDP to GVA may make it more difficult to analyse past trends and establish new benchmarks at least in initial few years

A more stable multiplier of real GDP and bank credit may emerge in the medium term once:

- banks come out of the stressed assets worries and have more risk appetite
- private investment sentiment improves on a sustainable basis (creating higher demand for project finance) and,
- inflation falls on a durable basis giving rise to lower lending rates

Obviously, an efficient credit supply strategy would be handicapped in absence of reasonably accurate demand estimation. I urge the economists present here to work towards possibilities of modeling such a co-relation.

(B) Supply Side of Credit

Broadly accepted estimations place credit growth need in the range of 12 to 15 per cent to support the projected growth in the intermediate term.

Questions to ponder over:

- Resources to support credit growth while being mindful of Asset- Liability mismatches
- Capital needed- Quantum & Composition (CET1/ Tier I/Tier II)
- Economic priority of the segment needing credit *vis-à-vis* bankers' inclination to follow that priority

i) Resources

Gross domestic savings (Table 2) and trend in growth in bank deposits (Table 3) are depicted below:

Key observations:

Table 2: Gross Savings

(per cent of GNDI)

Item	2011-12	2012-13	2013-14	2014-15
Gross Savings	33.8	33.0	32.3	32.3
Household sector	23.0	21.9	20.5	18.7
Net financial saving	7.2	7.2	7.5	7.5
Saving in physical assets	15.5	14.4	12.7	10.8
Saving in the form of valuables	0.4	0.4	0.3	0.3

Note: Net financial saving of the household sector is obtained as the difference between gross financial savings and financial liabilities during the year.
Source: CSO. GNDI: Gross National Disposable Income

Table 3: Growth Rate of Bank Deposits

(in per cent)

Bank Group	PSBs	PvtSBs	Foreign Banks	All Banks
Mar-12	13.1	16.8	15.1	13.8
Mar-13	14.0	18.5	3.9	14.4
Mar-14	13.1	14.2	22.4	13.7
Mar-15	8.9	16.5	15.0	10.7
Mar-16	4.6	17.3	13.2	7.6

- Decline in Household savings
- Stagnant net financial savings
- Household indebtedness increasing

Key observations:

- Rate of growth of bank deposits has slowed down considerably especially in PSBs.
- In short run, any gap in deposit growth can be funded by leveraging excess SLR, however, financial savings need to strengthen in the medium to long term.
- ALM trend: A gradual increase in institutional saving is also probably contributing to shrinking liability duration while the assets duration is expanding due to long term funding by banks.

ii) Capital Requirements

Overall capital position in the banking systems appears adequate at present (Table 4); however, few banks could be near the minimum prescribed threshold levels going forward. This is on account of many moving components as under:

- Supporting RWA Growth for normal growth
- Provisioning Requirements (as explained below)
- Basel Framework (CCB, D-SIBs *etc.*)- As per agreed framework
- Large Exposure Norms- Guidelines issued recently
- Enhanced Market Risk –Credit enhancements to corporate bonds and increased derivatives portfolio would entail higher market risk capital charge
- Higher Operational Risk – Recent episodes of KYC/AML violation, Cyber/FinTech related security incidents have heightened operational risk for banks
- Pension Funding- Gaps could still be there
- IFRS – Fair value treatment would potentially enhance capital requirements for banks

Provisioning Requirements

Substandard, Doubtful and Loss advances constitute nearly 36 per cent, 59 per cent and 5 per cent respectively of the stock of non-performing assets (₹611 thousand crore) of the banking system as on March 2016. Though, I won't like to hazard a guess about the provisioning numbers due to the dynamic nature, nevertheless due to ageing of non-performing assets and migration of a certain percentage of standard assets to NPA category, the system as a whole could be looking at significantly higher incremental provisioning

Table 4: Capital Adequacy of Banks

Bank/Bank Group Name	Period	Public Sector Banks	Private Sector Banks	Foreign Bank Group	Scheduled Commercial Banks
CRAR	31-Mar-15	11.44	15.73	16.81	12.96
	31-Mar-16	11.82	15.68	17.08	13.32
CET I Capital Ratio	31-Mar-15	8.26	12.77	15.55	10.01
	31-Mar-16	8.66	13.11	15.9	10.49
Tier I Capital Ratio	31-Mar-15	8.73	12.8	15.57	10.33
	31-Mar-16	9.13	13.16	15.92	10.81
Tier 2 Capital Ratio	31-Mar-15	2.72	2.93	1.25	2.64
	31-Mar-16	2.68	2.52	1.16	2.51

requirements in coming year. Though a better recovery and up-gradation in existing NPAs can support through provision reversal, the expected provision would still be significant. This is against a Total Earning before Provision and taxes of ₹2,46,067 for the sector as at the end of March 16. Incidentally, there is considerable divergence between the earnings of different bank groups as can be seen from the Table 5 below:

Table 5: Earning Before Provisions & Taxes
(in Rupees crore)

Period	Public Sector Banks	Private Sector Banks	Foreign Banks	Scheduled Commercial Banks
31-Mar-15	139,159	69,850	25,192	234,200
31-Mar-16	137,151	84,378	24,537	246,067

Source: OSMOS returns, RBI

Other potential factors with a bearing on capital requirement:

- Sovereign Risk Exposure (Risk Weight on Sovereign Bonds)

  This is a very live issue with standard setting bodies. Even if a low 2 per cent and 5 per cent Risk Weight respectively on the bank holdings of Central and State Government securities is assumed, the banking system may be required to hold around ₹6000 crore of capital on this count alone.

  While we are resisting the proposals during negotiations, **the state governments have to be extremely cautious as any irresponsible act on their part could have repercussions both for our arguments and also for instruments that can be treated as eligible under LCR framework.**

- Climate Change Protocol

  Discussion in the international forum is veering towards penalising industries which add to carbon emissions and banks may be forced to hold additional capital for loans to such industries on account of increased risk weights.

Key takeaways:

- Every bank should estimate its own requirement of capital under different scenarios including past average trend of slippages, recovery and up-gradation.
- They should carefully weigh optimum mode of raising capital and the extent to which it can be raised.
- This should enable them to better design their business strategy and in setting the risk appetite.
- I am not sure if this exercise is being done with full elaboration & scenario building as part of the present ICAAP exercise.

(C) National Priorities

a) Infrastructure

12th Five Year Plan (2012-17) projected an investment of ₹55.74 lakh crore in infrastructure with banks expected to meet 23 per cent of this requirement. Though, there is still some time to go before the end of the plan period, apparently, the investment target as well as bank credit may fall short of the projection.

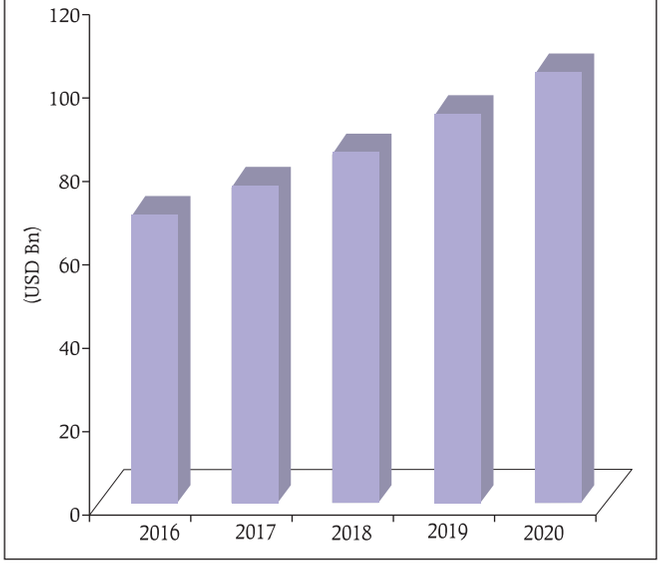
Assuming the current pace of credit growth & that the banks continue to meet 23 per cent of the infrastructure funding needs of the country between 2016 and 2020 (Chart 2), they may be required to lend between 17 and 26 per cent of their total incremental bank credit to the sector. This raises few issues:

i. Who can avail the infra credit going forward? Till recently, a handful of promoter groups have captured the infrastructure sector and majority of them seem to be 'retired hurt'.

ii. Even if new players were to come, whether the banks are equipped (both by way of resources and capital) and willing to lend them within the existing models.

iii. Whether external flow can support major part of the infrastructure funding requirements and if yes, whether the necessary enablers are in place.

Chart 2: Infrastructure Funding Requirements in India



b) Agriculture

- As per the 2011 Agriculture Census,
  - 60 per cent of the population depends on agriculture
  - sector provides employment to 55 per cent of the work force
  - contribution of agriculture to the national GDP is around 17 per cent
  - No. of farmers holding marginally sized land has increased substantially from about 36 million in 1970-71 to 93 million in 2010-11 highlighting the continuous fragmentation of lands which discourage mechanisation, lower labour productivity and increase costs.
- 35 per cent of the agricultural households having less than 1 acre of land, another 35 per cent holding between 1 and 2.5 acres, and only 30 per cent households with land more than 2.5 acres.
- 80 per cent borrowing of large farmers (>10 hectares) is from institutional sources, however, only 15 per cent of the landless farmers receive finance from formal sources.

Table 6: Agriculture Loan outstanding

(No of A/cs in actual & Amount in crore)

	Crop loan		Term loan		Total	
Year	No. accounts	Amount Out-standing	No. accounts	Amount out-standing	No. accounts	Amount out-standing
2014	39049508	397718	11766229	179048	50815737	576766
2015	43209609	471888	11966785	175133	55176394	647021
2016	46854333	542458	11952483	175715	58806816	718173

- The land under agriculture has been practically constant at around 140 mn hectare over past 4 decades with less than 50 per cent being irrigated.
- While credit flow to agriculture sector has increased over the years (Table 6), the long term credit in agriculture or investment credit has shown a declining trend. With no additional factors contributing to enhance the credit absorption capacity of this sector, there is a need to take a look at how incremental credit is being put to use.

Few other issues in the farm sector worth noting:

- New generation is not similarly interested in farming and is inclined to migrate to cities.
- Though many efforts are underway in form of improvement of rural road infrastructure, e-connectivity, direct benefit transfers, provision of power connectivity, water-bodies for irrigation, agriculture insurance *etc.* only the incremental measures may not be sufficient to improve the state of agriculture in the country.
- **Attempts must be made to target the entire agriculture value chain financing rather than on a solo level.**
- Further, the PSBs need to take a hard look at their approach for posting their staff in rural areas. Currently, there is a very high turnover in the staff in rural branches which hampers a focused approach.

c) MSME

- 12th Five Year Plan (2012-17) highlighted a credit gap of 56 per cent in the MSME (micro, small and medium enterprises) finance sector in India. In absolute terms, this translates to approximately ₹16 trillion which is roughly 25 per cent of the total bank credit.
- Outstanding credit to the MSME sector of all scheduled commercial banks as on March 31, 2016 has shown a declining trend.
- RBI, in co-ordination with the Government of India and other stake holders has initiated several measures to enhance flow of credit to the sector.
- Banks need to employ smart technology and innovative credit scoring to meet the credit needs to especially the micro and small segment a large per cent of which are outside the formal financial system.
- In the process, however, the banks must guard against creating over indebtedness in the sector.

(D) Human Resources

Finance alone cannot ensure growth. **Banking is still far away from being a driverless car, hence human factor is crucial.**

(i) Public Sector Banks (PSBs)

Chart 3 & 4 below show the number of top management retirement in PSBs over the next few years.

Chart 3: CEOs/CMDs Retirements in PSBs

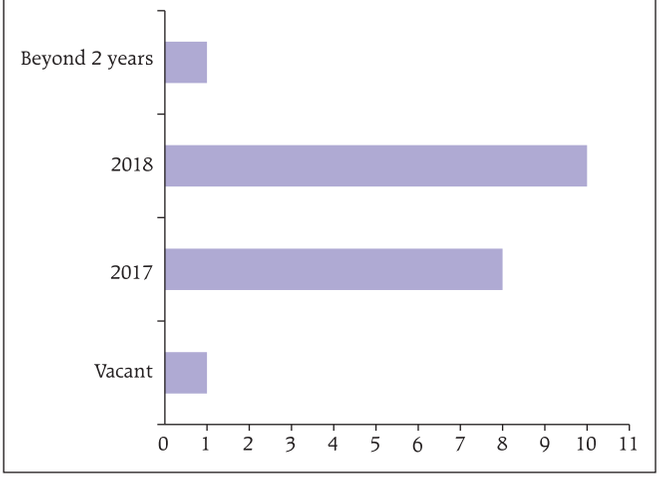
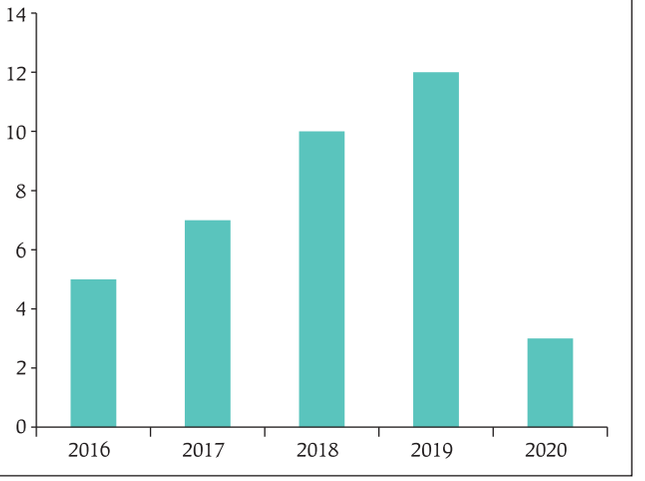


Chart 4: EDs Retirements in PSBs



- More than 73 per cent staff in DGM/GM cadre is above 55 years of age, while another 23 per cent are between 50 and 55 years.
  - Reasonable leadership tenure is crucial.
  - Pipeline to replace the Top executives is also weak and may get better only after a few years.

(ii) Private Sector Banks are witnessing very high rates of attrition at lower levels hence low customer connect and acute performance pressure may result in mis-selling. This area also needs urgent attention of the Top Management.

(E) Concluding thoughts:

- Cyber Risk/Frauds/Mis-selling/ Market misconduct have the potential to bring down a financial institution as recent events have shown.
- Banks need to do 'value accretive' and 'value based' financing

I would like to end with a Chinese proverb which says, **'The best time to plant a tree was 20 years ago and the second best time is now.'** The sector would do well not to miss planting trees at the second best time.

Thank you!

Asset Quality of Indian Banks: Way Forward *

N. S. Vishwanathan

The Indian banks in general, and the Public Sector Banks (PSBs) in particular, are grappling with the huge stock of stressed assets that has piled up in the system over the years. Any amount of discussion on the whys and what of stressed assets would therefore never be enough, if it enables us to discern what led to this phenomenal build-up of non-performing assets (NPAs) in our system and determine what we should do to solve them, and identify what could be done differently in future. I therefore compliment ASSOCHAM for organising a national conference on this topical issue and thank them for giving me an opportunity to share my views on the subject. I only hope this conference leaves us wiser about the problem at hand and the solutions to deal with it. I realise that the issue is complex and believe it will be naive to conclude that we go back with solutions that would work overnight.

Asset Quality

Gross NPAs and total stressed assets

Even if you have heard this many a time, let me put the issue in perspective in terms of the magnitude and dimensions of the problem (Chart 1 and 2). The total stressed assets in the Indian commercial banks have risen to 11.5 per cent with the Public Sector Banks leading the strain at 14.5 per cent as at end-March 2016.

Chart 1: Evolution of Gross NPAs (Per cent)

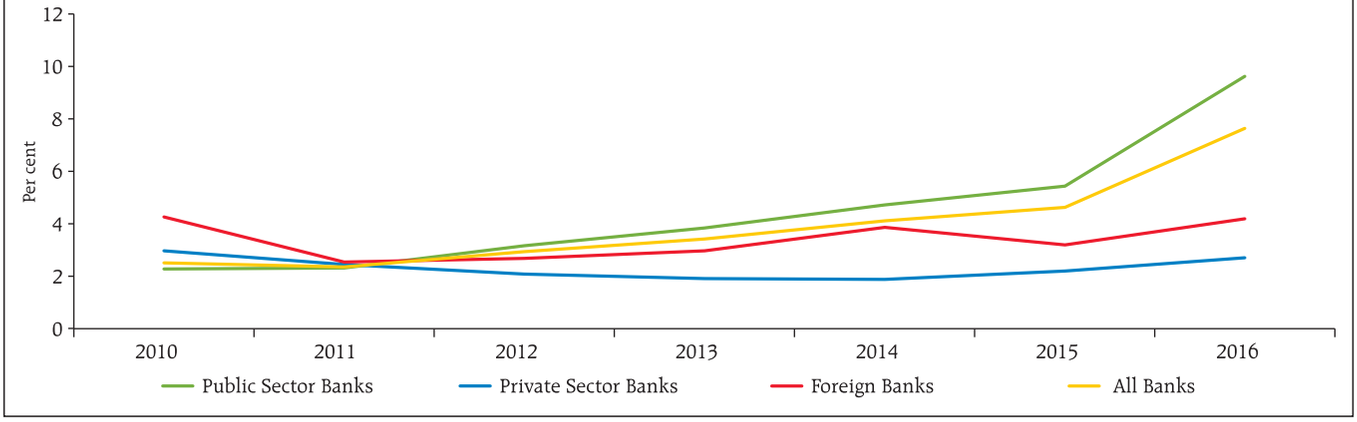
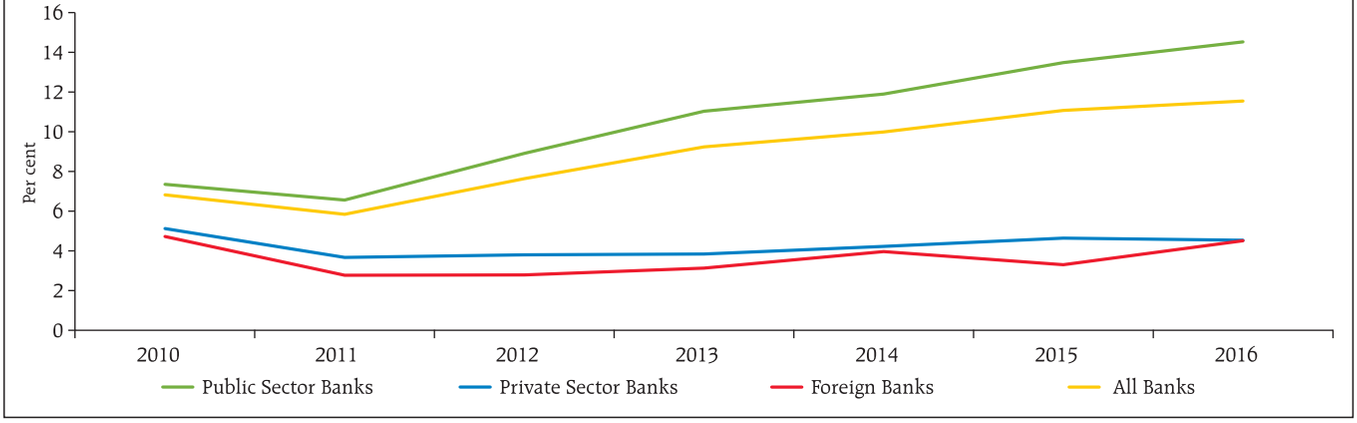
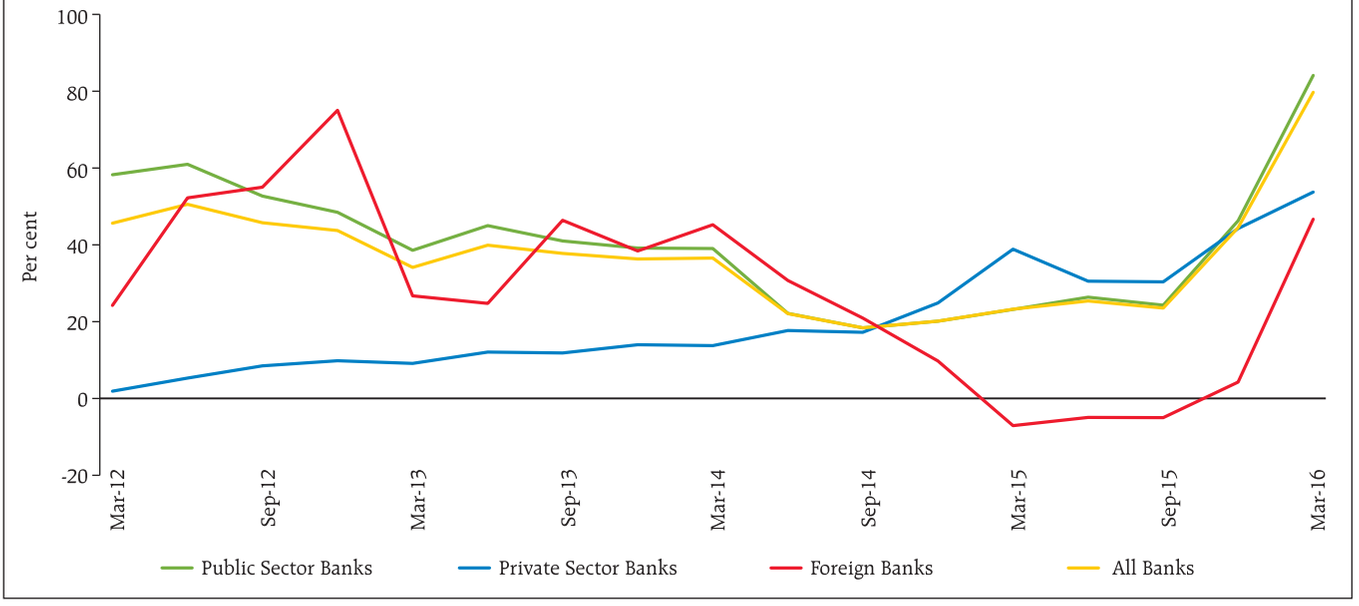


Chart 2 : Evolution of Stressed Assets (Per cent)



* Key note address delivered by Shri N. S. Vishwanathan, Deputy Governor, Reserve Bank of India at National Conference of ASSOCHAM on 'Risk Management: Key to Asset Quality' in New Delhi on August 30, 2016. Assistance provided by Shri Rajinder Kumar, Chief General Manager is gratefully acknowledged.

Chart 3: Y-O-Y growth of Gross NPAs



They still contain some amount of restructured assets indicating potential for some more pain, *albeit* of lesser intensity.

Incremental NPAs

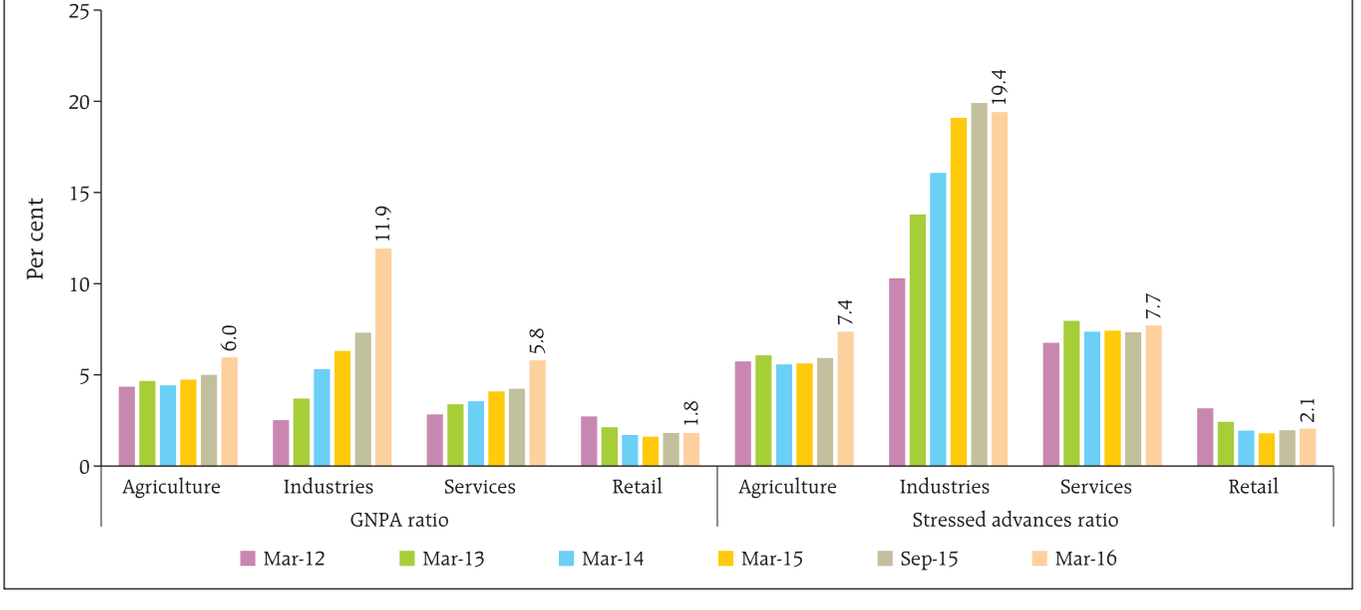
Let us now look at the year- on- year accretion to the NPAs. One could see that incremental accretion to NPAs is quite substantial (Chart 3). There was a big addition post-AQR exercise.

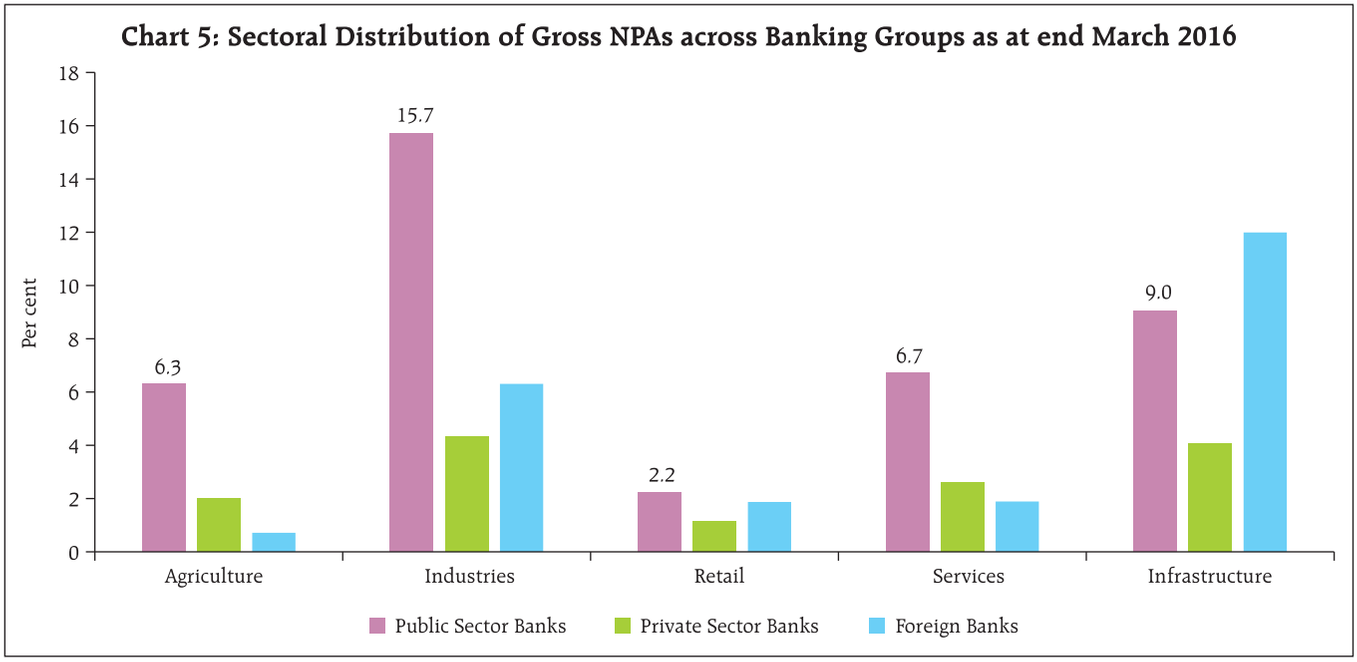
What we need to realise is that, maybe, going forward addition to NPAs may moderate but the provisioning needs as the NPAs age will put pressure on the P&L.

Sectoral distribution of NPAs

It would also be interesting to look at the sectoral distribution of NPAs and total stressed assets (Chart 4). It shows the obvious – the maximum stress in industry

Chart 4: Asset quality in major sectors





and infrastructure with the PSBs facing greatest strain across most sectors (Chart 5).

Restructured assets

During the five years to March 2015, banks have resorted to restructuring of loans in many cases to postpone recognition of non-performance, or what we now call 'extend and pretend', rather than using it as a tool to preserve the economic value of the units as intended. As a result, until 2016 the restructured assets constituted more than 50 per cent of the stressed assets of all scheduled commercial banks masking the actual extent of deterioration of the loan portfolios (Charts 6).

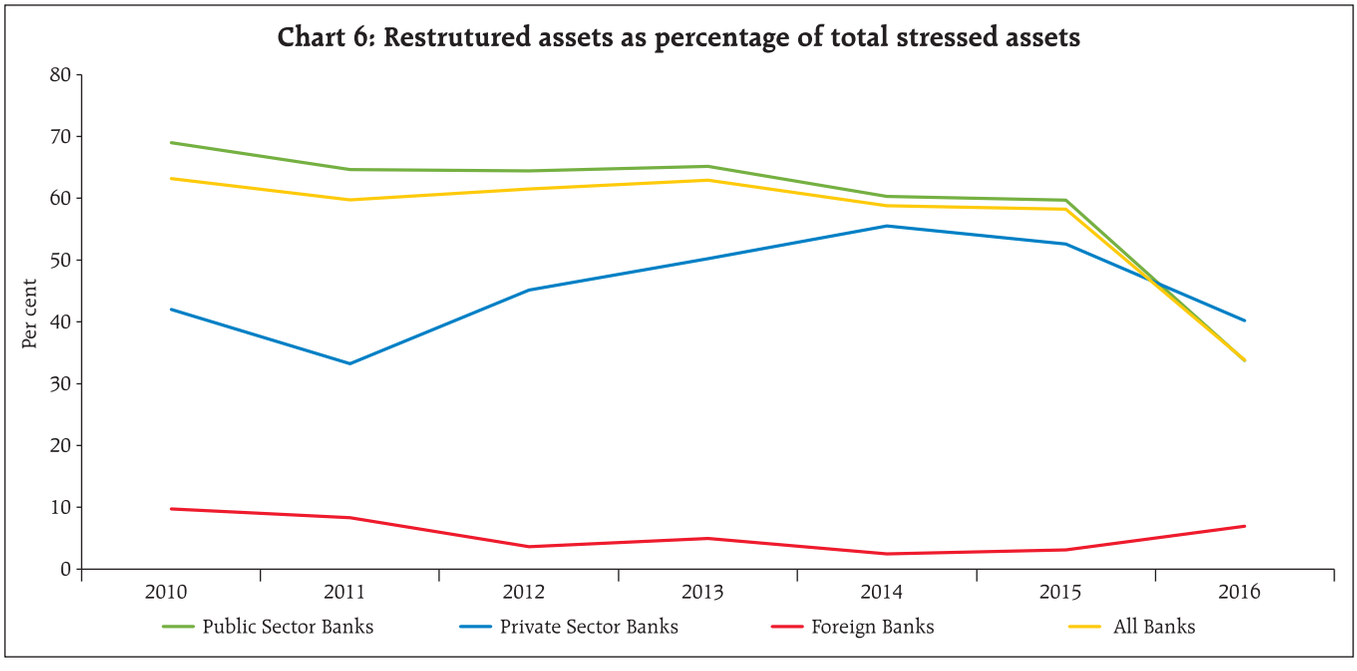
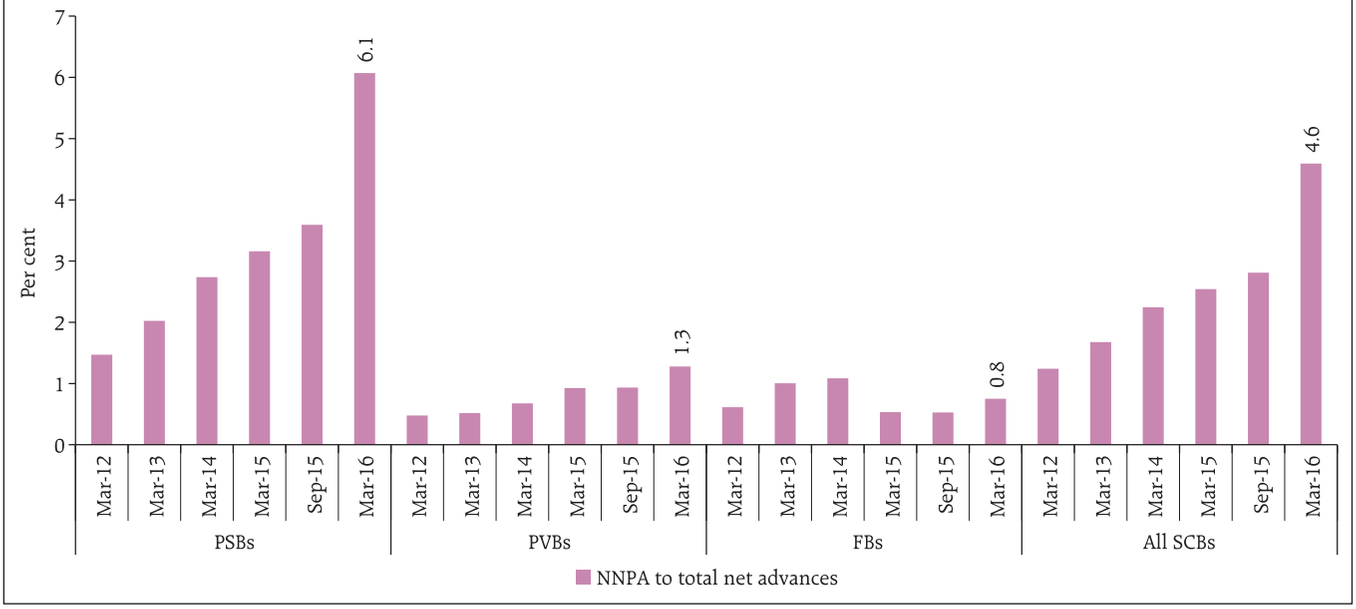


Chart 7: Evolution of Net NPAs (Per cent)



Down the years, as the stress deepened, these assets had to be classified as NPAs as work outs of non-viable units did not succeed. The Chart 6 shows that the proportion of these assets was much higher in public sector banks. The outstanding balance of these assets declined sharply in 2016 post-AQR, as a major portion of these assets has been classified as NPA post-AQR reflecting their true quality (Chart 6).

Net NPAs

High levels of NPAs have been progressively causing increasing stress on banks' earnings. As a result, banks' provisioning capacity has also come under pressure leading to a spike in the Net NPAs levels as well (Chart 7). Higher net NPAs indicate lower provision coverage ratio which should progressively improve as the strain on profitability eases.

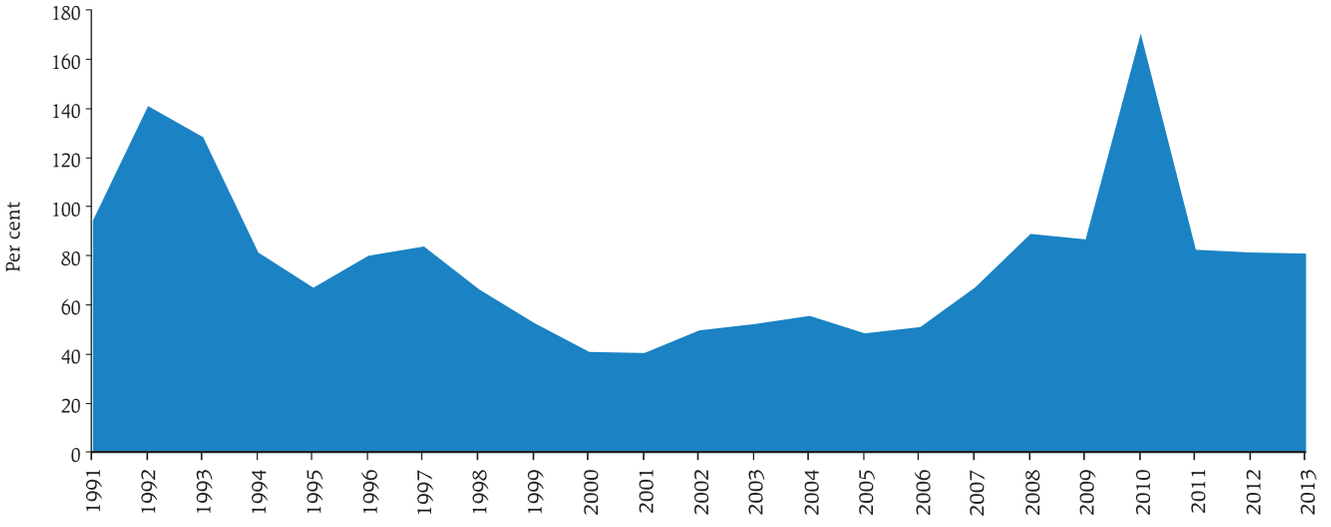
Some contributory factors

The reasons for the growth in the NPAs are also not far to seek. Table 1 and the Chart 8 below show that the bank debt fuelled the rise in corporate leverage steadily from 2005 to 2011. It is worth noting that despite the 'high leverage' being a well-established and most widely known risk factor of corporate lending, bank lending to industrial sector continued at an average elevated rate of over 20 per cent. Do we call this irrational exuberance? Obviously, an overly leveraged business is more sensitive to turbulence.

Table 1: High credit growth leading leverage

	06-07	07-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
GDP Growth (per cent) (Annual)	9.6	9.3	6.7	8.6	8.9	6.7	5.6	6.6	7.2	7.6(P)
Credit Growth (per cent) (annual- As reported on the last Friday of the financial year)	28.1	22.3	17.5	16.9	21.5	17.0	14.1	13.9	9.1	10.9
Credit growth Industrial sector (per cent)	26.7	25.0	23.0	24.4	23.6	20.3	15.1	13.1	5.6	2.7

Chart 8: Capital-weighted mean ratio of debt-to-equity



Source: IMF, Corporate Vulnerability Utility.

Portfolio diversification is key to managing idiosyncratic risk. The banks' credit portfolio leaves scope for improving the diversification both in terms of single name and sectoral concentrations. Charts 9 and 10 show that the stress is higher in large borrowers' accounts. In the overall credit portfolio, share of industrial advances is around 40 per cent. While this is partly justified based on the relatively higher credit intensity of industrial sector, the banks have to see the need for proper balance taking into account the risk return trade-off especially in the larger loan segment.

Chart 9: Share of large borrowers in the gross advances and Gross NPAs

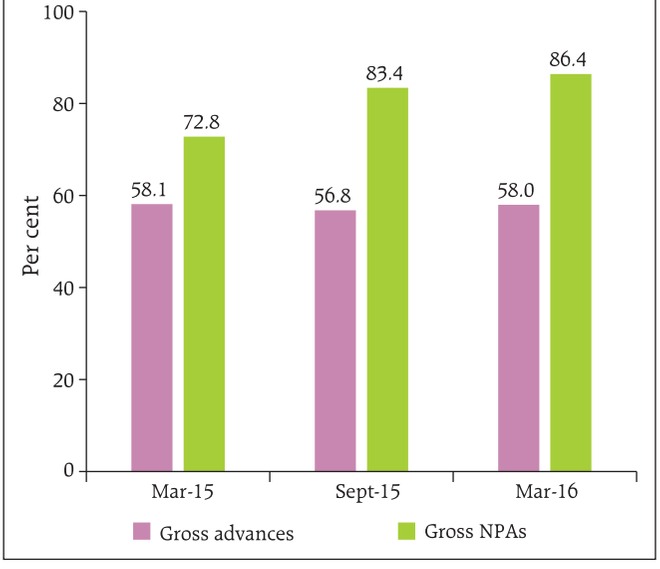
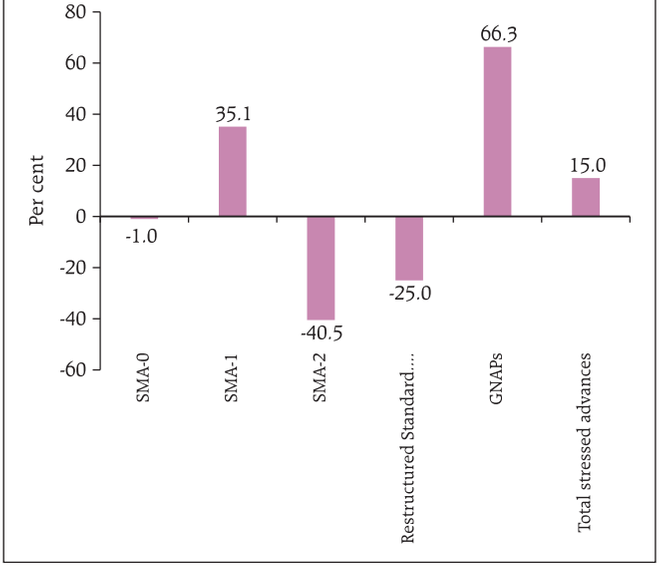


Chart 10: Percentage change in the asset quality of large borrowers



Risk Management

The conference rightly highlights the key role of risk management in developing a less stressed loan book. Let me therefore examine the elements of a good credit risk management, look at the past and draw some lessons for the future.

Banks are in the business of taking risks. If they are not taking risks they are not doing banking business. But, what does taking risk mean? Can it mean taking chances? When would a measured risk taking be different from recklessness?

Essentially, risk management would involve knowing the risk, measuring it, and controlling it within the risk appetite of the bank by using appropriate mitigants. Let us therefore identify the various sources of credit risk.

The first risk from credit management emanates from the possibility that the business does not take off as projected. It is likely that the project report based on which a credit proposal is submitted is highly optimistic. There is therefore a need to evaluate a proposal for how close the projections might be to reality. Even assuming that the projections were reasonable, there is the possibility that external factors might render the projections unachievable. The usual way to deal with this is to do a sensitivity analysis. The scenarios tested should be adequately stressed and plausible. They need to factor in the possibilities that arise on account of the fact that India is a lot more open economy now. Competition from abroad apart from domestic competition should be visualised and therefore global capacities and not just domestic capacity should be the criteria. Banks very often also undermine the forex risk embedded in cases which involve liabilities denominated in foreign currency.

As referred to earlier, during the boom period, underwriting standards did get lowered by what one may call irrational exuberance. What could be the right counterbalance in such cases? A strong balance sheet of the promoter seems to be an answer. However, it appears that there was no adequate effort to assess corporate leverage. We therefore had situations of the promoters ending with much less skin in the game. What this does is to turn the problem of corporate insolvency into a problem of the banks rather than that of the promoter. Therefore a strong underwriting system that is properly steeped in understanding and mitigating risks is the first element of credit risk management. But when would this happen? Only when risk culture permeates across the bank. Spreading risk culture is the function of the board and top management of the bank. In fact the Basel Committee states as under:

Banks should have an effective independent risk management function, under the direction of a chief risk officer (CRO), with sufficient stature, independence, resources and access to the board.

An important element of underwriting from a risk perspective will be the portfolio diversification. A credit portfolio which is exposed to concentration by counterparty, geography, economic activity and the like is more prone to shocks. There must be proper systems to monitor risks arising from concentration and systematically address them. We have allowed banks to have an exposure up to 15 per cent of their capital to a counter party and 40 per cent to a group. Banks must be wary of hitting these limits. Seven exposures of 15 per cent each would make the bank's capital vulnerable to the fortunes of a few companies. There is therefore a move to look at these limits differently. The linkages will not be through ownership alone but also economic relationships.

An effective pre-disbursement control is a very important element of credit risk management. Banks are quite liberal in waiving sanction terms without being mindful of the risk mitigant they are letting off go in the process. Almost every condition of sanction is a risk mitigant. Sometimes there may be more than one serving the same purpose. A proper evaluation of the waivers, modifications and suggestion of alternate measures in substitution of waived requirements would go a long way in reducing credit risk.

It is said that a poor underwriting can be made up by a strong post-sanction supervision and an excellently

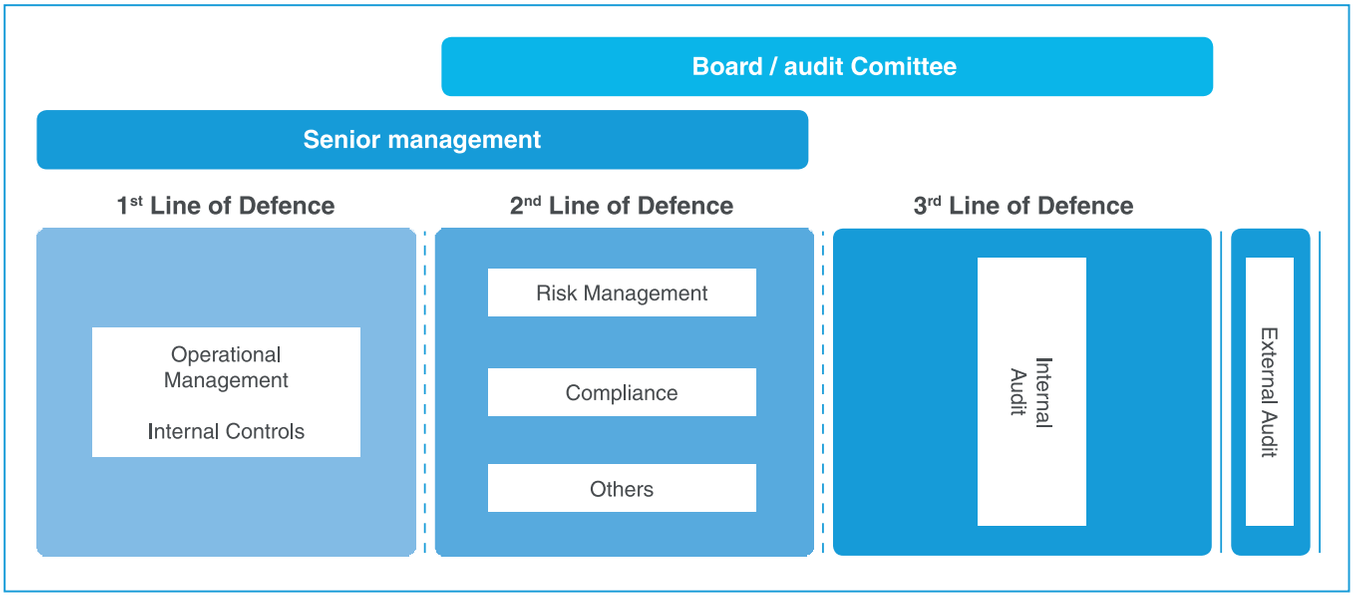
appraised credit can be marred by poor monitoring. Let me elaborate. Assume that the cost of setting up the plant was overestimated and passed off in appraisal. Tight control on release of monies and strong on-site supervision can still mitigate the risk. On the contrary, a lax post-sanction supervision can lead to the promoters not bringing in their contribution in time, money being used for purposes not part of the project cost, and the like.

An important part of the risk management is the manner in which a stressed asset is dealt with. By definition one can say that a stressed asset is a loan in which anticipated and or unanticipated risks have manifested. Again the entire gamut of activities surrounding a fresh underwriting will have to be undertaken. But is that done? It is a matter of concern that the exercise is many a time directed towards postponing the recognition of stress. Therefore, restructuring of large loans became fashionable to a default that we had to finally put a stop to it. We realise that in any part of the world a going concern is better than a gone concern and it is more so in our country in the absence of a framework for dealing with insolvency. Hopefully, this will be overcome shortly, now that the Insolvency and Bankruptcy Act has been passed. But we are not clear why a bank cannot classify an account as NPA and still provide need based credit. The system of restructuring to prevent a downgrade of an account puts pressure on the banks because they are building further leverage in an already leveraged entity. What it does is that it takes risk management away from the whole process.

Theoretically, the 'three lines of defence model' has been used traditionally to model the interaction between corporate governance and internal control systems of banks in the context of management of financial risks. I would explain it with the help of analogy to the three lines of defence in football game.

In football, it is the front line forwards and mid-fielders who set the stage for winning the match. If they play with caution and strength, the rest usually follows smoothly. In credit risk management, the loan officers and the loan sanctioning authorities constitute the first line of defence. Being responsible for operational management, they have ownership, responsibility and accountability for assessing, controlling and mitigating risk in credit exposures together with maintaining effective internal controls. (Figure 1). If they ignore the basics while selecting a

Figure 1: Three lines of defence model



Source: ECIIA/FERMA guidance on the 8th EU Company Law Directive, Article 41.

project for bank finance, the risk management, compliance and internal audits would have to work really hard to see that the loan turns out to be profitable for the bank.

The credit risk management function constituting the second line of defence facilitates and monitors the implementation of effective risk management practices by operational management. Coming back to our football metaphor, the second line of defence has multiple roles. It has to keep a watch on how the forwards are progressing and whether they need to call them to modify the strategy. At the same time they have to be in readiness to react should the situation suddenly slip out of the forwards' control. But, it would never be advisable for them to leave their place and join the forwards – this would expose the team to attack by the opposite team. Thus, the second line should only reinforce what the first line is doing, not to replace them. In credit risk management, the second line of defence should assist the risk owners- the credit department- in defining the target risk exposure and reporting adequate risk related information through the organisation. If this line of defence is to function effectively, this function has to remain independent. The credit risk management officers should not be part of the credit approval committees.

The internal audit function is the third line of defence and is expected to provide assurance to the organisation's board and senior management on how effectively the organisation assesses and manages its risks. They particularly look into the manner in which the first and second lines of defence operate. The assurance task covers all elements of an organisation's risk management framework, *i.e.* risk identification, risk assessment and response to communication of risk related information. Comparing this with a football match, one would not expect the goalkeeper to be running with the forwards past the midfield to hit a goal. Also, a team cannot always rely only upon a strong goal keeper to win the match. In other words, an internal audit cannot solve all the risk management problems that primarily are the responsibility of the operational, risk management and compliance teams.

RBI has issued detailed instructions to banks on credit risk management including the organisational and reporting structure of risk management and internal audit departments. If all institutional mechanisms have to function, they must be put in place to play the expected role and not just as a tick box compliance.

The multiple defence line model would not be effective in the following situations

- Misaligned incentives for risk-takers in first line of defence, which primarily arise from the emphasis on generating sufficient revenue and profits for the institution.
- Lack of organisational independence of functions in second line of defence.
- Lack of skills and expertise in second line functions.
- Inadequate and subjective risk assessment performed by internal audit.

Let me complete discussion on the three lines of defence with the role of the board and senior management. After all a big part of the game is won by strategising and mentoring. The players should have an executable plan that has assessed the opponent's strengths and weaknesses. The board and the senior management draw up the risk strategy for the bank, set the risk appetite for the organisation and allocate roles to each player and group of players. They are thus like the coach and the manager of a team. Mind you, if you look at famous football leagues, the coach and the manager are an important part of the teams.

Consequences

If banks continue to remain saddled with huge NPAs for a long time, it would make them risk averse and choke the lending for economic activities in general. Another consequence is the likely shift by the PSBs to loan segments such as personal loans and housing loans where the banks so far have had lowest NPAs. While this may help in rebalancing the loan portfolio in favour of less volatile sectors, care would

have to be taken not to overdo this and shift the leverage from the corporate sector to household sector. Yet another possibility is the rise in the market share of private sector banks in industrial loans. We are seeing this already. This would help the viable businesses continuing to have access to bank finance the broader banking sector is still under stress. However, these banks will have to manage the resultant credit concentration risk well. Overall, dealing squarely with stressed assets is crucial for the nation's economic growth, which is why the RBI and Government have taken several measures in this direction.

The Government and RBI Tool Kit

Steps taken by Government

The consequences of default in loans are aggravated by poor recovery. In particular, the low rate of recovery through legal recourse is a cause for concern – the annual recovery as percentage of amount of cases filed under SARFAESI Act, with DRT and Lok Adalats fell from 20 per cent in 2013-14 to 9 per cent in 2015-16. With the Government having notified the amendments to the DRT and SARFAESI Act, we hope to see improvement in the recovery process. The Insolvency and Bankruptcy Code is yet another major step taken by Government in this direction. The Government has set up a Committee, with four sub-groups, to formulate detailed regulations and rules to operationalise the code within a short time span.

The Government has also taken steps to improve the corporate governance of the PSBs. The Indradhanush initiative – breaking up the post of Chairman and Managing Director, strengthening board and management appointments through the Banks Board Bureau, decentralising more decisions to the professional board and finding ways to incentivise management – would contribute to better performance of loan portfolio of banks. The Government has also pumped in quite a bit of capital into the banks.

Regulatory measures

The phenomenal rise in non-performing assets of banks has engaged considerable attention of RBI too. Starting from the framework for dealing with stressed assets in early 2014, we have initiated a series of measures to empower banks to deal with stressed assets. Realising that information asymmetry is a major bottleneck in sound credit appraisal and strong credit monitoring, RBI has created a large loan database (CRILC) that covers all loans over ₹5 crore. The data base is accessible to all the banks. That database allows banks to identify incipient sickness that is reflected in repayment behaviour. Leveraging the CRILC database, lenders could coordinate their planning for recovery and resolution of the affected unit through a Joint Lenders' Forum (JLF) once early signals of sickness are noticed. Incentives have been given to banks for reaching quick decisions. We have taken steps to ensure that the forum performs efficiently.

RBI's regulations require banks to classify loans into special mention categories based on days past due for better monitoring. While restructuring of loans *per se* is not a bad thing, we have almost put an end to the restructuring of unviable projects by banks and keep them classified as standard assets too. At the same time, 5/25 scheme has been designed with the objective of allowing the borrowers to take the benefit of better alignment of their repayment schedule to cash flows to service the debt for a long term project. We have been constantly monitoring the performance of the scheme and tweaking it wherever necessary to ensure that it is not misused to evergreen the weak loans and to iron out the wrinkles if any.

The SDR scheme has been designed to deal with problem loans where promoters need to be replaced, whereas the 'Scheme for Sustainable Structuring of Stressed Assets'(S4A) is an optional framework for the resolution of large stressed accounts without change of promoters. The S4A envisages determination of the sustainable debt level for a stressed borrower, and bifurcation of the outstanding debt into sustainable debt and equity/quasi-equity instruments which are expected to provide upside to the lenders when the borrower turns around. This provides an incentive to capable, but overleveraged promoters to perform and banks to continue to lend as the project is not deemed an NPA, if adequately provided for.

Indian banks got into stress before full implementation of Basel III and revised IFRS which are designed to provide protection against system level stresses. In particular, the countercyclical capital buffers and expected loss based provisions would strengthen the banks and create sufficient cushions against systemic risk events. The essence of all the macro-prudential and countercyclical elements of Basel III is that they encourage banks to save capital in good times for use in bad times. For Indian banks, the stress has occurred before full implementation of Basel III and to that extent they have not had the benefits of this improved capital standard. Rather, as Basel III is being implemented during a stressed phase, Indian banks are under double pressure – to survive the current stress and implement Basel III. Hence, external capital support is essential.

Government of India has already provided the required capital support to the public sector banks, although with some conditions regarding the performance. More capital will be infused as part of Indhradhanush. But it is necessary that the stressed assets-build up is contained and the banks get back to generating adequate internal accruals. We are hopeful that, once the pain is over, banks would emerge much stronger.

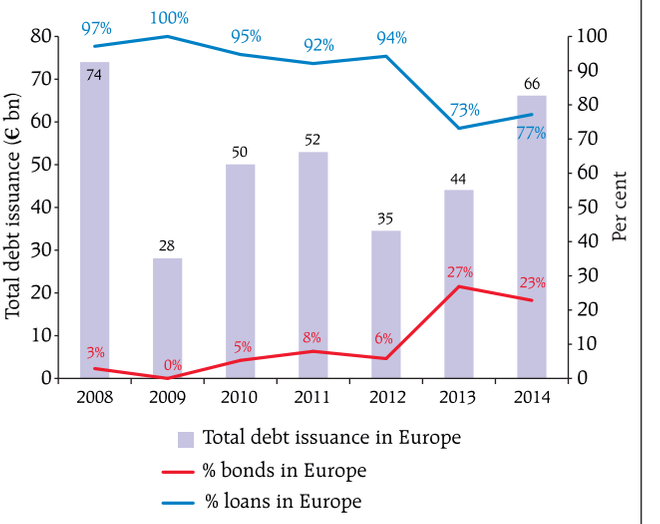
Malfeasance

While the RBI believes that businesses can get into financial difficulties and genuine business needs should be supported, malfeasance should be properly dealt with. We have, therefore, put in place a detailed system for identifying wilful defaulters and non-cooperative borrowers with attendant consequences to the borrowers who are so declared. We also believe that frauds should be sternly dealt with and have created a fraud registry.

Exploring alternative sources of project finance

Bank loans continue to be a dominant source of project finance except in North America. However, owing to the considerable risks for the bank's balance sheets that arise from such long term financing, capital market funding of project finance is being explored and consciously promoted in many other countries.

Chart 11: Trends in bank funding of projects in Europe



Source: PFI Thomson Reuters, Financial League Tables

For example, the bond funding of projects in Europe has increased from 3 per cent in 2008 to 23 per cent in 2014 (Chart 11). We have issued guidelines to make large borrowers to go to capital market for part of their funding needs. The revised draft on large exposure has been issued. We have also increased credit enhancement to be provided by banks for bond issuances to make them attractive for long term investors.

Conclusion

Any bank which does not have a strong risk management is likely to build a highly susceptible credit portfolio. Risk Management is not static. It evolves over a period of time. It need not be the same for all. Its sophistication grows with the growth in the complexities of a bank's functioning. In fact, if a bank's risk management function is not commensurate with the complexity of its operations, it is prone to the risks manifesting and turning beyond its risk appetite. Regulators have put in place a framework for risk management. How well to operationalise it and how to ensure that the various lines of defence play their expected role are in the hands of the board and senior management of a bank. There is no line of defence stronger than a board and senior management committed to sound risk management in a bank.

Thank you.

ARTICLE

Performance of Private Corporate Business Sector during 2015-16

*Performance of Private Corporate Business Sector during 2015-16**

Sales of private (non-financial) corporate business sector contracted in 2015-16 after three consecutive years of steep moderation in sales growth (Y-o-Y) both at the aggregate level and the manufacturing sector, due to lacklustre demand. However, excluding 'Petroleum Products' and 'Iron & Steel' companies, aggregate sales growth (Y-o-Y) of the remaining companies was positive, but lower, compared with 2014-15. Sales of 'Petroleum Products' industry contracted sharply in the last two years, triggered by a fall in global oil prices, but its operating profit and nominal Gross Value Added (GVA)[1] growth (Y-o-Y) improved significantly in 2015-16 compared with the previous year. Operating profit growth of the manufacturing sector, as a whole, also improved mainly on account of fall in raw material expenses. But performance of 'Iron & Steel' companies in 2015-16 has emerged as a major cause for concern due to plummeting sales combined with sharp contraction in nominal GVA and operating profits compared with 2014-15. Risk profile of 'Iron & Steel' industry has worsened in recent years with significant rise in the borrowings of the vulnerable set of companies. The risk profile of the remaining set of vulnerable manufacturing companies improved substantially.

On the positive side, in 2015-16, the ratio of cost of raw materials (CRM) to sales was the lowest in the last fifteen years. On the other hand, staff cost to sales ratio was the highest in the same period, with a sharp rise for the IT sector. Among the manufacturing industries, 'Motor Vehicles & Other Transport Equipments' and 'Pharmaceuticals & Medicines' have been performing better in the recent years. IT sector recovered in 2015-16 and non-IT services sector continued on its path of recovery in the last two years. Based on the quarterly results, a revival in the demand situation in terms of sales growth was witnessed in Q4:2015-16, after four consecutive quarters of contraction. Operating profit growth was also the highest in the last eight quarters. Improvement in the demand situation in the coming quarters would be the key for private corporate sector's profitability as benefits from lower raw material expenses may get eroded going forward.

This article analyses the performance of private (non-financial) corporate business sector during 2015-16, based on the earnings results of 2,932 listed non-government non-financial companies. Along with 2015-16 performance, a longer time-horizon is considered to analyse the trends in major performance parameters. Besides analysing the aggregate performance, the article also provides a brief analysis by size and major industry groups. The analysis is primarily based on various ratios and year on year (Y-o-Y) growth rates for the common set of companies derived from the profit & loss statements and balance sheets of companies. Select cash flow statements, as available, have also been taken into account. The detailed data corresponding to the profit & loss statements of 2015-16 for the listed non-government non-financial companies are available at the Bank's website https://rbi.org.in/scripts/Pr_DataRelease.aspx?SectionID=360&DateFilter=Year. Explanatory notes and glossary of terms are provided as part of the aforementioned data release.

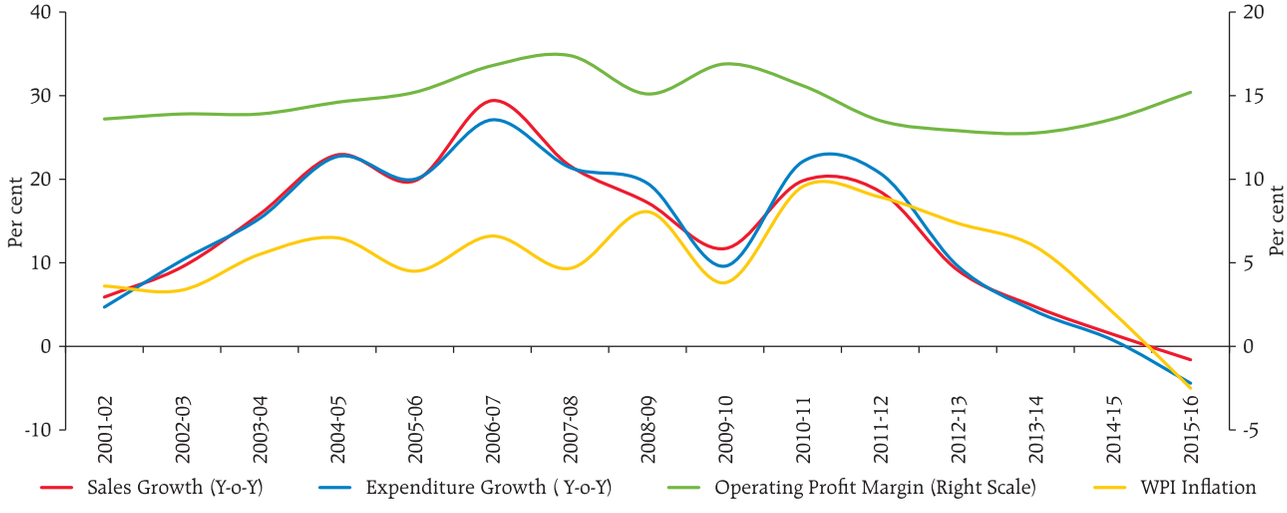
1. Aggregate sales contracted but operating profit growth improved

1.1. Performance of private corporate sector during 2015-16 was heavily impacted by the fall in global commodity prices, resulting in Y-o-Y contraction in sales by 1.6 per cent for the first time in the last fifteen years. This contraction in sales in 2015-16 was observed on the back of sharp deceleration in sales growth (Y-o-Y) in the previous three years. However, higher Y-o-Y contraction in total expenditure (4.4

* Prepared in the Corporate Studies Division of the Department of Statistics and Information Management. The previous study, 'Performance of Private Corporate Business Sector during 2014-15' was published in the October 2015 issue of the RBI Bulletin.

[1] Gross Value Added (GVA) is calculated as sum of Earnings Before Tax, Interest, Depreciation and Staff Cost.

Chart 1: Trends in Select Corporate Performance Parameters of Listed Non-Government Non-Financial Companies



per cent) as compared with the value of production (2.4 per cent), resulted in operating profit margin of 15.2 per cent in 2015-16, the highest since 2011-12 (Chart 1). Raw material and power & fuel expenses contracted sharply in 2015-16 contributing towards a fall in the total expenditure (Table 1). In contrast, staff

Table 1 : Performance of Listed Non-Government Non-Financial Companies

Period	All Companies			Excluding 'Petroleum Products' and 'Iron & Steel'		
	2014-15	2015-16		2014-15	2015-16	
No. of companies	2,925	2,932		2,751	2,750	
Items	Y-o-Y Growth in Per cent	Amount (₹ billion)	Y-o-Y Growth in Per cent	Y-o-Y Growth in Per cent	Amount (₹ billion)	Y-o-Y Growth in Per cent
	1	2	3	4	5	6
Sales	1.4	29,898	-1.6	4.8	25,409	2.9
Value of Production	1.3	29,814	-2.4	4.6	25,413	2.3
Gross Value Added (GVA)	8.0	8,368	9.7	8.8	7,440	11.2
Expenditure	0.7	25,269	-4.4	4.3	21,494	0.5
Cost of Raw Materials	-3.4	11,726	-12.4	3.9	9,149	-4.6
Staff Cost	10.5	2,905	13.1	10.2	2,743	13.5
Power and Fuel	5.1	1,051	-7.1	5.2	926	-8.4
Operating Profits	5.3	4,545	10.2	6.2	3,919	13.2
Other Income	14.0	918	-2.4	16.7	778	-4.0
EBITDA	6.8	5,463	7.9	8.0	4,698	10.0
Depreciation	5.1	1,226	5.0	6.2	1,016	6.0
Gross Profits(EBIT)	7.3	4,238	8.8	8.5	3,682	11.1
Interest	4.4	1,310	5.0	4.0	1,065	2.4
Earnings Before Tax(EBT)	8.8	2,927	10.5	10.6	2,617	15.1
Tax Provision	25.3	779	2.2	32.9	709	6.5
Net Profits	-0.7	1,966	9.3	-0.1	1,812	18.4
Paid-up Capital	2.8	1,457	4.7	3.1	1,289	4.8

Table 2 : Important Performance Parameters of Listed Non-Government Non-Financial Companies

(Per cent)

Period	No. of Companies	Sales Growth	GVA Growth	Expenditure Growth	Operating Profit Growth	Net Profit Growth	Operating Profit Margin	Net Profit Margin
	1	2	3	4	5	6	7	8
2009-10	2,629	11.7	19.2	9.6	26.6	28.8	16.9	9.4
2010-11	2,763	19.8	13.5	22.1	12.4	15.8	15.6	9.0
2011-12	2,679	18.5	9.1	20.7	1.7	-16.8	13.5	6.4
2012-13	2,931	9.1	8.0	9.6	3.5	-2.0	12.9	5.9
2013-14	2,854	4.7	6.6	4.2	2.3	-5.1	12.8	5.8
2014-15	2,925	1.4	8.0	0.7	5.3	-0.7	13.6	5.9
2015-16	2,932	-1.6	9.7	-4.4	10.2	9.3	15.2	6.6

cost growth (Y-o-Y) increased to 13.1 per cent in 2015-16 after moderating in the previous two years.

1.2. Contraction in raw material expenses contributed towards the improvement in nominal GVA growth (Y-o-Y) in 2015-16. Net profit growth of private corporate sector improved after four successive years of contraction mainly on account of high operating profits and lower tax provisions (Table 1 & 2). Profitability measured by operating profit margin significantly improved in 2015-16 compared with the previous year. Net profit margin also showed signs of improvement after remaining range bound from 2012-13 to 2014-15 (Table 2).

1.3. Excluding 'Petroleum Products' and 'Iron & Steel' companies, sales growth (Y-o-Y) of the remaining companies moderated to 2.9 per cent in 2015-16 compared with 4.8 per cent observed in the previous year (Table 1). Performance of the 'Petroleum Products' and 'Iron & Steel' industries are covered in details in section 4.

2. Contraction in sales across size classes

2.1. The listed companies are classified into three size groups according to their sales in the respective year. Companies having sales more than ₹10 billion, between ₹1 billion to ₹10 billion and less than ₹1 billion are classified as large, medium and small, respectively.

2.2. For the large companies, sales contracted for the first time in seven years. However, their operating profit growth improved significantly as compared with the previous year and was at the highest level since 2010-11. Higher operating profit growth was mainly due to fall in commodity prices. Net profit growth also improved for the large companies for three successive years. Operating profit margin stood at the six-year high level of 16.4 per cent while net profit margin stood at the five-year high level of 8.2 per cent (Table 3).

2.3. Sales contracted and operating profit improved for the medium-sized companies also, but their net profits contracted. Operating profit margins showed some improvement for the medium sized companies (Table 3).

2.4. Small companies, as a whole, indicated no signs of improvement. It may, however, be noted that the method of classification (referred in section 2.1) creates a downward bias in the sales growth of small-sized companies, as companies migrate to a lower size class when sales decline and companies migrate to a higher size class when sales increase. For example, sixty-eight companies, classified as small in 2015-16, were classified as medium in 2014-15. Another forty-nine companies, classified as small in 2014-15, were classified as medium in 2015-16. However, even after excluding such migrating companies, performance in terms of sales growth and net profit margin of small companies worsened in 2015-16 as compared with 2014-15.

Table 3 : Size Class wise Performance Parameters of Listed Non-Government Non-Financial Companies

(Per cent)

Period	Large					Medium					Small				
	Sales Growth	Operating Profit Growth	Net Profit Growth	Operating Profit Margin	Net Profit Margin	Sales Growth	Operating Profit Growth	Net Profit Growth	Operating Profit Margin	Net Profit Margin	Sales Growth	Operating Profit Growth	Net Profit Growth	Operating Profit Margin	Net Profit Margin
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2009-10	13.0	27.1	26.4	17.6	10.2	9.6	25.0	45.7	14.7	6.5	-8.8	12.4	42.7	9.2	3.5
2010-11	20.6	13.3	18.1	16.2	9.8	19.1	7.5	4.1	13.2	5.6	-4.4	2.2	-70.4	8.7	1.1
2011-12	20.8	3.7	-15.0	14.0	7.0	9.5	-9.5	-34.6	11.1	3.4	-9.2	-23.6	125.7	6.3	1.2
2012-13	10.7	4.0	3.2	13.3	6.8	1.5	0.7	-62.1	10.5	1.3	-9.3	-14.4	$	5.4	-4.7
2013-14	6.0	5.2	0.2	13.4	6.8	1.0	-15.1	-77.3	9.6	0.6	-26.3	-58.2	$	3.2	-11.9
2014-15	2.3	6.3	3.0	14.5	7.1	-2.8	0.3	@	8.6	-0.8	-15.6	@	$	-1.7	-17.6
2015-16	-1.2	10.6	7.8	16.4	8.2	-1.8	12.6	$	9.4	-0.5	-19.6	$	$	-7.1	-33.6

@: Denominator negligible
$: Denominator negative

3. Sectoral View - Risk profile of vulnerable manufacturing companies worsened

3.1. Sales of the manufacturing sector contracted in 2015-16, but it recorded the highest growth in operating profit and nominal GVA in the current year compared with the recent past. Net profit growth of the manufacturing sector improved considerably in 2015-16 on the back of two consecutive contractions. Profit margins also improved in 2015-16 compared with the previous year. IT sector recovered by recording improvements in sales, nominal GVA and operating profit growth after moderation in 2014-15. However, its performance is yet to match the levels observed during 2010-11 to 2013-14. Sales growth of the non-IT services sector continued in its path of recovery after significant moderation in 2013-14. Noticeable improvement was observed in the profit margins of this sector (Table 4).

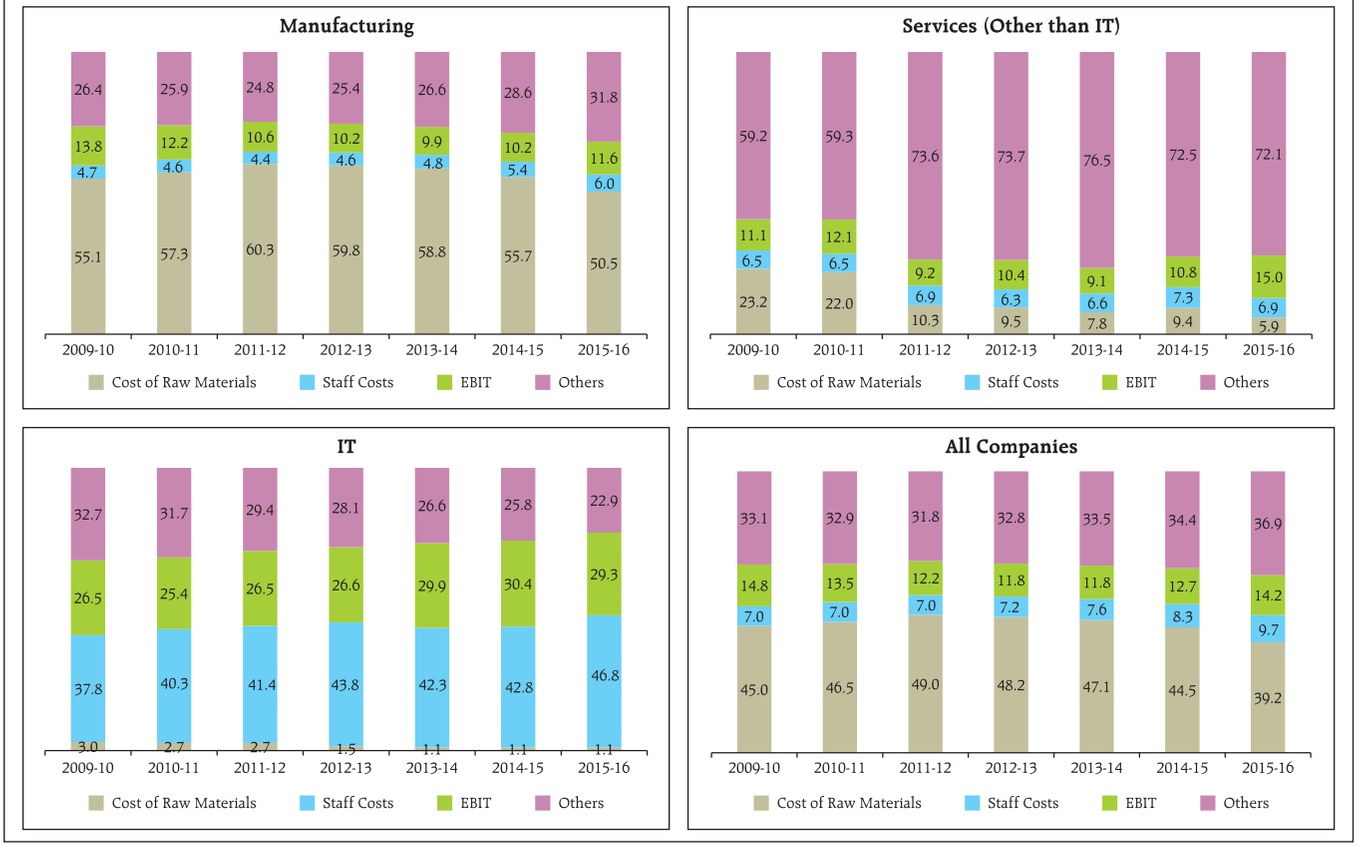
3.2. An analysis of major components of expenditure of the private corporate sector revealed that at the aggregate level, cost of raw materials (CRM) to sales, which was on a declining trend since 2012-13, further

Table 4 : Sector wise Performance Parameters of Listed Non-Government Non-Financial Companies

(Per cent)

Period	Manufacturing						Services (Non-IT)						IT					
	Sales Growth	GVA Growth	Operating Profit Growth	Net Profit Growth	Operating Profit Margin	Net Profit Margin	Sales Growth	GVA Growth	Operating Profit Growth	Net Profit Growth	Operating Profit Margin	Net Profit Margin	Sales Growth	GVA Growth	Operating Profit Growth	Net Profit Growth	Operating Profit Margin	Net Profit Margin
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
2009-10	12.9	30.0	33.1	44.2	15.8	8.5	3.6	-8.3	-1.8	-42.5	13.7	4.7	5.6	13.2	18.9	18.0	27.5	21.4
2010-11	22.4	17.5	11.7	20.0	14.3	8.2	8.5	21.9	17.6	25.3	14.3	5.4	16.9	23.1	13.5	14.4	25.8	19.8
2011-12	18.7	10.8	-0.1	-22.1	11.9	5.4	15.3	5.2	-3.9	-48.0	12.4	2.1	21.8	29.1	16.1	23.0	24.7	20.1
2012-13	8.8	7.4	2.7	2.2	11.3	5.3	11.5	7.7	11.0	-36.1	12.8	1.4	14.0	20.5	18.3	8.9	25.4	19.3
2013-14	4.2	4.2	0.0	-7.1	10.9	4.9	2.6	-4.1	-15.4	-71.7	11.6	1.2	20.4	25.8	29.1	25.7	28.2	21.1
2014-15	0.4	5.2	3.3	-7.8	11.5	4.5	3.7	22.4	38.1	$	13.6	2.7	10.7	14.8	6.6	8.1	26.8	21.3
2015-16	-3.7	7.8	9.6	12.6	13.0	5.3	4.9	17.3	21.9	-16.9	21.0	5.0	11.3	19.5	11.9	14.5	26.6	22.5

Chart 2: Components of Expenditure and EBIT as Percentage of Sales of Listed Non-Government Non-Financial Companies



moderated in 2015-16. On the other hand, staff cost to sales ratio continued to increase for four consecutive years (Chart 2). In 2015-16, the ratios of CRM to sales and staff cost to sales reached their minimum and maximum levels respectively in the last fifteen years. CRM to sales ratio for the manufacturing sector continued its declining trend since 2011-12 with significant drop in 2015-16, while staff costs to sales ratio increased for the fourth consecutive year. Non-IT services sector witnessed a decrease in both CRM and staff cost to sales ratios in 2015-16 compared with the previous year. IT sector witnessed a noticeable jump in staff cost to sales ratio in 2015-16 (Chart 2).

3.3. The annual financial statements of 1,707 common manufacturing companies over the last five years were analysed to study the trends in debt held by the vulnerable set of companies, *i.e.*, those companies having debt-equity ratio greater than 200 per cent and interest coverage ratio less than one. Companies having negative net worth were also considered as vulnerable. The number of vulnerable manufacturing companies continuously increased between 2012-13 to 2015-16. The debt held by these companies ('debt at risk') exhibited an increasing trend over the last five years with significant jump in 2014-15. The share of 'debt at risk' in the total debt of 1,707 companies grew and stood at around 30 per cent in the last two years, which indicated a deterioration in the risk profile of the manufacturing sector in the recent years. The risk profile of the 'Iron & Steel' companies was more alarming with its share of 'debt at risk' in the total debt of 142 companies at around 58.7 per cent in 2015-16. Excluding the 'Iron & Steel' companies, there was an improvement in the risk profile of the remaining

Table 5 : Debt at Risk –Listed Manufacturing Companies

Sector	Manufacturing				'Iron & Steel'				Excluding 'Iron & Steel'			
No. of Companies	1,707				142				1,565			
	No of vulnerable companies	Debt at risk (₹ Billion)	Total Debt (₹ Billion)	Share of debt at risk (per cent)	No of vulnerable companies	Debt at risk (₹ Billion)	Total Debt (₹ Billion)	Share of debt at risk (per cent)	No of vulnerable companies	Debt at risk (₹ Billion)	Total Debt (₹ Billion)	Share of debt at risk (per cent)
Period	1	2	3	4	5	6	7	8	9	10	11	12
2011-12	224	588	4,959	11.9	19	202	1,222	16.5	205	386	3,737	10.3
2012-13	215	681	5,604	12.1	23	234	1,511	15.5	192	447	4,093	10.9
2013-14	249	1,081	6,428	16.8	26	354	1,773	19.9	223	728	4,655	15.6
2014-15	279	2,033	6,792	29.9	37	999	1,929	51.8	242	1,034	4,863	21.3
2015-16	283	2,104	6,914	30.4	43	1,182	2,014	58.7	240	923	4,899	18.8

companies with the share of 'debt at risk' in the total debt of 1,565 companies at 18.8 per cent in 2015-16 (Table 5).

3.4. The sources of funds raised by these companies (mentioned in section 3.3) revealed that the share of external sources (*i.e.*, other than share capital and accumulated surplus) increased in 2015-16 compared with the previous year, while in terms of absolute amount, both the sources declined in the last two years. Long-term borrowings, which was a major source of fund until 2014-15, turned negative indicating the deleveraging process undertaken by the manufacturing sector in 2015-16. Similarly, the fund available through trade credit also declined in the last two years (Table 6A). The uses of funds table revealed that while gross fixed assets formation did not improve much in 2015-16, more money was invested in non-current assets. Drawdown of inventory position was another salient feature of the uses of funds by the manufacturing companies (Table 6B).

Table 6A : Sources of Funds - Listed Manufacturing Companies

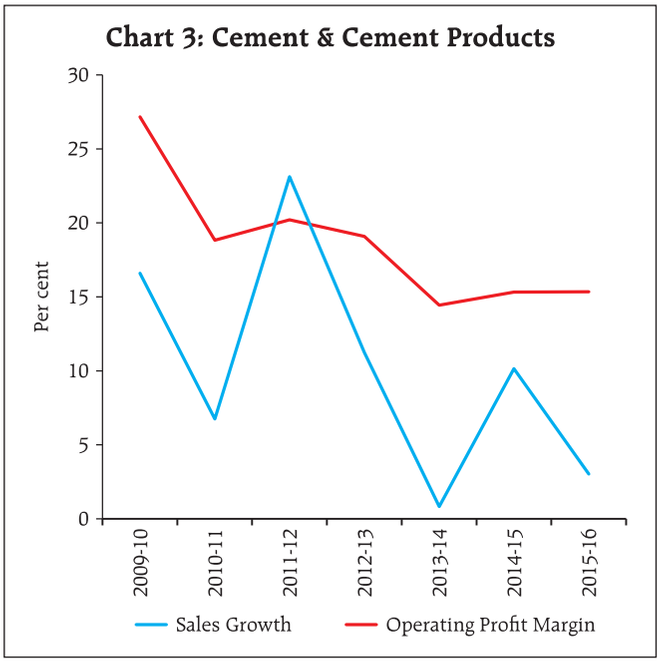
(₹ Billion)

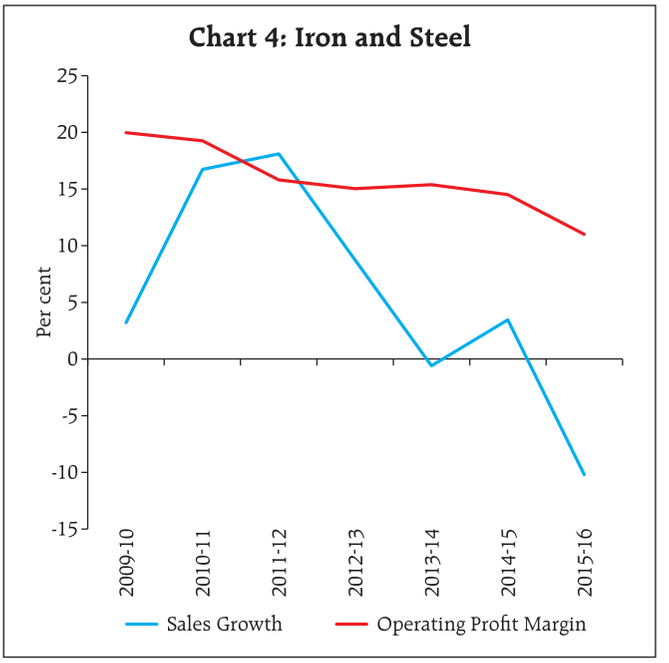
Sources of Funds	2012-13	2013-14	2014-15	2015-16
Items	1	2	3	4
INTERNAL SOURCES	831	707	840	703
A. Share Capital	30	20	42	36
B. Reserves and Surplus	801	686	798	667
EXTERNAL SOURCES	1,115	1,170	718	793
C. Money received against share warrants	1	-7	1	-1
D. Share application money pending allotment	2	-6	15	-21
E. Non-current liabilities	430	569	491	-37
1. Long-term borrowings	368	547	421	-62
2. Deferred tax liabilities (Net)	44	-15	48	-1
3. Other long-term liabilities	6	4	-32	15
4. Long Term provisions	13	33	54	10
F. Current liabilities	690	615	198	862
5. Short-term borrowings	278	277	-57	183
6. Trade payables	245	222	60	60
7. Other current liabilities	141	103	150	679
8. Short term provisions	27	13	46	-61
G. Other equity and liabilities	-8	0	12	-11
9. TOTAL	1,946	1,877	1,558	1,496

Table 6B : Uses of Funds - Listed Manufacturing Companies

(₹ Billion)

USES OF FUNDS	2012-13	2013-14	2014-15	2015-16
Items	1	2	3	4
H. Non-Current assets	1,097	1,645	1,192	1,631
10. Gross Fixed Assets	818	945	827	832
11. Noncurrent investments	120	534	373	809
12. Long-term loans and advances	139	107	-13	-36
13. Deferred tax assets (Net)	-3	14	7	17
14. Other non-current assets	23	45	-1	8
I. Current assets	849	231	360	-130
15. Current investments	157	211	192	-19
16. Inventories	311	112	110	-175
17. Trade receivables	201	115	43	154
18. Cash and cash equivalents	44	-292	-101	-19
19. Short term loans and advances	104	5	115	-64
20. other current assets	32	79	0	-7
J. Other assets	0	0	7	-4
21. TOTAL	1,946	1,877	1,558	1,496



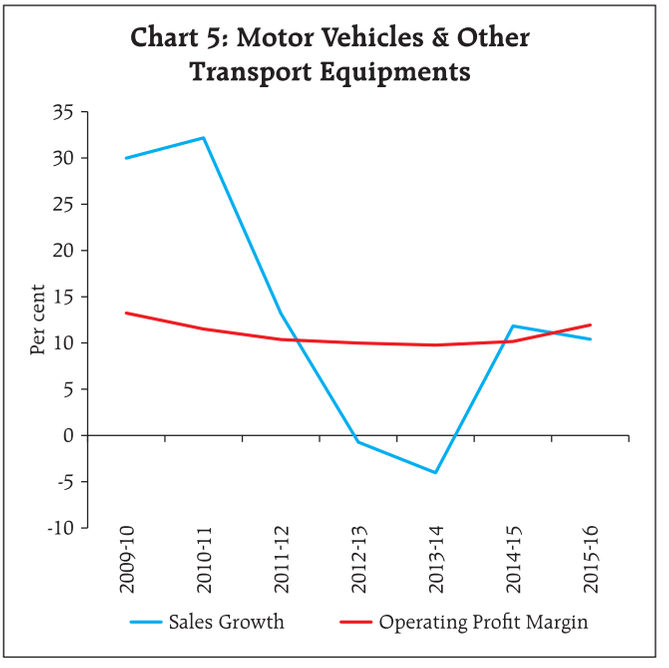


4. Higher profitability in most of the industries

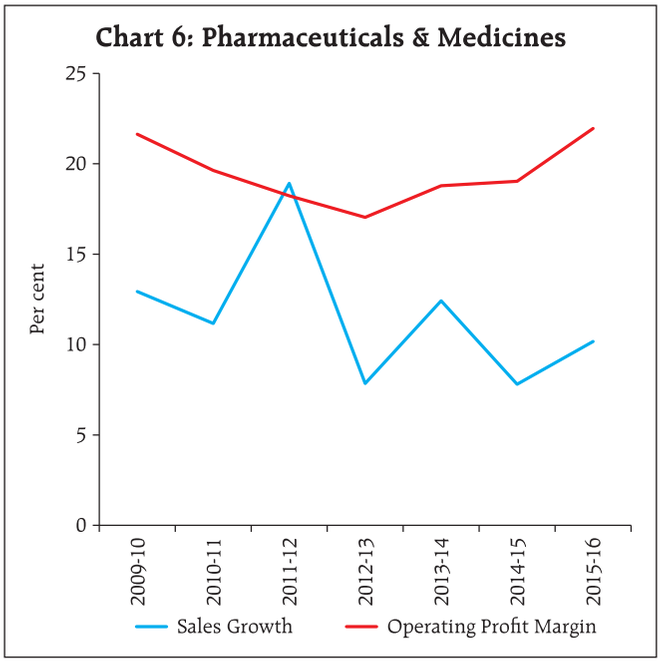
4.1. The sales growth of most of the industries were lower than their long-term (seven-year) averages, but a few major industries showed signs of recovery. Operating profit margins of most of the major industries were above their long-term averages.

4.2. Among the major industries in the basic goods sector, sales growth declined for the 'Cement & Cement Products' industry. The significant recovery that was observed in 2014-15 could not be sustained in 2015-16. Operating profit margins remained at similar levels in the last two years and was significantly below the levels observed in 2009-10 (Chart 3). 'Iron & Steel' industry was heavily impacted by contraction in output prices and its sales declined by 10.2 per cent. The operating profit margin also declined to a seven-year low level of 11.0 per cent (Chart 4). Interest coverage ratio of this industry declined below one, while its 'debt at risk' increased by 18.3 per cent in 2015-16 compared with the previous year (Table 5). For both 'Cement & Cement Products' and 'Iron & Steel' industries, net cash outflows[2] for investing activities declined in 2015-16.

4.3. In the consumer goods sector, the 'Motor Vehicles & Other Transport Equipments' and the 'Pharmaceuticals & Medicines' industries recorded impressive sales growth. Operating profit margin for the 'Motor Vehicles & Other Transport Equipments' industry stood at a six-year high in 2015-16 (Chart 5). The companies in this industry, also made a decent increase in net cash flow from operating activities in



[2] Cash flow statements were not available for all the selected companies.

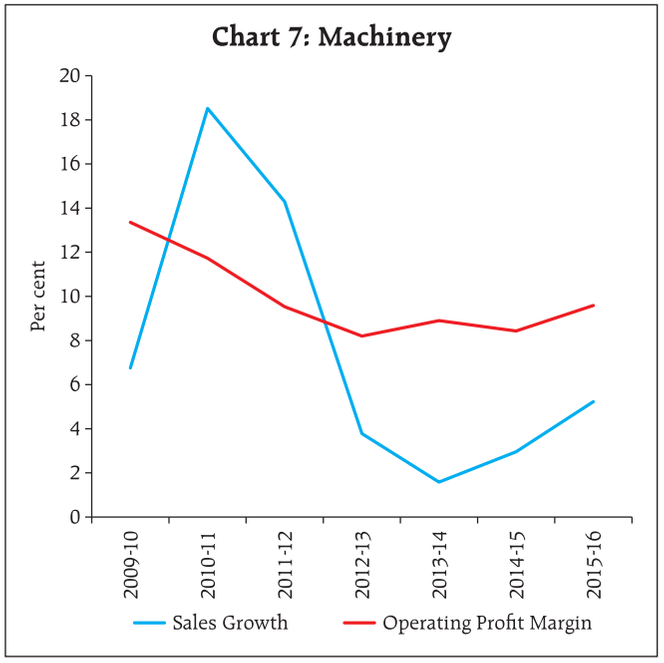


2015-16 over 2014-15. Operating profit margin for the 'Pharmaceuticals & Medicines' industry increased to a seven-year high level of 22.0 per cent in 2015-16 (Chart 6).

4.4. In the capital goods sector, sales growth of the 'Machinery' industry showed some recovery in 2015-16, recording the highest level in four years. Operating profit margin also improved for the industry (Chart 7).

4.5. 'Construction' industry showed positive sales growth after successive contraction in the last two years. However, operating profit margin declined for the industry (Chart 8). The industry also showed 11.0 per cent increase in total borrowings and their vulnerability in terms of interest coverage ratio and share of 'debt at risk' in total debt of 151 companies increased in 2015-16.

4.6. For the 'Telecommunication' industry, although sales growth declined, operating profit margin increased significantly to 33.1 per cent, which was the highest among major industries in 2015-16 (Chart 9). Twelve companies in this industry whose balance sheets were available for the last five years showed an increase of 60.0 per cent in the total borrowings in 2015-16. This led to 37.0 per cent increase in interest expenses. The cash flow statements, as available, also showed a net inflow of cash from financing activities. However, due to increase in profitability, the interest coverage ratio increased only marginally. Among other industries in the non-IT services sector, the 'Transport and Storage' industry after three successive years of sales stagnation, showed significant improvements in terms of sales growth and profitability (Chart 10).



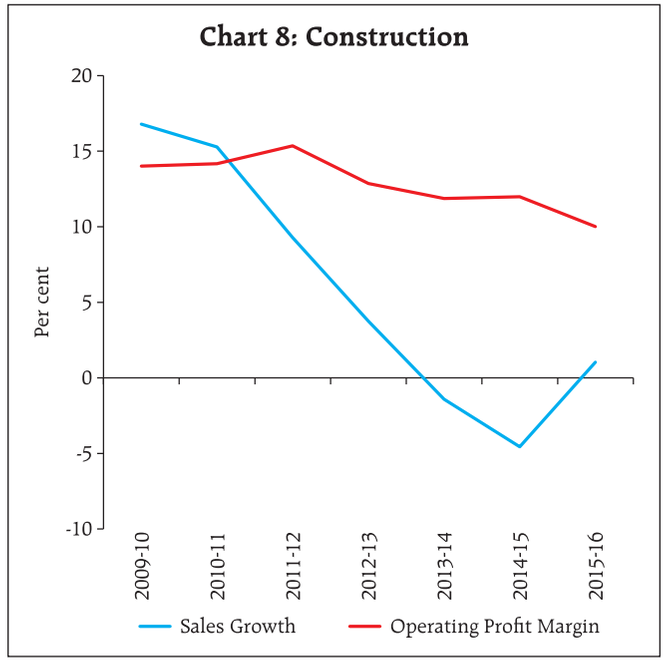


Chart 9: Telecommunication

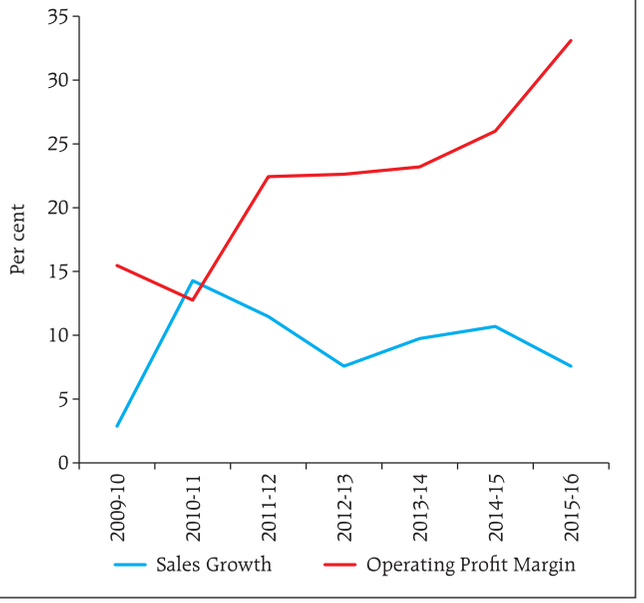
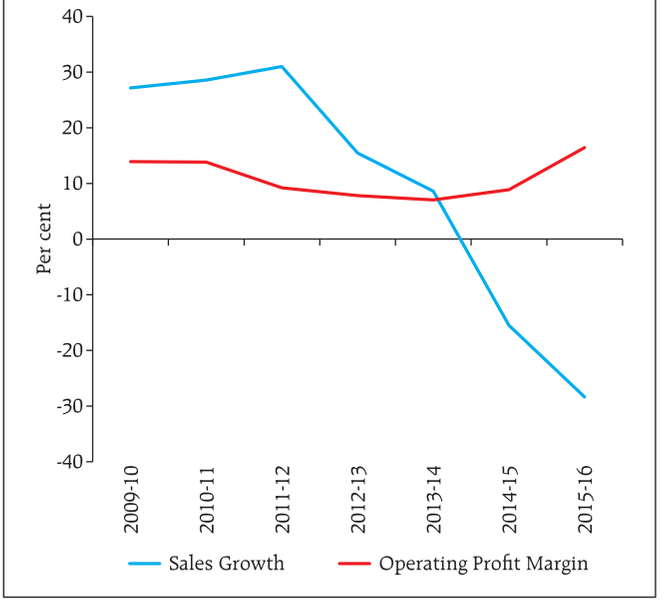
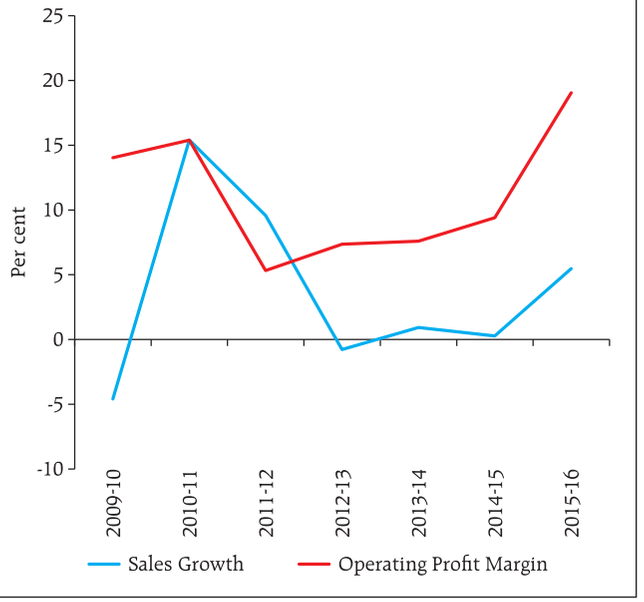


Chart 11 : Petroleum Products



4.7. Fall in global crude oil prices had a pronounced effect on the performance of the 'Petroleum Products' industry in 2015-16. 'Petroleum Products' industry suffered from a sharp contraction in sales but enjoyed the benefits of higher contraction in expenditure thus recording exceptionally high operating profit margin (Chart 11). Further, benefits of fall in global crude oil prices were not transmitted to the domestic consumers completely, which resulted in higher profitability.

Chart 10: Transport and Storage Services



5. Improvement in sales growth in Q4:2015-16 after successive contractions

5.1. Analysis of quarterly earnings statements of a common set of 2,139 listed non-government non-financial companies showed a turnaround in the demand situation, as they recorded positive sales growth in Q4:2015-16 after four successive quarters of contraction. With expenditure continuing to contract, though at a much lower rate, these companies recorded a robust operating profit growth of 18.4 per cent in Q4:2015-16, which was the highest in the last eight quarters. Nominal GVA growth also increased continuously over the last six quarters (Table 7).

5.2. Interest expenses of the manufacturing sector contracted for the second successive quarter in Q4:2015-16, while it increased markedly for the non-IT service sector. This was mainly on account of large borrowings undertaken by the 'Telecommunication' industry. IT sector witnessed noticeable improvement recording the highest growth in sales, operating profits and net profit in Q4:2015-16 over the last six quarters

Table 7 : Performance over the Quarters - 2014-15 and 2015-16 of Listed Non-Government Non-Financial Companies

(Per cent)

Item	Q1FY15	Q2FY15	Q3FY15	Q4FY15	Q1FY16	Q2FY16	Q3FY16	Q4FY16
	1	2	3	4	5	6	7	8
No. of companies	2,139							
Y-o-Y Growth								
Sales	8.5	5.3	0.5	-3.5	-1.7	-3.9	-2.3	3.3
Value of Production	8.9	5.8	1.1	-4.0	-1.9	-4.9	-3.0	2.0
Gross Value Added (GVA)	11.3	11.3	2.7	6.2	6.8	7.3	9.2	10.4
Expenditure, of which	7.9	5.1	1.3	-4.7	-3.1	-7.2	-5.3	-0.7
Operating Profits	15.6	9.7	-0.2	0.3	4.8	8.8	11.2	18.4
Other Income	-2.7	28.4	-4.1	6.2	4.9	-3.5	-3.1	-9.9
EBITDA	12.4	13.0	-0.8	1.3	4.8	6.5	8.9	13.1
Depreciation	8.3	5.1	7.4	4.1	5.0	4.8	7.1	11.9
Gross Profits (EBIT)	13.5	15.3	-3.1	0.6	4.8	6.9	9.5	13.4
Interest	2.5	5.5	9.7	9.7	13.0	9.1	2.7	6.4
Net Profits	21.0	27.2	-23.6	-20.5	-2.6	6.5	12.7	11.1
Ratio								
Cost of Raw Materials to Sales	54.3	55.2	52.4	50.6	49.8	49.4	48.4	47.4
Staff Cost to Sales	8.4	8.5	8.8	9.3	9.5	9.7	9.9	9.6
Interest Burden	25.6	26.3	30.3	27.9	27.5	27.0	28.9	26.8
Tax Provisions to EBT	24.9	23.0	23.6	23.4	25.4	24.4	25.2	22.8
Other Income to Net Profit	35.0	45.3	46.7	49.6	37.4	40.3	40.9	40.3
Interest to Sales	3.5	3.6	3.8	3.8	4.0	4.1	4.0	3.9
Interest Coverage(times)	3.9	3.8	3.3	3.6	3.6	3.7	3.5	3.7
Operating Profit to Sales	14.7	14.0	13.7	14.3	15.8	15.9	15.6	16.0
EBITDA to Sales	17.3	17.5	16.3	17.5	18.6	19.3	18.2	18.8
EBIT to Sales	13.6	13.8	12.5	13.6	14.7	15.3	14.0	14.6
Net Profit to Sales	7.5	7.6	5.6	6.4	7.5	8.4	6.2	7.0

(details are available in the quarterly data releases in the Bank's website).

5.3. Results available so far for Q1:2016-17 (April-June 2016), indicated a slight moderation in sales growth, compared with Q4:2015-16 at the aggregate level and for the manufacturing sector. There has been a considerable improvement in the profitability ratios at the aggregate level in Q1:2016-17 compared with the previous quarter. Improvement in demand situation in the coming quarters would be the key for private corporate sector's profitability as benefits from lower raw material expenses may get eroded going forward.

CURRENT STATISTICS

Contents

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

No. 1: Select Economic Indicators

Item	2015-16	2014-15	2015-16		2016-17
		Q4	Q1	Q4	Q1
	1	2	3	4	5
1 Real Sector (% Change)					
1.1 GVA at Basic Prices	7.2	6.2	7.2	7.4	7.3
1.1.1 Agriculture	1.2	-1.7	2.5	2.3	1.8
1.1.2 Industry	8.8	6.9	7.1	9.2	7.7
1.1.3 Services	8.2	8.3	8.3	8.1	8.4
1.1a Final Consumption Expenditure	6.6	5.2	5.7	7.6	8.7
1.1b Gross Fixed Capital Formation	3.9	5.4	7.1	-1.9	-3.1
	2015-16	2015		2016	
		Jul.	Aug.	Jul.	Aug.
	1	2	3	4	5
1.2 Index of Industrial Production	0.1	4.3	6.3	-2.4	-
2 Money and Banking (% Change)					
2.1 Scheduled Commercial Banks					
2.1.1 Deposits	9.3	12.5	10.7	8.3	7.6
2.1.2 Credit	10.9	10.0	8.8	8.4	7.6
2.1.2.1 Non-food Credit	10.9	10.0	9.0	8.6	7.7
2.1.3 Investment in Govt. Securities	5.4	15.5	12.9	4.7	4.2
2.2 Money Stock Measures					
2.2.1 Reserve Money (M0)	13.1	10.8	11.0	13.8	14.8
2.2.2 Broad Money (M3)	10.5	11.1	11.1	10.4	10.3
3 Ratios (%)					
3.1 Cash Reserve Ratio	4.00	4.00	4.00	4.00	4.00
3.2 Statutory Liquidity Ratio	21.50	21.50	21.50	21.00	21.00
3.3 Cash-Deposit Ratio	4.8	4.7	4.7	4.8	4.8
3.4 Credit-Deposit Ratio	77.7	74.8	74.5	74.9	74.4
3.5 Incremental Credit-Deposit Ratio	89.8	37.7	28.4	2.0	-34.4
3.6 Investment-Deposit Ratio	28.1	29.8	30.0	28.8	29.1
3.7 Incremental Investment-Deposit Ratio	16.9	42.7	47.8	46.3	59.4
4 Interest Rates (%)					
4.1 Policy Repo Rate	6.75	7.25	7.25	6.50	6.50
4.2 Reverse Repo Rate	5.75	6.25	6.25	6.00	6.00
4.3 Marginal Standing Facility (MSF) Rate	7.75	8.25	8.25	7.00	7.00
4.4 Bank Rate	7.75	8.25	8.25	7.00	7.00
4.5 Base Rate	9.30/9.70	9.70/10.00	9.70/10.00	9.30/9.70	9.30/9.70
4.6 MCLR	-	-	-	-	-
4.7 Term Deposit Rate >1 Year	7.00/7.50	8.0/8.3	7.3/8.0	7.0/7.5	7.0/7.5
4.8 Savings Deposit Rate	4.00	4.00	4.00	4.00	4.00
4.9 Call Money Rate (Weighted Average)	7.35	7.03	7.03	6.39	6.40
4.10 91-Day Treasury Bill (Primary) Yield	7.27	7.48	7.44	6.56	6.56
4.11 182-Day Treasury Bill (Primary) Yield	7.17	7.53	7.49	6.69	6.67
4.12 364-Day Treasury Bill (Primary) Yield	7.11	7.62	7.54	6.74	6.67
4.13 10-Year Government Securities Yield	7.42	7.84	7.79	7.27	7.13
5 RBI Reference Rate and Forward Premia					
5.1 INR-US$ Spot Rate (₹ Per Foreign Currency)	66.33	63.89	66.08	67.03	67.03
5.2 INR-Euro Spot Rate (₹ Per Foreign Currency)	75.10	70.12	74.37	74.27	75.74
5.3 Forward Premia of US$ 1-month (%)	6.78	7.32	6.81	6.35	6.44
3-month (%)	6.63	7.20	6.72	6.24	6.24
6-month (%)	6.57	7.20	6.64	6.03	5.85
6 Inflation (%)					
6.1 All India Consumer Price Index	4.9	3.7	3.7	6.1	5.0
6.2 Consumer Price Index for Industrial Workers	5.6	4.4	4.4	6.5	5.3
6.3 Wholesale Price Index	-2.5	-4.1	-5.1	3.6	3.7
6.3.1 Primary Articles	0.2	-4.0	-4.2	9.4	7.5
6.3.2 Fuel and Power	-11.6	-11.6	-16.2	-1.0	1.6
6.3.3 Manufactured Products	-1.1	-1.5	-2.0	1.8	2.4
7 Foreign Trade (% Change)					
7.1 Imports	-15.3	-9.2	-9.3	-19.0	-14.1
7.2 Exports	-15.9	-9.8	-19.6	-6.8	-0.3

Reserve Bank of India

No. 2: RBI - Liabilities and Assets

(₹ Billion)

Item	As on the Last Friday/ Friday						
	2015-16	2015	2016				
		Sep.	Aug. 26	Sep. 9	Sep. 16	Sep. 23	Sep. 30
	1	2	3	4	5	6	7
1 Issue Department							
1.1 Liabilities							
1.1.1 Notes in Circulation	16,512.44	14,716.09	17,095.22	17,330.99	17,375.98	17,171.36	17,046.05
1.1.2 Notes held in Banking Department	0.16	0.17	0.13	0.10	0.10	0.12	0.13
1.1/1.2 Total Liabilities (Total Notes Issued) or Assets	**16,512.60**	**14,716.25**	**17,095.35**	**17,331.09**	**17,376.08**	**17,171.48**	**17,046.18**
1.2 Assets							
1.2.1 Gold Coin and Bullion	694.86	626.63	758.21	759.65	759.65	759.65	759.65
1.2.2 Foreign Securities	15,804.14	14,077.30	16,324.78	16,558.05	16,603.39	16,399.40	16,274.60
1.2.3 Rupee Coin	3.14	1.86	1.90	2.93	2.58	1.97	1.47
1.2.4 Government of India Rupee Securities	10.46	10.46	10.46	10.46	10.46	10.46	10.46
2 Banking Department							
2.1 Liabilities							
2.1.1 Deposits	6,481.57	5,328.66	5,498.21	5,682.65	5,803.21	6,056.73	6,301.63
2.1.1.1 Central Government	1.01	1.36	1.01	1.00	1.01	1.01	1.00
2.1.1.2 Market Stabilisation Scheme	–	–	–	–	–	–	–
2.1.1.3 State Governments	1.99	0.47	0.42	0.42	0.42	0.42	0.42
2.1.1.4 Scheduled Commercial Banks	3,906.19	3,742.46	3,968.89	3,884.38	3,926.48	4,024.04	4,124.06
2.1.1.5 Scheduled State Co-operative Banks	37.97	32.49	34.50	34.87	35.45	34.99	35.40
2.1.1.6 Non-Scheduled State Co-operative Banks	14.07	12.06	15.04	15.22	14.88	14.62	14.01
2.1.1.7 Other Banks	211.08	193.99	216.12	217.42	218.24	216.52	225.11
2.1.1.8 Others	2,309.26	1,345.84	1,262.23	1,529.34	1,606.73	1,765.13	1,901.63
2.1.2 Other Liabilities	9,627.82	9,077.52	9,427.08	9,330.98	9,345.08	9,332.53	9,399.12
2.1/2.2 Total Liabilities or Assets	**16,109.39**	**14,406.17**	**14,925.29**	**15,013.63**	**15,148.29**	**15,389.26**	**15,700.75**
2.2 Assets							
2.2.1 Notes and Coins	0.16	0.17	0.13	0.10	0.10	0.12	0.13
2.2.2 Balances held Abroad	6,553.25	7,751.54	6,703.92	6,616.47	6,567.62	6,781.66	6,997.77
2.2.3 Loans and Advances							
2.2.3.1 Central Government	–	–	–	–	–	–	–
2.2.3.2 State Governments	11.92	27.72	15.14	53.89	20.49	20.20	32.09
2.2.3.3 Scheduled Commercial Banks	2,465.69	588.13	50.89	39.05	252.17	293.11	343.67
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	145.93	52.48	47.80	53.13	54.13	43.76	43.86
2.2.4 Bills Purchased and Discounted							
2.2.4.1 Internal	–	–	–	–	–	–	–
2.2.4.2 Government Treasury Bills	–	–	–	–	–	–	–
2.2.5 Investments	6,122.94	5,236.70	7,258.50	7,397.16	7,397.84	7,398.54	7,445.73
2.2.6 Other Assets	809.50	749.43	848.91	853.83	855.94	851.87	837.50
2.2.6.1 Gold	631.16	569.22	688.70	690.01	690.01	690.01	679.19

No. 3: Liquidity Operations by RBI

(₹ Billion)

Date	Liquidity Adjustment Facility				MSF	Standing Liquidity Facilities	OMO (Outright)		Net Injection (+)/ Absorption (-) (1+3+5+6+8-2-4-7)
	Repo	Reverse Repo	Variable Rate Repo	Variable Rate Reverse Repo			Sale	Purchase	
	1	2	3	4	5	6	7	8	9
Aug. 1, 2016	34.89	42.87	–	173.55	7.75	–	–	–	–173.78
Aug. 2, 2016	29.79	27.15	22.25	196.47	–	–	–	–	–171.58
Aug. 3, 2016	30.42	66.60	–	174.39	–	–	0.10	–	–210.67
Aug. 4, 2016	48.65	33.24	–	96.16	5.50	–1.94	–	–	–77.19
Aug. 5, 2016	54.82	69.99	10.00	317.53	7.45	1.94	–	–	–313.31
Aug. 6, 2016	76.19	5.20	–	–	–	–	–	–	70.99
Aug. 8, 2016	90.97	23.88	–	59.52	26.20	–	–	–	33.77
Aug. 9, 2016	101.21	54.79	192.86	–	–	–	–	–	239.28
Aug. 10, 2016	131.72	27.68	–	–	0.33	–4.51	–	–	99.86
Aug. 11, 2016	39.74	23.47	47.83	–	1.00	4.51	–	–	69.61
Aug. 12, 2016	32.06	69.96	35.75	150.05	6.00	–	–	100.00	–46.20
Aug. 16, 2016	86.22	27.06	11.75	164.71	–	–	–	–	–93.80
Aug. 17, 2016	–	108.28	–	–	21.00	–	–	–	–87.28
Aug. 18, 2016	30.82	106.73	–	334.13	0.20	–	–	–	–409.84
Aug. 19, 2016	41.92	149.73	25.25	261.56	0.60	–	–	–	–343.52
Aug. 20, 2016	57.44	12.76	–	–	0.01	–	–	–	44.69
Aug. 22, 2016	33.53	39.99	–	100.82	4.85	–1.47	–	–	–103.90
Aug. 23, 2016	55.38	22.61	4.40	100.03	8.30	–1.60	–	–	–56.16
Aug. 24, 2016	123.49	24.76	–	106.41	4.00	3.07	–	–	–0.61
Aug. 25, 2016	33.28	11.08	–	304.02	3.00	–	–	–	–278.82
Aug. 26, 2016	35.82	37.56	3.25	191.03	–	–0.92	–	–	–190.44
Aug. 29, 2016	88.48	41.93	–	109.14	3.00	–0.19	–	–	–59.78
Aug. 30, 2016	107.18	82.81	18.60	104.23	2.25	–	–	–	–59.01
Aug. 31, 2016	32.07	63.28	–	326.27	0.12	–1.70	–	–	–359.06

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

i) Operations in OTC segment

Item	2015-16	2015	2016	
		Aug.	Jul.	Aug.
	1	2	3	4
1 Net Purchase/ Sale of Foreign Currency (US $ Million) (1.1–1.2)	10,209.00	–1,559.00	1,400.00	850.00
1.1 Purchase (+)	63,299.00	4,486.00	4,465.00	5,070.00
1.2 Sale (–)	53,090.00	6,045.00	3,065.00	4,220.00
2 ₹ equivalent at contract rate (₹ Billion)	630.89	–104.30	95.17	58.10
3 Cumulative (over end-March) (US $ Million)	10,209.00	7,184.00	5,211.00	6,061.00
(₹ Billion)	630.89	458.49	350.49	408.58
4 Outstanding Net Forward Sales (–)/ Purchase (+) at the end of month (US $ Million)	–4,253.00	2,901.00	–5,066.00	94.00

ii) Operations in currency futures segment

Item	2015-16	2015	2016	
		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 (+)	9462.00	0.00	0.00	0.00
1.2 Sale (–)	9462.00	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, 2016		
	Long (+)	Short (-)	Net (1-2)
	1	2	3
1. Upto 1 month	2,916	2,092	824
2. More than 1 month and upto 3 months	12,932	22,442	-9,510
3. More than 3 months and upto 1 year	13,271	2,274	10,997
4. More than 1 year	0	2,217	-2,217
Total (1+2+3+4)	**29,119**	**29,025**	**94**

No. 5: RBI's Standing Facilities

(₹ Billion)

Item	As on the Last Reporting Friday							
	2015-16	2015	2016					
		Sep. 18	Apr. 29	May 27	Jun. 24	Jul. 22	Aug. 19	Sep. 30
	1	2	3	4	5	6	7	8
1 MSF	0.1	81.8	12.5	–	0.7	2.8	0.6	1.8
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	27.7	16.5	27.6	23.4	22.1	19.0	19.1	16.7
4 Others								
4.1 Limit	–	–	–	–	–	–	–	–
4.2 Outstanding	–	–	–	–	–	–	–	–
5 Total Outstanding (1+2.2+3.2+4.2)	27.8	98.3	40.1	23.4	22.8	21.9	19.7	18.4

Money and Banking

No. 6: Money Stock Measures

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2015-16	2015	2016		
		Aug. 21	Jul. 22	Aug. 5	Aug. 19
	1	2	3	4	5
1 Currency with the Public (1.1 + 1.2 + 1.3 – 1.4)	15,972.5	14,233.2	16,611.4	16,642.7	16,730.4
1.1 Notes in Circulation	16,415.6	14,663.3	17,135.7	17,106.3	17,219.5
1.2 Circulation of Rupee Coin	211.6	197.1	218.6	218.6	218.6
1.3 Circulation of Small Coins	7.4	7.4	7.4	7.4	7.4
1.4 Cash on Hand with Banks	662.1	634.7	750.3	689.6	715.1
2 Deposit Money of the Public	10,052.8	9,172.0	9,963.7	10,228.5	10,184.5
2.1 Demand Deposits with Banks	9,898.3	9,020.7	9,827.8	10,089.0	10,044.5
2.2 'Other' Deposits with Reserve Bank	154.5	151.3	135.9	139.5	140.0
3 M_1 (1 + 2)	**26,025.4**	**23,405.1**	**26,575.1**	**26,871.2**	**26,914.9**
4 Post Office Saving Bank Deposits	607.8	517.3	607.8	607.8	607.8
5 M_2 (3 + 4)	**26,633.1**	**23,922.4**	**27,182.9**	**27,479.0**	**27,522.7**
6 Time Deposits with Banks	90,150.8	86,390.1	93,859.8	94,464.9	94,187.6
7 M_3 (3 + 6)	**116,176.2**	**109,795.3**	**120,434.9**	**121,336.1**	**121,102.6**
8 Total Post Office Deposits	2,076.2	1,851.5	2,076.2	2,076.2	2,076.2
9 M_4 (7 + 8)	**118,252.3**	**111,646.8**	**122,511.1**	**123,412.2**	**123,178.7**

No. 7: Sources of Money Stock (M_3)

(₹ Billion)

Sources	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2015-16	2015	2016		
		Aug. 21	Jul. 22	Aug. 5	Aug. 19
	1	2	3	4	5
1 Net Bank Credit to Government	**32,384.8**	**33,055.2**	**36,931.2**	**38,063.4**	**37,062.5**
1.1 RBI's net credit to Government (1.1.1–1.1.2)	4,250.0	4,713.4	6,996.2	7,569.0	6,931.3
1.1.1 Claims on Government	6,167.0	5,335.3	7,044.8	7,570.5	7,274.7
1.1.1.1 Central Government	6,162.2	5,314.3	7,031.8	7,558.7	7,247.5
1.1.1.2 State Governments	4.8	21.0	13.0	11.8	27.2
1.1.2 Government deposits with RBI	1,917.0	621.9	48.6	1.4	343.4
1.1.2.1 Central Government	1,916.6	621.5	48.2	1.0	343.0
1.1.2.2 State Governments	0.4	0.4	0.4	0.4	0.4
1.2 Other Banks' Credit to Government	28,134.9	28,341.9	29,935.0	30,494.4	30,131.2
2 Bank Credit to Commercial Sector	**78,030.7**	**71,632.7**	**78,081.3**	**78,313.1**	**78,107.0**
2.1 RBI's credit to commercial sector	200.8	55.1	75.9	68.7	70.9
2.2 Other banks' credit to commercial sector	77,829.9	71,577.6	78,005.5	78,244.4	78,036.1
2.2.1 Bank credit by commercial banks	72,496.1	66,388.2	72,676.7	72,959.3	72,756.0
2.2.2 Bank credit by co-operative banks	5,285.3	5,129.6	5,274.6	5,235.9	5,230.5
2.2.3 Investments by commercial and co-operative banks in other securities	48.4	59.8	54.2	49.2	49.5
3 Net Foreign Exchange Assets of Banking Sector (3.1 + 3.2)	**25,337.2**	**24,249.9**	**25,749.5**	**25,839.3**	**25,970.2**
3.1 RBI's net foreign exchange assets (3.1.1–3.1.2)	23,834.8	23,181.7	24,247.0	24,336.8	24,467.7
3.1.1 Gross foreign assets	23,836.8	23,182.0	24,249.1	24,338.9	24,469.8
3.1.2 Foreign liabilities	2.0	0.3	2.1	2.1	2.1
3.2 Other banks' net foreign exchange assets	1,502.5	1,068.1	1,502.5	1,502.5	1,502.5
4 Government's Currency Liabilities to the Public	**219.1**	**204.5**	**226.0**	**226.0**	**226.0**
5 Banking Sector's Net Non-monetary Liabilities	**19,795.6**	**19,347.1**	**20,553.2**	**21,105.7**	**20,263.1**
5.1 Net non-monetary liabilities of RBI	9,541.7	8,996.7	9,718.2	9,848.2	9,320.7
5.2 Net non-monetary liabilities of other banks (residual)	10,253.9	10,350.4	10,835.0	11,257.6	10,942.4
M_3 (1+2+3+4–5)	**116,176.2**	**109,795.3**	**120,434.9**	**121,336.1**	**121,102.6**

No. 8: Monetary Survey

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2015-16	2015	2016		
		Aug. 21	Jul. 22	Aug. 5	Aug. 19
	1	2	3	4	5
Monetary Aggregates					
NM_1 (1.1 + 1.2.1+1.3)	26,025.4	23,405.1	26,575.1	26,871.2	26,914.9
NM_2 (NM_1+ 1.2.2.1)	65,238.9	60,964.3	67,446.7	68,017.8	67,918.5
NM_3 (NM_2 + 1.2.2.2 + 1.4 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	116,156.4	109,280.8	120,317.1	121,149.2	121,070.6
1 Components					
1.1 Currency with the Public	15,972.5	14,233.2	16,611.4	16,642.7	16,730.4
1.2 Aggregate Deposits of Residents	97,039.6	92,485.4	100,653.4	101,525.9	101,163.6
1.2.1 Demand Deposits	9,898.3	9,020.7	9,827.8	10,089.0	10,044.5
1.2.2 Time Deposits of Residents	87,141.2	83,464.7	90,825.6	91,436.9	91,119.1
1.2.2.1 Short-term Time Deposits	39,213.5	37,559.1	40,871.5	41,146.6	41,003.6
1.2.2.1.1 Certificates of Deposit (CDs)	2,068.2	2,017.3	1,755.5	1,725.7	1,606.9
1.2.2.2 Long-term Time Deposits	47,927.7	45,905.6	49,954.1	50,290.3	50,115.5
1.3 'Other' Deposits with RBI	154.5	151.3	135.9	139.5	140.0
1.4 Call/Term Funding from Financial Institutions	2,989.8	2,411.0	2,916.3	2,841.1	3,036.6
2 Sources					
2.1 Domestic Credit	115,922.7	109,803.0	121,094.1	122,570.2	121,494.1
2.1.1 Net Bank Credit to the Government	32,384.8	33,055.2	36,931.2	38,063.4	37,062.5
2.1.1.1 Net RBI credit to the Government	4,250.0	4,713.4	6,996.2	7,569.0	6,931.3
2.1.1.2 Credit to the Government by the Banking System	28,134.9	28,341.9	29,935.0	30,494.4	30,131.2
2.1.2 Bank Credit to the Commercial Sector	83,537.9	76,747.7	84,162.9	84,506.8	84,431.6
2.1.2.1 RBI Credit to the Commercial Sector	200.8	55.1	75.9	68.7	70.9
2.1.2.2 Credit to the Commercial Sector by the Banking System	83,337.0	76,692.6	84,087.1	84,438.1	84,360.7
2.1.2.2.1 Other Investments (Non-SLR Securities)	5,412.0	5,054.0	5,990.9	6,100.9	6,238.8
2.2 Government's Currency Liabilities to the Public	219.1	204.5	226.0	226.0	226.0
2.3 Net Foreign Exchange Assets of the Banking Sector	21,586.9	20,544.0	22,267.8	22,378.3	22,669.5
2.3.1 Net Foreign Exchange Assets of the RBI	23,834.8	23,181.7	24,247.0	24,336.8	24,467.7
2.3.2 Net Foreign Currency Assets of the Banking System	–2,247.8	–2,637.7	–1,979.2	–1,958.5	–1,798.2
2.4 Capital Account	18,310.9	17,767.9	18,825.5	18,822.7	18,942.8
2.5 Other items (net)	3,261.5	3,502.8	4,445.4	5,202.6	4,376.2

No. 9: Liquidity Aggregates

(₹ Billion)

Aggregates	2015-16	2015	2016		
		Aug.	Jun.	Jul.	Aug.
	1	2	3	4	5
1 NM_3	**116,156.4**	**109,280.8**	**119,446.7**	**120,317.1**	**121,070.6**
2 Postal Deposits	2,076.2	1,851.5	2,076.2	2,076.2	2,076.2
3 L_1 (1 + 2)	**118,232.5**	**111,132.3**	**121,522.9**	**122,393.3**	**123,146.8**
4 Liabilities of Financial Institutions	29.3	29.3	29.3	29.3	29.3
4.1 Term Money Borrowings	26.6	26.6	26.6	26.6	26.6
4.2 Certificates of Deposit	0.3	0.3	0.3	0.3	0.3
4.3 Term Deposits	2.5	2.5	2.5	2.5	2.5
5 L_2 (3 + 4)	**118,261.8**	**111,161.7**	**121,552.2**	**122,422.6**	**123,176.1**
6 Public Deposits with Non-Banking Financial Companies	372.1	..	372.1	..	..
7 L_3 (5 + 6)	**118,633.9**	..	**121,924.3**	..	..

No. 10: Reserve Bank of India Survey

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2015-16	2015	2016		
		Aug. 21	Jul. 22	Aug. 5	Aug. 19
	1	2	3	4	5
1 Components					
1.1 Currency in Circulation	16,634.6	14,867.9	17,361.8	17,332.3	17,445.5
1.2 Bankers' Deposits with the RBI	5,018.3	3,925.9	4,130.7	4,273.2	4,154.8
1.2.1 Scheduled Commercial Banks	4,738.7	3,688.9	3,867.4	4,005.9	3,888.0
1.3 'Other' Deposits with the RBI	154.5	151.3	135.9	139.5	140.0
Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	21,807.4	18,945.0	21,628.4	21,745.1	21,740.4
2 Sources					
2.1 RBI's Domestic Credit	7,295.3	4,555.5	6,873.5	7,030.4	6,367.4
2.1.1 Net RBI credit to the Government	4,250.0	4,713.4	6,996.2	7,569.0	6,931.3
2.1.1.1 Net RBI credit to the Central Government (2.1.1.1.1 + 2.1.1.1.2 + 2.1.1.1.3 + 2.1.1.1.4 – 2.1.1.1.5)	4,245.6	4,692.8	6,983.7	7,557.7	6,904.6
2.1.1.1.1 Loans and Advances to the Central Government	–	–	–	420.3	–
2.1.1.1.2 Investments in Treasury Bills	–	–	–	–	–
2.1.1.1.3 Investments in dated Government Securities	6,159.5	5,311.9	7,029.6	7,137.0	7,245.1
2.1.1.1.3.1 Central Government Securities	6,149.0	5,301.4	7,019.1	7,126.6	7,234.6
2.1.1.1.4 Rupee Coins	2.8	2.4	2.3	1.4	2.5
2.1.1.1.5 Deposits of the Central Government	1,916.6	621.5	48.2	1.0	343.0
2.1.1.2 Net RBI credit to State Governments	4.3	20.6	12.6	11.3	26.8
2.1.2 RBI's Claims on Banks	2,844.5	-213.0	-198.6	-607.4	-634.9
2.1.2.1 Loans and Advances to Scheduled Commercial Banks	2,844.5	-213.4	-198.6	-607.4	-634.9
2.1.3 RBI's Credit to Commercial Sector	200.8	55.1	75.9	68.7	70.9
2.1.3.1 Loans and Advances to Primary Dealers	27.0	16.5	19.0	19.1	19.1
2.1.3.2 Loans and Advances to NABARD	–	–	–	–	–
2.2 Government's Currency Liabilities to the Public	219.1	204.5	226.0	226.0	226.0
2.3 Net Foreign Exchange Assets of the RBI	23,834.8	23,181.7	24,247.0	24,336.8	24,467.7
2.3.1 Gold	1,334.3	1,168.1	1,391.3	1,446.9	1,446.9
2.3.2 Foreign Currency Assets	22,500.6	22,013.8	22,855.9	22,890.1	23,021.0
2.4 Capital Account	8,728.0	8,621.5	8,599.7	8,600.9	8,731.1
2.5 Other Items (net)	813.7	375.2	1,118.5	1,247.3	589.7

No. 11: Reserve Money - Components and Sources

(₹ Billion)

Item	Outstanding as on March 31/ last Fridays of the month/ Fridays						
	2015-16	2015	2016				
		Aug. 28	Jul. 29	Aug. 5	Aug. 12	Aug. 19	Aug. 26
	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)	21,807.4	18,852.3	21,673.1	21,745.1	21,772.0	21,740.4	21,700.6
1 Components							
1.1 Currency in Circulation	16,634.6	14,785.2	17,237.2	17,332.3	17,457.1	17,445.5	17,321.3
1.2 Bankers' Deposits with RBI	5,018.3	3,914.3	4,291.0	4,273.2	4,175.0	4,154.8	4,234.6
1.3 'Other' Deposits with RBI	154.5	152.8	144.9	139.5	139.9	140.0	144.7
2 Sources							
2.1 Net Reserve Bank Credit to Government	4,250.0	4,694.5	7,031.7	7,569.0	6,455.2	6,931.3	6,684.9
2.2 Reserve Bank Credit to Banks	2,844.5	-200.2	-259.5	-607.4	-137.5	-634.9	-441.8
2.3 Reserve Bank Credit to Commercial Sector	200.8	60.7	75.6	68.7	73.8	70.9	70.8
2.4 Net Foreign Exchange Assets of RBI	23,834.8	23,033.0	24,402.3	24,336.8	24,345.6	24,467.7	24,473.5
2.5 Government's Currency Liabilities to the Public	219.1	204.5	226.0	226.0	226.0	226.0	226.0
2.6 Net Non- Monetary Liabilities of RBI	9,541.7	8,940.3	9,803.1	9,848.2	9,191.1	9,320.7	9,312.9

No. 12: Commercial Bank Survey

(₹ Billion)

Item	Outstanding as on last reporting Fridays of the month/ reporting Fridays of the month				
	2015-16	2015	2016		
		Aug. 21	Jul. 22	Aug. 5	Aug. 19
	1	2	3	4	5
1 Components					
1.1 Aggregate Deposits of Residents	90,263.3	86,150.4	93,706.4	94,565.2	94,194.1
1.1.1 Demand Deposits	8,890.0	8,050.7	8,765.2	9,024.5	8,988.3
1.1.2 Time Deposits of Residents	81,373.4	78,099.7	84,941.2	85,540.7	85,205.7
1.1.2.1 Short-term Time Deposits	36,618.0	35,144.9	38,223.5	38,493.3	38,342.6
1.1.2.1.1 Certificates of Deposits (CDs)	2,068.2	2,017.3	1,755.5	1,725.7	1,606.9
1.1.2.2 Long-term Time Deposits	44,755.4	42,954.8	46,717.7	47,047.4	46,863.2
1.2 Call/Term Funding from Financial Institutions	2,989.8	2,411.0	2,916.3	2,841.1	3,036.6
2 Sources					
2.1 Domestic Credit	104,171.4	98,121.8	106,742.0	107,676.6	107,228.4
2.1.1 Credit to the Government	26,239.3	26,686.4	28,044.9	28,589.2	28,212.8
2.1.2 Credit to the Commercial Sector	77,932.1	71,435.4	78,697.1	79,087.5	79,015.6
2.1.2.1 Bank Credit	72,496.1	66,388.2	72,676.7	72,959.3	72,756.0
2.1.2.1.1 Non-food Credit	71,443.6	65,361.4	71,622.1	71,913.0	71,720.9
2.1.2.2 Net Credit to Primary Dealers	97.8	63.6	93.3	95.5	88.4
2.1.2.3 Investments in Other Approved Securities	15.8	19.2	25.8	21.5	21.9
2.1.2.4 Other Investments (in non-SLR Securities)	5,322.4	4,964.4	5,901.3	6,011.2	6,149.2
2.2 Net Foreign Currency Assets of Commercial Banks (2.2.1–2.2.2–2.2.3)	–2,247.8	–2,637.7	–1,979.2	–1,958.5	–1,798.2
2.2.1 Foreign Currency Assets	1,847.4	1,273.3	2,041.9	2,046.1	2,221.5
2.2.2 Non-resident Foreign Currency Repatriable Fixed Deposits	3,009.6	2,925.4	3,034.2	3,027.9	3,068.6
2.2.3 Overseas Foreign Currency Borrowings	1,085.6	985.6	986.9	976.7	951.2
2.3 Net Bank Reserves (2.3.1+2.3.2–2.3.3)	2,290.1	4,463.3	4,725.6	5,211.1	5,144.2
2.3.1 Balances with the RBI	3,874.4	3,688.9	3,867.4	4,005.9	3,888.0
2.3.2 Cash in Hand	574.4	561.0	659.6	597.9	621.3
2.3.3 Loans and Advances from the RBI	2,158.7	–213.4	–198.6	–607.4	–634.9
2.4 Capital Account	9,341.1	8,904.8	9,984.1	9,980.1	9,970.1
2.5 Other items (net) (2.1+2.2+2.3–2.4–1.1–1.2)	1,619.5	2,481.3	2,881.6	3,542.8	3,373.6
2.5.1 Other Demand and Time Liabilities (net of 2.2.3)	3,954.8	3,397.4	3,609.2	3,945.5	3,894.4
2.5.2 Net Inter-Bank Liabilities (other than to PDs)	–256.0	–469.3	–287.7	–295.0	–230.5

No. 13: Scheduled Commercial Banks' Investments

(₹ Billion)

Item	As on March 18, 2016	2015	2016		
		Aug. 21	Jul. 22	Aug. 05	Aug. 19
	1	2	3	4	5
1 SLR Securities	26,255.1	26,705.7	27,930.6	28,610.7	28,234.8
2 Commercial Paper	817.9	678.7	912.2	964.5	1,062.4
3 Shares issued by					
3.1 PSUs	77.1	84.4	76.8	78.2	77.3
3.2 Private Corporate Sector	435.5	389.4	477.3	465.0	461.4
3.3 Others	55.9	30.9	43.5	43.4	43.4
4 Bonds/Debentures issued by					
4.1 PSUs	930.7	791.5	1,182.7	1,136.6	1,132.9
4.2 Private Corporate Sector	1,324.4	1,157.6	1,304.5	1,354.4	1,362.6
4.3 Others	511.2	539.9	649.2	652.7	657.9
5 Instruments issued by					
5.1 Mutual funds	641.7	741.8	761.4	732.9	758.6
5.2 Financial institutions	629.0	637.6	611.2	583.5	592.6

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			
	2015-16	2015	2016		2015-16	2015	2016	
		Aug.	Jul.	Aug.		Aug.	Jul.	Aug.
	1	2	3	4	5	6	7	8
Number of Reporting Banks	214	212	219	219	147	145	148	148
1 Liabilities to the Banking System	**2,312.4**	**1,743.8**	**2,136.1**	**2,270.0**	**2,250.3**	**1,686.0**	**2,067.0**	**2,201.8**
1.1 Demand and Time Deposits from Banks	1,583.2	1,352.8	1,533.1	1,571.7	1,522.1	1,296.1	1,465.8	1,504.2
1.2 Borrowings from Banks	645.0	328.7	550.3	623.3	644.0	327.6	548.5	622.8
1.3 Other Demand and Time Liabilities	84.2	62.4	52.7	74.9	84.2	62.3	52.7	74.9
2 Liabilities to Others	**103,899.7**	**99,167.1**	**107,845.0**	**107,069.9**	**101,303.1**	**96,684.9**	**105,079.2**	**104,307.4**
2.1 Aggregate Deposits	95,756.3	91,674.2	99,524.5	98,756.1	93,272.9	89,300.2	96,877.7	96,101.6
2.1.1 Demand	9,095.8	8,472.7	9,222.8	9,394.3	8,890.0	8,272.6	8,990.1	9,170.0
2.1.2 Time	86,660.5	83,201.5	90,301.7	89,361.8	84,382.9	81,027.6	87,887.6	86,931.6
2.2 Borrowings	3,011.5	2,784.2	3,175.6	3,271.7	2,989.8	2,756.7	3,144.1	3,247.0
2.3 Other Demand and Time Liabilities	5,131.9	4,708.7	5,144.9	5,042.1	5,040.4	4,627.9	5,057.4	4,958.9
3 Borrowings from Reserve Bank	**2,324.7**	**142.3**	**261.2**	**50.9**	**2,324.7**	**142.0**	**261.2**	**50.9**
3.1 Against Usance Bills /Promissory Notes	–	–	–	–	–	–	–	–
3.2 Others	2,324.7	142.3	261.2	50.9	2,324.7	142.0	261.2	50.9
4 Cash in Hand and Balances with Reserve Bank	4,571.0	4,352.4	4,763.7	4,747.3	4,448.8	4,237.6	4,637.5	4,622.6
4.1 Cash in Hand	586.7	571.8	626.3	667.8	574.38	560.5	612.2	653.7
4.2 Balances with Reserve Bank	3,984.4	3,780.6	4,137.4	4,079.5	3,874.4	3,677.1	4,025.4	3,968.9
5 Assets with the Banking System	**2,980.4**	**2,596.3**	**2,683.4**	**2,696.4**	**2,604.0**	**2,227.3**	**2,297.5**	**2,274.8**
5.1 Balances with Other Banks	1,759.6	1,744.8	1,695.1	1,755.0	1,616.8	1,585.4	1,530.4	1,581.0
5.1.1 In Current Account	124.9	98.8	173.9	172.5	108.8	81.6	152.7	154.8
5.1.2 In Other Accounts	1,634.7	1,646.0	1,521.2	1,582.5	1,508.0	1,503.8	1,377.7	1,426.2
5.2 Money at Call and Short Notice	513.6	209.1	377.9	292.2	348.9	75.8	206.4	113.3
5.3 Advances to Banks	273.3	234.6	266.2	276.9	260.5	226.7	263.9	267.8
5.4 Other Assets	433.8	407.9	344.3	372.3	377.8	339.4	296.9	312.7
6 Investment	**27,000.9**	**27,545.0**	**28,680.7**	**28,728.6**	**26,255.1**	**26,812.1**	**27,925.4**	**27,940.4**
6.1 Government Securities	26,981.7	27,522.9	28,655.5	28,699.8	26,239.3	26,792.9	27,907.9	27,920.2
6.2 Other Approved Securities	19.2	22.1	25.3	28.8	15.8	19.3	17.5	20.3
7 Bank Credit	**74,689.6**	**68,521.2**	**74,783.4**	**73,753.5**	**72,496.1**	**66,489.9**	**72,569.8**	**71,522.8**
7a Food Credit	1,215.2	1,162.2	1,203.7	1,182.1	1,052.5	1,027.4	1,041.0	1,019.4
7.1 Loans, Cash-credits and Overdrafts	72,492.8	66,298.9	72,628.5	71,704.9	70,337.2	64,299.0	70,466.7	69,528.5
7.2 Inland Bills-Purchased	264.3	354.0	257.4	231.1	257.1	347.4	241.6	216.3
7.3 Inland Bills-Discounted	1,313.5	1,209.2	1,273.8	1,223.7	1,288.7	1,190.1	1,243.2	1,189.4
7.4 Foreign Bills-Purchased	205.5	231.8	219.3	210.7	204.4	231.1	218.7	210.1
7.5 Foreign Bills-Discounted	413.6	427.3	404.5	383.1	408.8	422.3	399.7	378.6

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

(₹ Billion)

Item	Outstanding as on				Growth (%)	
	Mar. 18, 2016	2015	2016		Financial year so far	Y-o-Y
		Aug. 21	Jul. 22	Aug. 19	2016-17	2016
	1	2	3	4	5	6
1 Gross Bank Credit	**66,500**	**61,600**	**66,321**	**66,287**	**-0.3**	**7.6**
1.1 Food Credit	**1,031**	**1,050**	**794**	**771**	**–25.2**	**-26.5**
1.2 Non-food Credit	**65,469**	**60,550**	**65,527**	**65,515**	**0.1**	**8.2**
1.2.1 Agriculture & Allied Activities	**8,829**	**8,078**	**9,123**	**9,177**	**3.9**	**13.6**
1.2.2 Industry	**27,307**	**26,238**	**26,365**	**26,181**	**–4.1**	**-0.2**
1.2.2.1 Micro & Small	3,715	3,679	3,597	3,543	–4.6	-3.7
1.2.2.2 Medium	1,148	1,142	1,089	1,079	–6.1	-5.5
1.2.2.3 Large	22,444	21,417	21,679	21,559	–3.9	0.7
1.2.3 Services	**15,411**	**13,906**	**15,559**	**15,594**	**1.2**	**12.1**
1.2.3.1 Transport Operators	997	949	1,061	1,055	5.7	11.1
1.2.3.2 Computer Software	191	191	183	183	–4.2	-4.2
1.2.3.3 Tourism, Hotels & Restaurants	371	372	384	385	3.8	3.5
1.2.3.4 Shipping	104	103	101	100	–4.0	-2.4
1.2.3.5 Professional Services	1,046	887	1,145	1,128	7.8	27.2
1.2.3.6 Trade	3,811	3,658	3,894	3,912	2.7	6.9
1.2.3.6.1 Wholesale Trade	1,686	1,755	1,746	1,761	4.4	0.4
1.2.3.6.2 Retail Trade	2,125	1,904	2,148	2,151	1.2	13.0
1.2.3.7 Commercial Real Estate	1,776	1,655	1,815	1,817	2.3	9.8
1.2.3.8 Non-Banking Financial Companies (NBFCs)	3,527	2,949	3,424	3,395	–3.7	15.2
1.2.3.9 Other Services	3,587	3,143	3,551	3,619	0.9	15.1
1.2.4 Personal Loans	**13,922**	**12,329**	**14,480**	**14,563**	**4.6**	**18.1**
1.2.4.1 Consumer Durables	178	160	188	191	7.4	19.2
1.2.4.2 Housing	7,468	6,745	7,816	7,869	5.4	16.7
1.2.4.3 Advances against Fixed Deposits	667	587	612	595	–10.8	1.3
1.2.4.4 Advances to Individuals against share & bonds	64	57	58	57	–11.0	0.0
1.2.4.5 Credit Card Outstanding	377	340	429	431	14.4	26.8
1.2.4.6 Education	682	661	691	701	2.7	6.0
1.2.4.7 Vehicle Loans	1,529	1,314	1,575	1,589	3.9	21.0
1.2.4.8 Other Personal Loans	2,958	2,465	3,112	3,131	5.9	27.0
1.2A Priority Sector	**22,259**	**20,708**	**22,805**	**22,646**	**1.7**	**9.4**
1.2A.1 Agriculture & Allied Activities	8,826	8,078	9,087	9,139	3.5	13.1
1.2A.2 Micro & Small Enterprises	8,476	7,918	8,502	8,392	–1.0	6.0
1.2A.2.1 Manufacturing	3,715	3,679	3,597	3,543	–4.6	-3.7
1.2A.2.2 Services	4,761	4,239	4,905	4,849	1.8	14.4
1.2A.3 Housing	3,423	3,309	3,512	3,516	2.7	6.2
1.2A.4 Micro-Credit	188	177	182	184	–2.4	3.8
1.2A.5 Education Loans	601	600	607	615	2.2	2.5
1.2A.6 State-Sponsored Orgs. for SC/ST	5	5	6	6	16.1	25.2
1.2A.7 Weaker Sections	4,774	4,390	4,939	4,994	4.6	13.8
1.2A.8 Export Credit	424	359	471	459	8.3	27.9

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

(₹ Billion)

Industry	Outstanding as on				Growth (%)	
	Mar. 18, 2016	2015	2016		Financial year so far	Y-o-Y
		Aug. 21	Jul. 22	Aug. 19	2016-17	2016
	1	2	3	4	5	6
1 Industry	**27,307**	**26,238**	**26,365**	**26,181**	**–4.1**	**–0.2**
1.1 Mining & Quarrying (incl. Coal)	**390**	**332**	**338**	**340**	**–13.0**	**2.3**
1.2 Food Processing	**1,501**	**1,543**	**1,441**	**1,401**	**–6.7**	**–9.2**
1.2.1 Sugar	400	362	364	348	–12.8	–3.8
1.2.2 Edible Oils & Vanaspati	199	181	189	182	–8.6	0.7
1.2.3 Tea	36	30	35	37	2.6	22.6
1.2.4 Others	866	970	853	834	–3.8	–14.1
1.3 Beverage & Tobacco	**181**	**175**	**168**	**161**	**–11.4**	**–8.0**
1.4 Textiles	**2,058**	**1,968**	**1,976**	**1,946**	**–5.4**	**–1.1**
1.4.1 Cotton Textiles	1,035	972	963	942	–9.0	–3.1
1.4.2 Jute Textiles	22	21	20	20	–7.4	–5.6
1.4.3 Man-Made Textiles	208	206	194	193	–7.1	–6.4
1.4.4 Other Textiles	793	768	800	791	–0.3	3.0
1.5 Leather & Leather Products	**105**	**100**	**106**	**105**	**–0.3**	**4.8**
1.6 Wood & Wood Products	**95**	**101**	**103**	**103**	**8.8**	**2.3**
1.7 Paper & Paper Products	**355**	**342**	**340**	**337**	**–4.9**	**–1.4**
1.8 Petroleum, Coal Products & Nuclear Fuels	**512**	**432**	**516**	**481**	**–6.0**	**11.4**
1.9 Chemicals & Chemical Products	**1,645**	**1,520**	**1,531**	**1,512**	**–8.1**	**–0.5**
1.9.1 Fertiliser	285	218	241	219	–23.2	0.4
1.9.2 Drugs & Pharmaceuticals	535	511	501	490	–8.3	–4.0
1.9.3 Petro Chemicals	365	342	345	366	0.2	7.0
1.9.4 Others	461	450	444	437	–5.1	–2.8
1.10 Rubber, Plastic & their Products	**374**	**364**	**365**	**365**	**–2.2**	**0.4**
1.11 Glass & Glassware	**89**	**85**	**86**	**85**	**–4.7**	**–0.7**
1.12 Cement & Cement Products	**543**	**560**	**541**	**536**	**–1.4**	**–4.3**
1.13 Basic Metal & Metal Product	**4,160**	**3,875**	**4,178**	**4,172**	**0.3**	**7.7**
1.13.1 Iron & Steel	3,115	2,868	3,111	3,109	–0.2	8.4
1.13.2 Other Metal & Metal Product	1,046	1,007	1,067	1,063	1.6	5.5
1.14 All Engineering	**1,542**	**1,536**	**1,516**	**1,513**	**–1.9**	**–1.5**
1.14.1 Electronics	382	376	356	357	–6.8	–5.2
1.14.2 Others	1,159	1,160	1,161	1,157	–0.2	–0.3
1.15 Vehicles, Vehicle Parts & Transport Equipment	**690**	**680**	**694**	**699**	**1.3**	**2.7**
1.16 Gems & Jewellery	**727**	**709**	**690**	**687**	**–5.6**	**–3.1**
1.17 Construction	**745**	**731**	**758**	**761**	**2.1**	**4.1**
1.18 Infrastructure	**9,648**	**9,411**	**9,101**	**9,014**	**–6.6**	**–4.2**
1.18.1 Power	5,799	5,769	5,245	5,207	–10.2	–9.7
1.18.2 Telecommunications	913	899	883	861	–5.7	–4.3
1.18.3 Roads	1,775	1,704	1,835	1,838	3.5	7.9
1.18.4 Other Infrastructure	1,161	1,039	1,138	1,108	–4.6	6.6
1.19 Other Industries	**1,945**	**1,773**	**1,915**	**1,964**	**0.9**	**10.7**

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					
	2015-16	2015	2016			
		May, 29	Apr, 15	Apr, 29	May, 13	May, 27
	1	2	3	4	5	6
Number of Reporting Banks	31	31	30	30	30	30
1 Aggregate Deposits (2.1.1.2+2.2.1.2)	491.4	418.1	499.8	496.4	498.8	499.1
2 Demand and Time Liabilities						
2.1 Demand Liabilities	155.4	140.1	158.1	158.7	157.4	154.6
2.1.1 Deposits						
2.1.1.1 Inter-Bank	33.0	26.1	35.7	34.9	32.5	27.7
2.1.1.2 Others	82.3	77.9	85.9	85.2	86.2	84.8
2.1.2 Borrowings from Banks	9.5	8.7	8.3	8.7	8.7	10.2
2.1.3 Other Demand Liabilities	30.6	27.5	28.1	29.9	30.0	31.9
2.2 Time Liabilities	885.9	836.5	904.5	899.4	893.9	894.3
2.2.1 Deposits						
2.2.1.1 Inter-Bank	467.0	485.2	480.6	478.4	469.4	460.0
2.2.1.2 Others	409.1	340.2	413.9	411.2	412.6	414.3
2.2.2 Borrowings from Banks	0.1	1.4	0.0	0.1	2.0	10.1
2.2.3 Other Time Liabilities	9.7	9.7	10.0	9.7	10.0	9.9
3 Borrowing from Reserve Bank	0.0	0.0	0.0	0.0	0.0	0.0
4 Borrowings from a notified bank / Government	435.1	425.6	425.9	421.8	416.5	407.7
4.1 Demand	164.0	170.3	162.4	164.5	163.5	134.9
4.2 Time	271.1	255.3	263.5	257.3	252.9	272.8
5 Cash in Hand and Balances with Reserve Bank	44.9	39.1	43.7	42.9	41.9	40.7
5.1 Cash in Hand	2.2	2.1	2.2	2.4	2.3	2.3
5.2 Balance with Reserve Bank	42.6	37.0	41.5	40.5	39.6	38.4
6 Balances with Other Banks in Current Account	6.2	6.7	7.4	6.7	7.1	6.5
7 Investments in Government Securities	291.1	271.1	289.3	293.6	289.7	291.7
8 Money at Call and Short Notice	172.2	187.2	172.7	170.2	171.2	175.1
9 Bank Credit (10.1+11)	484.0	429.1	483.7	487.6	491.9	509.6
10 Advances						
10.1 Loans, Cash-Credits and Overdrafts	483.9	429.1	483.7	487.6	491.9	509.6
10.2 Due from Banks	693.9	664.7	681.9	674.4	663.6	642.0
11 Bills Purchased and Discounted	0.0	0.1	0.0	0.0	0.0	0.0

Prices and Production

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

Group/Sub group	2015-16			Rural			Urban			Combined		
	Rural	Urban	Combined	Aug. 15	Jul. 16	Aug. 16	Aug. 15	Jul. 16	Aug. 16	Aug. 15	Jul. 16	Aug. 16
	1	2	3	4	5	6	7	8	9	10	11	12
1 Food and beverages	**129.2**	**129.8**	**129.4**	**129.8**	**137.6**	**138.0**	**131.1**	**139.8**	**137.6**	**130.3**	**138.4**	**137.9**
1.1 Cereals and products	125.3	123.9	124.9	124.7	129.3	130.1	123.1	126.8	127.6	124.2	128.5	129.3
1.2 Meat and fish	130.9	132.1	131.3	131.3	139.5	138.7	131.7	144.2	140.3	131.4	141.2	139.3
1.3 Egg	122.1	120.5	121.5	121.3	129.6	130.3	118.1	136.6	133.7	120.1	132.3	131.6
1.4 Milk and products	129.2	128.2	128.8	128.8	134.5	135.2	128.0	131.8	132.2	128.5	133.5	134.1
1.5 Oils and fats	115.7	107.6	112.7	114.0	119.5	119.9	106.8	111.0	111.8	111.4	116.4	116.9
1.6 Fruits	132.7	125.6	129.4	134.2	138.5	140.3	130.1	137.0	135.8	132.3	137.8	138.2
1.7 Vegetables	142.1	148.5	144.2	153.6	158.2	157.1	165.5	179.5	163.4	157.6	165.4	159.2
1.8 Pulses and products	146.4	166.1	153.0	137.9	171.8	172.3	156.0	188.4	182.3	144.0	177.4	175.7
1.9 Sugar and confectionery	96.0	91.7	94.5	93.1	110.3	112.1	85.3	113.3	114.6	90.5	111.3	112.9
1.10 Spices	125.9	134.7	128.8	123.9	134.3	134.8	132.7	143.9	144.6	126.8	137.5	138.1
1.11 Non-alcoholic beverages	122.3	119.2	121.0	121.5	127.3	128.1	118.8	121.7	121.9	120.4	125.0	125.5
1.12 Prepared meals, snacks, sweets	133.2	132.6	132.9	132.5	139.9	140.6	131.7	137.5	138.1	132.1	138.8	139.4
2 Pan, tobacco and intoxicants	**130.9**	**135.6**	**132.2**	**130.1**	**138.0**	**139.0**	**134.2**	**142.9**	**143.6**	**131.2**	**139.3**	**140.2**
3 Clothing and footwear	**130.2**	**123.5**	**127.5**	**129.0**	**136.5**	**137.1**	**122.9**	**126.9**	**127.3**	**126.6**	**132.7**	**133.2**
3.1 Clothing	130.7	124.3	128.2	129.5	137.2	137.8	123.7	127.9	128.3	127.2	133.5	134.1
3.2 Footwear	127.0	118.7	123.6	126.3	132.2	133.0	118.2	121.1	121.4	122.9	127.6	128.2
4 Housing	**--**	**121.7**	**121.7**	**--**	**--**	**--**	**120.9**	**126.4**	**127.3**	**120.9**	**126.4**	**127.3**
5 Fuel and light	**124.4**	**115.3**	**121.0**	**123.8**	**128.2**	**129.1**	**115.3**	**115.5**	**114.7**	**120.6**	**123.4**	**123.6**
6 Miscellaneous	**118.9**	**116.3**	**117.6**	**118.2**	**123.8**	**124.2**	**116.2**	**119.9**	**119.9**	**117.2**	**121.9**	**122.1**
6.1 Household goods and services	124.5	120.4	122.6	123.7	130.0	130.7	120.0	123.5	123.9	122.0	126.9	127.5
6.2 Health	121.9	117.3	120.1	121.1	126.7	127.1	116.6	120.9	121.2	119.4	124.5	124.9
6.3 Transport and communication	113.7	109.7	111.5	113.6	116.4	115.9	109.9	111.7	110.4	111.7	113.9	113.0
6.4 Recreation and amusement	119.6	117.4	118.4	118.5	125.2	125.6	117.2	120.3	120.6	117.8	122.4	122.8
6.5 Education	124.2	125.4	124.9	123.6	130.8	132.0	126.2	130.8	131.4	125.1	130.8	131.6
6.6 Personal care and effects	114.0	113.4	113.7	112.5	120.9	122.1	112.0	120.0	120.9	112.3	120.5	121.6
General Index (All Groups)	**126.1**	**123.0**	**124.7**	**126.1**	**133.0**	**133.5**	**123.2**	**129.0**	**128.4**	**124.8**	**131.1**	**131.1**

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

No. 19: Other Consumer Price Indices

Item	Base Year	Linking Factor	2015-16	2015	2016	
				Aug.	Jul.	Aug.
	1	2	3	4	5	6
1 Consumer Price Index for Industrial Workers	2001	4.63	265	264	280	278
2 Consumer Price Index for Agricultural Labourers	1986-87	5.89	835	832	877	876
3 Consumer Price Index for Rural Labourers	1986-87	–	839	836	881	881

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

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

Item	2015-16	2015	2016	
		Aug.	Jul.	Aug.
	1	2	3	4
1 Standard Gold (₹ per 10 grams)	26,534	25,729	30,942	31,270
2 Silver (₹ per kilogram)	36,318	35,500	46,943	46,614

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

No. 21: Wholesale Price Index

(Base: 2004-05 = 100)

Commodities	Weight	2015-16	2015	2016		
			Aug.	Jun.	Jul. (P)	Aug. (P)
	1	2	3	4	5	6
1 ALL COMMODITIES	**100.000**	**176.7**	**176.5**	**182.9**	**183.9**	**183.1**
1.1 PRIMARY ARTICLES	**20.118**	**249.6**	**250.2**	**265.5**	**269.5**	**268.9**
1.1.1 Food articles	**14.337**	**262.1**	**262.6**	**280.0**	**285.8**	**284.2**
1.1.1.1 Food Grains	4.090	253.0	248.8	275.6	280.4	282.3
1.1.1.1.1 Cereals	3.373	235.2	232.3	249.1	248.0	249.1
1.1.1.1.2 Pulses	0.717	336.7	326.2	400.3	432.8	438.9
1.1.1.2 Fruits & Vegetables	3.843	254.0	267.7	278.3	296.9	286.4
1.1.1.2.1 Vegetables	1.736	268.5	298.6	298.0	323.2	299.1
1.1.1.2.2 Fruits	2.107	242.0	242.3	262.0	275.3	276.0
1.1.1.3 Milk	3.238	250.6	250.1	258.0	258.4	258.6
1.1.1.4 Eggs, Meat & Fish	2.414	288.0	278.7	305.4	301.4	303.1
1.1.1.5 Condiments & Spices	0.569	342.6	335.9	352.0	351.4	360.1
1.1.1.6 Other Food Articles	0.183	245.1	245.4	250.4	246.4	243.5
1.1.2 Non-Food Articles	**4.258**	**219.5**	**217.9**	**231.9**	**236.6**	**236.3**
1.1.2.1 Fibres	0.877	207.2	204.9	239.5	261.0	255.2
1.1.2.2 Oil Seeds	1.781	214.9	213.5	225.5	224.8	227.9
1.1.2.3 Other Non-Food Articles	1.386	233.8	233.5	244.2	247.3	242.0
1.1.2.4 Flowers	0.213	215.7	207.4	174.0	165.3	192.1
1.1.3 Minerals	**1.524**	**216.2**	**224.0**	**222.6**	**208.9**	**216.3**
1.1.3.1 Metallic Minerals	0.489	286.3	312.8	297.9	264.6	281.1
1.1.3.2 Other Minerals	0.135	203.8	205.6	196.2	194.3	195.4
1.1.3.3 Crude Petroleum	0.900	180.0	178.5	185.7	181.0	184.3
1.2 FUEL & POWER	**14.910**	**179.8**	**179.3**	**188.0**	**187.9**	**182.2**
1.2.1 Coal	2.094	189.9	189.9	191.2	191.2	191.2
1.2.2 Mineral Oils	9.364	179.5	177.6	193.1	192.9	183.7
1.2.3 Electricity	3.452	174.3	177.2	172.3	172.3	172.3
1.3 MANUFACTURED PRODUCTS	**64.972**	**153.4**	**153.0**	**156.2**	**156.4**	**156.7**
1.3.1 Food Products	**9.974**	**174.2**	**171.8**	**187.8**	**189.2**	**191.3**
1.3.1.1 Dairy Products	0.568	206.7	207.7	208.7	209.1	208.7
1.3.1.2 Canning, Preserving & Processing of Food	0.358	165.1	163.6	168.3	167.2	167.8
1.3.1.3 Grain Mill Products	1.340	178.7	175.9	187.6	191.0	193.5
1.3.1.4 Bakery Products	0.444	150.5	151.4	151.2	151.2	151.4
1.3.1.5 Sugar, Khandsari & Gur	2.089	167.1	157.3	200.1	203.5	206.8
1.3.1.6 Edible Oils	3.043	148.6	147.5	154.5	154.5	155.7
1.3.1.7 Oil Cakes	0.494	250.4	251.3	270.7	271.1	276.2
1.3.1.8 Tea & Coffee Proccessing	0.711	192.8	200.6	205.3	207.1	209.5
1.3.1.9 Manufacture of Salt	0.048	201.5	199.8	199.8	199.8	199.8
1.3.1.10 Other Food Products	0.879	207.9	205.2	225.2	227.3	230.1
1.3.2 Beverages, Tobacco & Tobacco Products	**1.762**	**206.5**	**205.9**	**220.0**	**220.7**	**221.9**
1.3.2.1 Wine Industries	0.385	137.5	136.5	148.4	152.5	149.0
1.3.2.2 Malt Liquor	0.153	181.3	180.7	188.9	187.5	187.6
1.3.2.3 Soft Drinks & Carbonated Water	0.241	167.7	166.9	181.4	181.6	184.0
1.3.2.4 Manufacture of Bidi, Cigarettes, Tobacco & Zarda	0.983	247.0	246.6	262.4	262.2	265.1
1.3.3 Textiles	**7.326**	**140.2**	**140.3**	**141.4**	**141.5**	**142.1**
1.3.3.1 Cotton Textiles	2.605	156.6	156.9	159.5	159.9	160.6
1.3.3.1.1 Cotton Yarn	1.377	166.2	167.9	170.4	171.1	172.4
1.3.3.1.2 Cotton Fabric	1.228	145.8	144.6	147.5	147.4	147.3
1.3.3.2 Man-Made Textiles	2.206	131.3	132.8	128.9	128.7	129.4
1.3.3.2.1 Man-Made Fibre	1.672	130.1	131.4	126.9	126.9	127.5
1.3.3.2.2 Man-Made Fabric	0.533	134.9	136.9	135.0	134.5	135.1
1.3.3.3 Woollen Textiles	0.294	153.3	150.3	152.3	152.0	152.1
1.3.3.4 Jute, Hemp & Mesta Textiles	0.261	219.2	213.4	242.9	244.6	247.6
1.3.3.5 Other Misc. Textiles	1.960	115.8	115.4	116.1	116.1	116.2
1.3.4 Wood & Wood Products	**0.587**	**195.7**	**194.0**	**198.1**	**196.1**	**197.6**
1.3.4.1 Timber/Wooden Planks	0.181	164.5	165.4	163.9	163.7	165.2
1.3.4.2 Processed Wood	0.128	193.9	193.3	199.1	196.3	199.1
1.3.4.3 Plywood & Fibre Board	0.241	227.3	222.9	230.6	227.1	227.3
1.3.4.4 Others	0.038	150.0	149.5	151.3	152.9	159.5

No. 21: Wholesale Price Index (Concld.)

(Base: 2004-05 = 100)

Commodities	Weight	2015-16	2015	2016		
			Aug.	Jun.	Jul. (P)	Aug. (P)
	1	2	3	4	5	6
1.3.5 Paper & Paper Products	**2.034**	**154.5**	**154.6**	**155.9**	**156.7**	**157.0**
1.3.5.1 Paper & Pulp	1.019	151.3	150.4	151.0	151.2	150.1
1.3.5.2 Manufacture of boards	0.550	135.6	136.9	136.0	136.8	137.3
1.3.5.3 Printing & Publishing	0.465	184.3	184.8	190.1	192.3	195.5
1.3.6 Leather & Leather Products	**0.835**	**144.9**	**145.4**	**145.5**	**146.3**	**146.1**
1.3.6.1 Leathers	0.223	116.1	119.0	113.9	115.8	114.9
1.3.6.2 Leather Footwear	0.409	160.6	160.2	161.6	162.3	162.3
1.3.6.3 Other Leather Products	0.203	144.9	144.5	147.9	147.5	147.8
1.3.7 Rubber & Plastic Products	**2.987**	**147.2**	**148.3**	**146.2**	**146.5**	**147.6**
1.3.7.1 Tyres & Tubes	0.541	176.8	177.1	175.9	176.2	176.3
1.3.7.1.1 Tyres	0.488	177.5	177.9	176.0	176.0	176.0
1.3.7.1.2 Tubes	0.053	170.6	169.6	175.5	177.7	178.6
1.3.7.2 Plastic Products	1.861	136.3	138.0	135.1	134.8	134.9
1.3.7.3 Rubber Products	0.584	154.6	154.5	154.0	156.4	161.4
1.3.8 Chemicals & Chemical Products	**12.018**	**150.5**	**151.2**	**151.0**	**151.1**	**151.2**
1.3.8.1 Basic Inorganic Chemicals	1.187	155.3	156.0	155.4	156.2	157.6
1.3.8.2 Basic Organic Chemicals	1.952	140.2	141.4	140.7	141.1	140.8
1.3.8.3 Fertilisers & Pesticides	3.145	155.0	154.9	157.0	156.4	156.3
1.3.8.3.1 Fertilisers	2.661	158.2	158.3	159.7	159.3	159.2
1.3.8.3.2 Pesticides	0.483	137.7	136.4	141.8	140.6	140.1
1.3.8.4 Paints, Varnishes & Lacquers	0.529	152.2	152.1	152.4	152.5	152.6
1.3.8.5 Dyestuffs & Indigo	0.563	141.9	141.5	143.8	143.6	143.2
1.3.8.6 Drugs & Medicines	0.456	129.6	130.3	129.1	129.2	129.3
1.3.8.7 Perfumes, Cosmetics, Toiletries etc.	1.130	163.2	163.5	165.0	165.1	165.2
1.3.8.8 Turpentine, Plastic Chemicals	0.586	154.1	154.7	155.1	155.1	155.2
1.3.8.9 Polymers including Synthetic Rubber	0.970	146.0	147.3	145.2	145.7	146.2
1.3.8.10 Petrochemical Intermediates	0.869	150.1	153.0	145.8	146.0	145.9
1.3.8.11 Matches, Explosives & other Chemicals	0.629	153.9	154.7	153.4	153.3	153.6
1.3.9 Non-Metallic Mineral Products	**2.556**	**177.3**	**175.9**	**178.1**	**178.6**	**179.5**
1.3.9.1 Structural Clay Products	0.658	198.4	197.2	198.0	198.7	200.2
1.3.9.2 Glass, Earthenware, Chinaware & their Products	0.256	141.5	141.1	143.3	143.4	144.0
1.3.9.3 Cement & Lime	1.386	173.6	171.6	175.3	176.0	177.1
1.3.9.4 Cement, Slate & Graphite Products	0.256	179.2	179.0	176.5	175.9	174.9
1.3.10 Basic Metals, Alloys & Metal Products	**10.748**	**154.6**	**154.2**	**153.9**	**153.0**	**151.9**
1.3.10.1 Ferrous Metals	8.064	141.7	141.6	139.3	137.6	135.6
1.3.10.1.1 Iron & Semis	1.563	139.4	139.6	134.9	131.7	130.4
1.3.10.1.2 Steel: Long	1.630	148.8	148.1	145.3	142.5	138.2
1.3.10.1.3 Steel: Flat	2.611	132.5	132.1	131.9	130.4	128.4
1.3.10.1.4 Steel: Pipes & Tubes	0.314	127.8	128.4	127.0	126.8	125.8
1.3.10.1.5 Stainless Steel & alloys	0.938	160.6	160.6	158.0	157.3	156.9
1.3.10.1.6 Castings & Forgings	0.871	144.0	144.8	141.0	141.1	139.7
1.3.10.1.7 Ferro alloys	0.137	149.8	150.7	152.3	151.7	151.4
1.3.10.2 Non-Ferrous Metals	1.004	164.2	164.3	164.4	164.1	164.1
1.3.10.2.1 Aluminium	0.489	137.3	137.5	137.7	137.1	137.0
1.3.10.2.2 Other Non-Ferrous Metals	0.515	189.7	189.7	189.8	189.8	189.8
1.3.10.3 Metal Products	1.680	210.4	208.5	217.6	220.0	222.6
1.3.11 Machinery & Machine Tools	**8.931**	**135.0**	**135.1**	**135.4**	**135.3**	**135.3**
1.3.11.1 Agricultural Machinery & Implements	0.139	149.1	149.0	149.8	149.8	154.0
1.3.11.2 Industrial Machinery	1.838	153.5	153.8	154.3	154.3	154.1
1.3.11.3 Construction Machinery	0.045	141.5	141.5	141.5	141.5	141.5
1.3.11.4 Machine Tools	0.367	167.6	165.8	175.0	174.9	174.9
1.3.11.5 Air Conditioner & Refrigerators	0.429	120.8	120.5	121.2	121.3	121.3
1.3.11.6 Non-Electrical Machinery	1.026	127.6	127.4	128.4	128.5	128.5
1.3.11.7 Electrical Machinery, Equipment & Batteries	2.343	138.2	138.4	138.9	138.7	138.6
1.3.11.8 Electrical Accessories, Wires, Cables etc.	1.063	155.5	156.5	151.7	152.1	151.9
1.3.11.9 Electrical Apparatus & Appliances	0.337	121.8	121.7	123.7	123.7	123.7
1.3.11.10 Electronics Items	0.961	89.2	89.2	89.1	89.1	89.1
1.3.11.11 IT Hardware	0.267	91.7	91.7	91.7	91.7	91.7
1.3.11.12 Communication Equipments	0.118	99.0	98.5	98.1	98.1	98.1
1.3.12 Transport, Equipment & Parts	**5.213**	**138.1**	**137.5**	**139.6**	**139.6**	**139.7**
1.3.12.1 Automotives	4.231	137.1	136.4	139.0	139.0	139.1
1.3.12.2 Auto Parts	0.804	140.3	140.6	140.3	139.9	140.3
1.3.12.3 Other Transport Equipments	0.178	151.0	151.0	150.9	150.9	150.9

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

No. 22: Index of Industrial Production (Base:2004-05=100)

Industry	Weight	2014-15	2015-16	April-July		July	
				2015-16	2016-17	2015	2016
	1	2	3	4	5	6	7
General Index	**100.00**	**176.9**	**181.1**	**179.4**	**179.0**	**180.5**	**176.1**
1 Sectoral Classification							
1.1 Mining and Quarrying	14.16	126.5	129.3	122.3	124.8	117.7	118.7
1.2 Manufacturing	75.53	186.1	189.8	189.1	186.4	190.9	184.5
1.3 Electricity	10.32	178.6	188.7	186.6	199.9	190.3	193.3
2 Use-Based Classification							
2.1 Basic Goods	45.68	167.8	173.8	172.1	179.1	171.6	175.1
2.2 Capital Goods	8.83	258.0	250.5	259.6	204.3	289.9	204.0
2.3 Intermediate Goods	15.69	153.8	157.6	155.6	161.5	158.5	163.9
2.4 Consumer Goods	29.81	178.9	184.3	179.4	180.7	173.2	175.5
2.4.1 Consumer Durables	8.46	231.0	257.2	250.4	268.8	244.2	258.6
2.4.2 Consumer Non-Durables	21.35	158.3	155.4	151.2	145.7	145.1	142.6

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–August			
	2016-17 (Budget Estimates)	2016-17 (Actuals)	2015-16 (Actuals)	Percentage to Budget Estimates	
				2016-17	2015-16
	1	2	3	4	5
1 Revenue Receipts	13,770.2	3,853.2	3,455.4	28.0	30.3
1.1 Tax Revenue (Net)	10,541.0	2,802.6	2,099.3	26.6	22.8
1.2 Non-Tax Revenue	3,229.2	1,050.7	1,363.1	32.5	61.5
2 Capital Receipts	6,010.4	4,163.4	3,866.6	69.3	60.8
2.1 Recovery of Loans	106.3	53.4	45.6	50.2	42.4
2.2 Other Receipts	565.0	31.8	128.0	5.6	18.4
2.3 Borrowings and Other Liabilities	5,339.0	4,078.2	3,693.0	76.4	66.5
3 Total Receipts (1+2)	**19,780.6**	**8,016.6**	**7,321.9**	**40.5**	**41.2**
4 Non-Plan Expenditure	14,280.5	5,649.8	5,456.1	39.6	41.6
4.1 On Revenue Account	13,274.1	5,294.4	5,062.8	39.9	42.0
4.1.1 Interest Payments	4,926.7	1,744.7	1,634.7	35.4	35.8
4.2 On Capital Account	1,006.4	355.5	393.3	35.3	37.0
5 Plan Expenditure	5,500.1	2,366.8	1,865.9	43.0	40.1
5.1 On Revenue Account	4,036.3	1,808.9	1,339.8	44.8	40.6
5.2 On Capital Account	1,463.8	557.9	526.1	38.1	38.9
6 Total Expenditure (4+5)	**19,780.6**	**8,016.6**	**7,321.9**	**40.5**	**41.2**
7 Revenue Expenditure (4.1+5.1)	17,310.4	7,103.3	6,402.6	41.0	41.7
8 Capital Expenditure (4.2+5.2)	2,470.2	913.3	919.4	37.0	38.1
9 Revenue Deficit (7-1)	**3,540.1**	**3,250.1**	**2,947.2**	**91.8**	**74.7**
10 Fiscal Deficit {6-(1+2.1+2.2)}	**5,339.0**	**4,078.2**	**3,693.0**	**76.4**	**66.5**
11 Gross Primary Deficit [10-4.1.1]	**412.3**	**2,333.5**	**2,058.3**	**565.9**	**206.9**

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

No. 24: Treasury Bills – Ownership Pattern

(₹ Billion)

Item	2015-16	2015	2016					
		Aug. 28	Jul. 22	Jul. 29	Aug. 5	Aug. 12	Aug. 19	Aug. 26
	1	2	3	4	5	6	7	8
1 91-day								
1.1 Banks	436.1	361.3	253.3	239.8	228.1	227.7	198.9	211.3
1.2 Primary Dealers	219.0	214.8	160.2	168.5	149.9	179.5	170.2	162.2
1.3 State Governments	453.0	556.6	681.2	645.2	662.7	677.7	630.7	645.4
1.4 Others	362.4	624.3	873.5	882.0	912.2	881.8	893.9	895.7
2 182-day								
2.1 Banks	186.5	335.7	264.3	307.8	310.3	348.9	339.4	390.6
2.2 Primary Dealers	412.7	311.7	286.1	278.9	270.7	244.8	245.5	260.1
2.3 State Governments	50.0	45.1	95.7	95.7	95.7	105.7	105.7	106.0
2.4 Others	62.9	123.2	169.6	133.0	138.7	126.0	134.8	128.7
3 364-day								
3.1 Banks	442.8	397.9	517.7	502.2	533.0	562.6	595.3	605.6
3.2 Primary Dealers	662.6	647.3	617.4	670.2	650.1	632.2	597.1	602.3
3.3 State Governments	19.6	23.2	25.2	25.2	25.2	25.2	25.2	25.2
3.4 Others	354.9	412.1	385.2	347.9	337.2	325.5	337.9	322.4
4 14-day Intermediate								
4.1 Banks	–	–	–	–	–	–	–	–
4.2 Primary Dealers	–	–	–	–	–	–	–	–
4.3 State Governments	1,224.9	724.1	803.3	841.8	846.8	775.9	809.9	900.0
4.4 Others	10.1	8.4	7.8	4.6	7.7	8.5	22.3	6.0
Total Treasury Bills (Excluding 14 day Intermediate T Bills) #	3,662.4	4,053.1	4,329.4	4,296.4	4,313.8	4,337.7	4,274.6	4,355.6

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										
2016-17										
Aug. 3	90	68	793.78	73.70	59	90.00	73.70	163.70	98.39	6.5634
Aug. 10	90	73	472.56	30.00	50	90.00	30.00	120.00	98.39	6.5634
Aug. 16	80	64	596.74	3.00	36	80.00	3.00	83.00	98.39	6.5634
Aug. 24	80	69	913.10	71.01	56	80.00	71.01	151.01	98.39	6.5634
Aug. 31	80	58	762.53	70.30	48	80.00	70.30	150.30	98.39	6.5634
182-day Treasury Bills										
2016-17										
Jul. 27	60	56	268.87	–	31	60.00	–	60.00	96.77	6.6940
Aug. 10	60	56	285.36	10.00	19	60.00	10.00	70.00	96.79	6.6511
Aug. 24	60	45	189.12	–	26	60.00	–	60.00	96.78	6.6725
364-day Treasury Bills										
2016-17										
Jul. 20	60	80	260.99	–	24	60.00	–	60.00	93.70	6.7421
Aug. 3	60	71	328.65	–	6	60.00	–	60.00	93.75	6.6850
Aug. 16	60	56	246.28	–	16	60.00	–	60.00	93.76	6.6736
Aug. 31	60	61	211.48	–	37	60.00	–	60.00	93.76	6.6736

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, 2016	5.00-6.55	6.37
August	2, 2016	5.00-6.55	6.38
August	3, 2016	5.20-6.75	6.39
August	4, 2016	5.40-6.60	6.40
August	5, 2016	5.40-6.70	6.37
August	6, 2016	4.75-6.75	6.16
August	8, 2016	5.25-6.70	6.45
August	9, 2016	5.25-6.80	6.47
August	10, 2016	5.45-6.65	6.46
August	11, 2016	5.25-6.65	6.45
August	12, 2016	5.00-6.65	6.43
August	16, 2016	5.40-6.60	6.41
August	18, 2016	5.00-6.50	6.36
August	19, 2016	5.00-6.60	6.39
August	20, 2016	4.90-6.50	6.36
August	22, 2016	5.00-6.55	6.39
August	23, 2016	5.00-6.55	6.41
August	24, 2016	5.00-6.55	6.42
August	25, 2016	5.45-6.55	6.42
August	26, 2016	5.40-6.55	6.38
August	29, 2016	5.40-6.60	6.39
August	30, 2016	5.40-6.60	6.38
August	31, 2016	5.00-6.70	6.39
September	1, 2016	5.40-6.55	6.39
September	2, 2016	5.25-6.60	6.36
September	3, 2016	4.70-6.50	6.11
September	6, 2016	5.30-6.80	6.38
September	7, 2016	5.40-6.50	6.39
September	8, 2016	5.25-6.55	6.38
September	9, 2016	5.40-6.55	6.40
September	12, 2016	5.30-6.55	6.41
September	14, 2016	5.40-6.60	6.42
September	15, 2016	5.00-6.80	6.46

Note: Includes Notice Money.

No. 27: Certificates of Deposit

Item	2015	2016			
	Aug. 21	Jul. 8	Jul. 22	Aug. 5	Aug. 19
	1	2	3	4	5
1 Amount Outstanding (₹ Billion)	2,065.3	1,760.4	1,691.6	1,732.5	1,634.1
1.1 Issued during the fortnight (₹ Billion)	260.0	129.2	92.3	114.8	84.5
2 Rate of Interest (per cent)	7.29-7.95	6.52-7.57	6.65-7.39	6.53-7.35	6.65-7.36

No. 28: Commercial Paper

Item	2015	2016			
	Aug. 31	Jul. 15	Jul. 31	Aug. 15	Aug. 31
	1	2	3	4	5
1 Amount Outstanding (₹ Billion)	3,094.6	4,031.1	3,811.9	3,861.9	3,883.1
1.1 Reported during the fortnight (₹ Billion)	599.5	932.1	566.3	814.4	1,149.9
2 Rate of Interest (per cent)	7.33-12.29	6.42-11.95	6.42-13.84	6.44-12.78	6.51-13.92

No. 29: Average Daily Turnover in Select Financial Markets

(₹ Billion)

Item	2015-16	2015	2016					
		Aug. 28	Jul. 22	Jul. 29	Aug. 5	Aug. 12	Aug. 19	Aug. 26
	1	2	3	4	5	6	7	8
1 Call Money	221.1	157.7	333.4	232.0	244.5	275.9	200.3	231.3
2 Notice Money	49.3	35.5	2.9	89.0	94.9	5.9	155.7	9.2
3 Term Money	4.9	4.2	11.1	8.2	11.7	10.7	13.4	6.1
4 CBLO	1,287.62	1,479.8	1,362.6	1,872.8	1,262.1	1,609.6	1,855.6	1,760.0
5 Market Repo	1,245.0	971.8	1,888.8	1,704.9	1,578.9	1,602.6	2,751.7	1,609.9
6 Repo in Corporate Bond	1.2	0.4	0.4	0.2	–	0.4	0.7	2.0
7 Forex (US $ million)	55,345	68,530	47,884	53,982	59,461	50,775	51,931	45,546
8 Govt. of India Dated Securities	712.8	849.6	2,003.6	1,853.0	1,708.3	2,212.6	1,337.5	1,744.5
9 State Govt. Securities	27.5	31.0	58.5	76.6	73.0	89.2	33.3	39.1
10 Treasury Bills								
10.1 91-Day	40.8	41.6	36.4	44.7	49.7	27.5	60.6	48.2
10.2 182-Day	11.8	17.2	10.3	17.6	21.3	18.8	10.8	23.5
10.3 364-Day	19	14.2	53.1	24.8	23.5	16.1	33.5	11.7
10.4 Cash Management Bills		–	–	–	–	–	–	–
11 Total Govt. Securities (8+9+10)	811.9	953.6	2,161.7	2,016.8	1,875.8	2,364.2	1,475.6	1,867.0
11.1 RBI	4.5	3.8	0.2	0.1	0.9	20.9	16.2	0.0

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

(Amount in ₹ Billion)

Security & Type of Issue	2015-16		2015-16 (Apr.-Aug.)		2016-17 (Apr.-Aug.)*		Aug. 2015		Aug. 2016 *	
	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	**87**	**240.0**	**32**	**124.5**	**30**	**91.9**	**9**	**19.1**	**8**	**26.4**
1A Premium	78	225.7	29	117.7	29	87.4	8	14.9	8	25.2
1.1 Prospectus	73	142.5	29	48.6	28	86.2	9	19.1	7	21.4
1.1.1 Premium	65	134.2	26	42.7	27	81.8	8	14.9	7	20.3
1.2 Rights	14	97.5	3	76.0	2	5.8	–	–	1	5.0
1.2.1 Premium	13	91.4	3	75.0	2	5.6	–	–	1	4.9
2 Preference Shares	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
2.1 Prospectus	–	–	–	–	–	–	–	–	–	–
2.2 Rights	–	–	–	–	–	–	–	–	–	–
3 Debentures	**9**	**27.1**	**3**	**8.0**	**6**	**64.0**	**–**	**–**	**1**	**40.0**
3.1 Convertible	–	–	–	–	–	–	–	–	–	–
3.1.1 Prospectus	–	–	–	–	–	–	–	–	–	–
3.1.2 Rights	–	–	–	–	–	–	–	–	–	–
3.2 Non-Convertible	9	27.1	3	8.0	6	64.0	–	–	1	40.0
3.2.1 Prospectus	9	27.1	3	8.0	6	64.0	–	–	1	40.0
3.2.2 Rights	–	–	–	–	–	–	–	–	–	–
4 Bonds	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
4.1 Prospectus	–	–	–	–	–	–	–	–	–	–
4.2 Rights	–	–	–	–	–	–	–	–	–	–
5 Total (1+2+3+4)	**96**	**267.2**	**35**	**132.6**	**36**	**155.9**	**9**	**19.1**	**9**	**66.4**
5.1 Prospectus	82	169.7	32	56.6	34	150.2	9	19.1	8	61.4
5.2 Rights	14	97.5	3	76.0	2	5.8	–	–	1	5.0

* : Data is Provisional

Source: Based on prospectus/advertisements issued by companies, replies to Reserve Bank's questionnaire and information received from SEBI, stock exchanges, press reports, etc.

External Sector

No. 31: Foreign Trade

Item	Unit	2015-16	2015	2016				
			Aug.	Apr.	May	Jun.	Jul.	Aug.
		1	2	3	4	5	6	7
1 Exports	₹ Billion	17,163.8	1,404.4	1,384.7	1,496.2	1,535.3	1,458.8	1,440.6
	US $ Million	262,290.1	21,582.7	20,832.6	22,362.4	22,814.1	21,705.3	21,521.1
1.1 Oil	₹ Billion	1,996.4	184.4	138.6	146.1	180.5	175.1	168.3
	US $ Million	30,582.7	2,833.3	2,085.2	2,183.5	2,682.0	2,604.9	2,514.0
1.2 Non-oil	₹ Billion	15,167.4	1,220.1	1,246.1	1,350.1	1,354.8	1,283.7	1,272.3
	US $ Million	231,707.4	18,749.4	18,747.4	20,178.9	20,132.1	19,100.4	19,007.1
2 Imports	₹ Billion	24,903.0	2,211.3	1,711.7	1,895.7	2,092.2	1,981.1	1,951.1
	US $ Million	381,006.6	33,981.7	25,752.4	28,333.2	31,089.0	29,477.1	29,146.5
2.1 Oil	₹ Billion	5,405.0	479.4	378.6	399.6	490.8	459.2	452.1
	US $ Million	82,944.5	7,367.8	5,695.3	5,971.8	7,292.7	6,831.9	6,754.0
2.2 Non-oil	₹ Billion	19,497.9	1,731.8	1,333.2	1,496.1	1,601.4	1,521.9	1,498.9
	US $ Million	298,062.2	26,614.0	20,057.1	22,361.4	23,796.3	22,645.3	22,392.5
3 Trade Balance	₹ Billion	–7,739.2	–806.8	–327.0	–399.5	–556.9	–522.3	–510.4
	US $ Million	–118,716.5	–12,399.1	–4,919.8	–5,970.8	–8,274.9	–7,771.9	–7,625.4
3.1 Oil	₹ Billion	–3,408.7	–295.1	–240.0	–253.5	–310.3	–284.1	–283.8
	US $ Million	–52,361.8	–4,534.5	–3,610.1	–3,788.3	–4,610.7	–4,226.9	–4,240.0
3.2 Non-oil	₹ Billion	–4,330.5	–511.8	–87.1	–146.0	–246.6	–238.2	–226.6
	US $ Million	–66,354.8	–7,864.6	–1,309.7	–2,182.5	–3,664.2	–3,544.9	–3,385.4

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

No. 32: Foreign Exchange Reserves

Item	Unit	2015	2016					
		Sep. 18	Aug. 12	Aug. 19	Aug. 26	Sep. 2	Sep. 9	Sep. 16
		1	2	3	4	5	6	7
1 Total Reserves	**₹ Billion**	**23,120**	**24,334**	**24,457**	**24,463**	**24,467**	**24,607**	**24,604**
	US $ Million	**352,021**	**365,823**	**367,169**	**366,777**	**367,766**	**371,280**	**369,600**
1.1 Foreign Currency Assets	₹ Billion	21,567	22,628	22,749	22,754	22,758	22,899	22,894
	US $ Million	328,560	340,360	341,676	341,285	342,238	345,747	344,074
1.2 Gold	₹ Billion	1,196	1,447	1,447	1,447	1,450	1,450	1,450
	US $ Million	18,035	21,585	21,585	21,585	21,643	21,643	21,643
1.3 SDRs	SDRs Million	2,889	1,066	1,066	1,066	1,066	1,066	1,066
	₹ Billion	270	99	100	100	100	99	100
	US $ Million	4,097	1,486	1,498	1,497	1,489	1,494	1,492
1.4 Reserve Tranche Position in IMF	₹ Billion	88	160	161	162	160	159	160
	US $ Million	1,328	2,392	2,412	2,410	2,397	2,396	2,392

No. 33: NRI Deposits

(US$ Million)

Scheme	Outstanding				Flows	
	2015-16	2015	2016		2015-16	2016-17
		Aug.	Jul.	Aug.	Apr.-Aug.	Apr.-Aug.
	1	2	3	4	5	6
1 NRI Deposits	**126,929**	**119,394**	**128,927**	**130,079**	**8,287**	**3,755**
1.1 FCNR(B)	45,316	44,157	44,949	45,459	1,333	143
1.2 NR(E)RA	71,468	65,769	73,697	74,163	6,561	3,225
1.3 NRO	10,145	9,469	10,281	10,457	393	388

No. 34: Foreign Investment Inflows

(US$ Million)

Item	2015-16	2015-16	2016-17	2015	2016	
		Apr.-Aug.	Apr.-Aug.	Aug.	Jul.	Aug.
	1	2	3	4	5	6
1.1 Net Foreign Direct Investment (1.1.1–1.1.2)	**36,021**	**13,955**	**12,585**	**2,088**	**3,621**	**4,876**
1.1.1 Direct Investment to India (1.1.1.1–1. 1.1.2)	**44,907**	**16,365**	**14,844**	**2,565**	**4,130**	**4,817**
1.1.1.1 Gross Inflows/Gross Investments	**55,559**	**20,515**	**22,771**	**3,300**	**5,167**	**5,854**
1.1.1.1.1 Equity	41,112	14,116	16,913	2,297	4,159	4,880
1.1.1.1.1.1 Government (SIA/FIPB)	3,574	900	1,961	59	106	1,148
1.1.1.1.1.2 RBI	32,494	11,643	11,080	1,885	3,627	3,468
1.1.1.1.1.3 Acquisition of shares	3,933	1,192	3,434	276	349	187
1.1.1.1.1.4 Equity capital of unincorporated bodies	1,111	381	438	77	77	77
1.1.1.1.2 Reinvested earnings	10,413	3,894	4,742	790	790	790
1.1.1.1.3 Other capital	4,034	2,505	1,116	213	219	184
1.1.1.2 Repatriation/Disinvestment	**10,652**	**4,151**	**7,927**	**735**	**1,037**	**1,037**
1.1.1.2.1 Equity	10,524	4,085	7,842	734	1,029	1,029
1.1.1.2.2 Other capital	128	66	85	2	8	8
1.1.2 Foreign Direct Investment by India (1.1.2.1+1.1.2.2+1.1.2.3–1.1.2.4)	**8,886**	**2,410**	**2,258**	**477**	**509**	**–60**
1.1.2.1 Equity capital	6,486	1,875	3,320	343	785	173
1.1.2.2 Reinvested Earnings	3,337	1,390	1,390	278	278	278
1.1.2.3 Other Capital	3,382	1,111	1,301	179	110	153
1.1.2.4 Repatriation/Disinvestment	4,320	1,967	3,753	323	664	664
1.2 Net Portfolio Investment (1.2.1+1.2.2+1.2.3–1.2.4)	**–4,130**	**–1,761**	**5,680**	**–2,468**	**2,640**	**937**
1.2.1 GDRs/ADRs	373	373	–	–	–	–
1.2.2 FIIs	–4,016	–2,372	4,989	–2,504	2,726	1,022
1.2.3 Offshore funds and others	–	–	–	–	–	–
1.2.4 Portfolio investment by India	487	–237	–692	–35	86	86
1 Foreign Investment Inflows	**31,891**	**12,194**	**18,266**	**–381**	**6,261**	**5,813**

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

(US$ Million)

Item	2015-16	2015	2016		
		Aug.	Jun.	Jul.	Aug.
	1	2	3	4	5
1 Outward Remittances under the LRS	**4,642.6**	**439.1**	**683.7**	**682.7**	**829.4**
1.1 Deposit	109.9	7.0	16.3	16.6	18.9
1.2 Purchase of immovable property	90.8	4.6	7.5	9.0	7.0
1.3 Investment in equity/debt	317.9	19.5	26.4	41.1	37.8
1.4 Gift	533.0	46.5	56.3	59.1	65.3
1.5 Donations	3.9	0.4	0.9	0.4	0.2
1.6 Travel	651.4	58.5	221.9	206.0	290.3
1.7 Maintenance of close relatives	1,372.1	123.5	169.7	182.2	187.4
1.8 Medical Treatment	17.2	1.2	1.2	1.2	1.6
1.9 Studies Abroad	1,200.0	150.0	103.7	132.9	190.5
1.10 Others	346.4	27.9	79.8	34.2	30.3

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

Item	2014-15	2015-16	2015	2016	
			September	August	September
	1	2	3	4	5
36-Currency Export and Trade Based Weights (Base: 2004-05=100)					
1 Trade-Based Weights					
1.1 NEER	74.07	74.75	74.41	74.03	74.45
1.2 REER	108.96	112.07	112.06	113.87	114.51
2 Export-Based Weights					
2.1 NEER	75.22	76.45	76.04	75.18	75.60
2.2 REER	111.25	114.44	114.34	115.70	116.35
6-Currency Trade Based Weights					
1 Base: 2004-05 (April-March) =100					
1.1 NEER	68.60	67.86	66.66	66.63	66.89
1.2 REER	119.92	123.57	122.11	126.11	126.59
2 Base: 2014-15 (April-March) =100					
2.1 NEER	100.00	98.93	97.18	97.14	97.51
2.2 REER	100.00	103.05	101.83	105.16	105.56

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

(Amount in US$ Million)

Item	2015-16	2015	2016	
		Aug.	Jul.	Aug.
	1	2	3	4
1 Automatic Route				
1.1 Number	671	51	54	66
1.2 Amount	13,412	441	1,020	2,587
2 Approval Route				
2.1 Number	46	4	3	3
2.2 Amount	10,961	310	184	586
3 Total (1+2)				
3.1 Number	717	55	57	69
3.2 Amount	24,373	751	1,204	3,173
4 Weighted Average Maturity (in years)	6.20	4.30	4.50	7.10
5 Interest Rate (per cent)				
5.1 Weighted Average Margin over 6-month LIBOR or reference rate for Floating Rate Loans	1.45	2.09	3.53	1.80
5.2 Interest rate range for Fixed Rate Loans	0.00-13.00	0.00-10.75	0.00-12.05	0.00-12.05

No. 38: India's Overall Balance of Payments

(US $ Million)

Item	Apr-Jun 2015 (PR)			Apr-Jun 2016 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	**267,930**	**256,500**	**11,430**	**254,539**	**247,570**	**6,969**
1 CURRENT ACCOUNT (1.1+ 1.2)	**126,891**	**133,024**	**–6,132**	**125,221**	**125,519**	**–299**
1.1 MERCHANDISE	**68,025**	**102,200**	**–34,175**	**66,616**	**90,450**	**–23,833**
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	**58,866**	**30,824**	**28,043**	**58,604**	**35,070**	**23,535**
1.2.1 Services	38,266	20,515	17,751	39,530	23,761	15,769
1.2.1.1 Travel	4,566	3,840	727	4,803	4,561	242
1.2.1.2 Transportation	3,608	4,128	–520	3,897	3,678	219
1.2.1.3 Insurance	482	282	200	516	287	229
1.2.1.4 G.n.i.e.	131	269	–139	130	162	–32
1.2.1.5 Miscellaneous	29,479	11,996	17,483	30,184	15,074	15,111
1.2.1.5.1 Software Services	18,188	676	17,512	18,243	674	17,569
1.2.1.5.2 Business Services	7,792	7,289	503	8,058	8,005	53
1.2.1.5.3 Financial Services	1,286	778	509	1,403	1,268	135
1.2.1.5.4 Communication Services	495	154	341	539	209	331
1.2.2 Transfers	17,280	1,128	16,153	15,306	1,341	13,965
1.2.2.1 Official	146	261	–115	58	253	–195
1.2.2.2 Private	17,134	867	16,267	15,248	1,087	14,161
1.2.3 Income	3,320	9,181	–5,861	3,768	9,968	–6,200
1.2.3.1 Investment Income	2,437	8,655	–6,218	2,856	9,268	–6,412
1.2.3.2 Compensation of Employees	883	526	357	912	700	212
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	**141,039**	**122,402**	**18,637**	**129,155**	**122,050**	**7,104**
2.1 Foreign Investment (2.1.1+2.1.2)	**79,378**	**69,151**	**10,226**	**72,115**	**65,924**	**6,192**
2.1.1 Foreign Direct Investment	15,449	5,447	10,003	14,174	10,086	4,088
2.1.1.1 In India	14,129	2,680	11,448	11,749	5,852	5,897
2.1.1.1.1 Equity	9,735	2,617	7,117	7,874	5,784	2,090
2.1.1.1.2 Reinvested Earnings	2,315	–	2,315	3,162	–	3,162
2.1.1.1.3 Other Capital	2,079	63	2,016	713	69	644
2.1.1.2 Abroad	1,321	2,766	–1,446	2,425	4,234	–1,809
2.1.1.2.1 Equity	1,321	1,160	161	2,425	2,362	63
2.1.1.2.2 Reinvested Earnings	–	834	–834	–	834	–834
2.1.1.2.3 Other Capital	–	772	–772	–	1,038	–1,038
2.1.2 Portfolio Investment	63,928	63,705	223	57,941	55,838	2,103
2.1.2.1 In India	63,668	63,612	57	56,260	55,020	1,241
2.1.2.1.1 FIIs	63,395	63,612	–216	56,260	55,020	1,241
2.1.2.1.1.1 Equity	50,887	50,607	280	45,591	43,227	2,365
2.1.2.1.1.2 Debt	12,508	13,004	–496	10,669	11,793	–1,124
2.1.2.1.2 ADR/GDRs	273	–	273	–	–	–
2.1.2.2 Abroad	260	93	167	1,681	818	863
2.2 Loans (2.2.1+2.2.2+2.2.3)	**29,241**	**30,873**	**–1,632**	**26,139**	**27,908**	**–1,769**
2.2.1 External Assistance	1,500	1,207	293	1,860	1,179	681
2.2.1.1 By India	14	134	–120	14	100	–86
2.2.1.2 To India	1,486	1,074	412	1,846	1,079	767
2.2.2 Commercial Borrowings	5,196	4,761	435	3,280	5,381	–2,100
2.2.2.1 By India	686	81	605	824	493	332
2.2.2.2 To India	4,510	4,680	–170	2,456	4,888	–2,432
2.2.3 Short Term to India	22,545	24,905	–2,360	21,000	21,349	–349
2.2.3.1 Suppliers' Credit > 180 days & Buyers' Credit	22,545	22,987	–442	21,000	21,121	–122
2.2.3.2 Suppliers' Credit up to 180 days	–	1,918	–1,918	–	228	–228
2.3 Banking Capital (2.3.1+2.3.2)	**27,626**	**16,609**	**11,017**	**21,139**	**21,288**	**–148**
2.3.1 Commercial Banks	27,626	16,333	11,293	21,112	21,287	–175
2.3.1.1 Assets	6,216	2,490	3,727	9,426	8,569	856
2.3.1.2 Liabilities	21,410	13,843	7,567	11,687	12,718	–1,031
2.3.1.2.1 Non-Resident Deposits	16,922	11,036	5,886	11,573	10,195	1,378
2.3.2 Others	–	277	–277	27	0	27
2.4 Rupee Debt Service	–	34	–34	–	35	–35
2.5 Other Capital	4,794	5,734	–940	9,761	6,896	2,865
3 Errors & Omissions	–	**1,075**	**–1,075**	**164**	–	**164**
4 Monetary Movements (4.1+ 4.2)	–	**11,430**	**–11,430**	–	**6,969**	**–6,969**
4.1 I.M.F.	–	–	–	–	–	–
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	–	11,430	–11,430	–	6,969	–6,969

No. 39: India's Overall Balance of Payments

(₹ Billion)

Item	Apr-Jun 2015 (PR)			Apr-Jun 2016 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	**17,006**	**16,280**	**725**	**17,026**	**16,560**	**466**
1 CURRENT ACCOUNT (1.1+ 1.2)	**8,054**	**8,443**	**–389**	**8,376**	**8,396**	**–20**
1.1 MERCHANDISE	**4,318**	**6,487**	**–2,169**	**4,456**	**6,050**	**–1,594**
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	**3,736**	**1,956**	**1,780**	**3,920**	**2,346**	**1,574**
1.2.1 Services	2,429	1,302	1,127	2,644	1,589	1,055
1.2.1.1 Travel	290	244	46	321	305	16
1.2.1.2 Transportation	229	262	–33	261	246	15
1.2.1.3 Insurance	31	18	13	35	19	15
1.2.1.4 G.n.i.e.	8	17	–9	9	11	–2
1.2.1.5 Miscellaneous	1,871	761	1,110	2,019	1,008	1,011
1.2.1.5.1 Software Services	1,154	43	1,111	1,220	45	1,175
1.2.1.5.2 Business Services	495	463	32	539	535	4
1.2.1.5.3 Financial Services	82	49	32	94	85	9
1.2.1.5.4 Communication Services	31	10	22	36	14	22
1.2.2 Transfers	1,097	72	1,025	1,024	90	934
1.2.2.1 Official	9	17	–7	4	17	–13
1.2.2.2 Private	1,088	55	1,033	1,020	73	947
1.2.3 Income	211	583	–372	252	667	–415
1.2.3.1 Investment Income	155	549	–395	191	620	–429
1.2.3.2 Compensation of Employees	56	33	23	61	47	14
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	**8,952**	**7,769**	**1,183**	**8,639**	**8,164**	**475**
2.1 Foreign Investment (2.1.1+2.1.2)	5,038	4,389	649	4,824	4,410	414
2.1.1 Foreign Direct Investment	981	346	635	948	675	273
2.1.1.1 In India	897	170	727	786	391	394
2.1.1.1.1 Equity	618	166	452	527	387	140
2.1.1.1.2 Reinvested Earnings	147	–	147	212	–	212
2.1.1.1.3 Other Capital	132	4	128	48	5	43
2.1.1.2 Abroad	84	176	–92	162	283	–121
2.1.1.2.1 Equity	84	74	10	162	158	4
2.1.1.2.2 Reinvested Earnings	–	53	–53	–	56	–56
2.1.1.2.3 Other Capital	–	49	–49	–	69	–69
2.1.2 Portfolio Investment	4,058	4,043	14	3,876	3,735	141
2.1.2.1 In India	4,041	4,038	4	3,763	3,680	83
2.1.2.1.1 FIIs	4,024	4,038	–14	3,763	3,680	83
2.1.2.1.1.1 Equity	3,230	3,212	18	3,050	2,891	158
2.1.2.1.1.2 Debt	794	825	–31	714	789	–75
2.1.2.1.2 ADR/GDRs	17	–	17	–	–	–
2.1.2.2 Abroad	16	6	11	112	55	58
2.2 Loans (2.2.1+2.2.2+2.2.3)	**1,856**	**1,960**	**–104**	**1,748**	**1,867**	**–118**
2.2.1 External Assistance	95	77	19	124	79	46
2.2.1.1 By India	1	8	–8	1	7	–6
2.2.1.2 To India	94	68	26	123	72	51
2.2.2 Commercial Borrowings	330	302	28	219	360	–141
2.2.2.1 By India	44	5	38	55	33	22
2.2.2.2 To India	286	297	–11	164	327	–163
2.2.3 Short Term to India	1,431	1,581	–150	1,405	1,428	–23
2.2.3.1 Suppliers' Credit > 180 days & Buyers' Credit	1,431	1,459	–28	1,405	1,413	–8
2.2.3.2 Suppliers' Credit up to 180 days	–	122	–122	–	15	–15
2.3 Banking Capital (2.3.1+2.3.2)	**1,753**	**1,054**	**699**	**1,414**	**1,424**	**–10**
2.3.1 Commercial Banks	1,753	1,037	717	1,412	1,424	–12
2.3.1.1 Assets	395	158	237	630	573	57
2.3.1.2 Liabilities	1,359	879	480	782	851	–69
2.3.1.2.1 Non-Resident Deposits	1,074	700	374	774	682	92
2.3.2 Others	–	18	–18	2	–	2
2.4 Rupee Debt Service	–	2	–2	–	2	–2
2.5 Other Capital	304	364	–60	653	461	192
3 Errors & Omissions	–	**68**	**–68**	**11**	–	**11**
4 Monetary Movements (4.1+ 4.2)	–	**725**	**–725**	–	**466**	**–466**
4.1 I.M.F.	–	–	–	–	–	–
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	–	725	–725	–	466	–466

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

(US $ Million)

Item	Apr-Jun 2015 (PR)			Apr-Jun 2016 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)	**126,879**	**132,999**	**–6,119**	**125,219**	**125,496**	**–277**
1.A Goods and Services (1.A.a+1.A.b)	**106,291**	**122,715**	**–16,424**	**106,147**	**114,211**	**–8,064**
1.A.a Goods (1.A.a.1 to 1.A.a.3)	**68,025**	**102,200**	**–34,175**	**66,616**	**90,450**	**–23,833**
1.A.a.1 General merchandise on a BOP basis	66,357	94,680	–28,323	66,199	86,528	–20,329
1.A.a.2 Net exports of goods under merchanting	1,668	–	1,668	418	–	418
1.A.a.3 Nonmonetary gold	–	7,520	–7,520	–	3,922	–3,922
1.A.b Services (1.A.b.1 to 1.A.b.13)	**38,266**	**20,515**	**17,751**	**39,530**	**23,761**	**15,769**
1.A.b.1 Manufacturing services on physical inputs owned by others	26	4	22	45	13	33
1.A.b.2 Maintenance and repair services n.i.e.	43	83	–40	33	78	–45
1.A.b.3 Transport	3,608	4,128	–520	3,897	3,678	219
1.A.b.4 Travel	4,566	3,840	727	4,803	4,561	242
1.A.b.5 Construction	352	233	120	463	233	230
1.A.b.6 Insurance and pension services	482	282	200	516	287	229
1.A.b.7 Financial services	1,286	778	509	1,403	1,268	135
1.A.b.8 Charges for the use of intellectual property n.i.e.	162	1,485	–1,323	171	1,628	–1,456
1.A.b.9 Telecommunications, computer, and information services	18,731	933	17,797	18,844	989	17,856
1.A.b.10 Other business services	7,792	7,289	503	8,058	8,005	53
1.A.b.11 Personal, cultural, and recreational services	424	489	–65	381	672	–291
1.A.b.12 Government goods and services n.i.e.	131	269	–139	130	162	–32
1.A.b.13 Others n.i.e.	663	701	–38	786	2,190	–1,404
1.B Primary Income (1.B.1 to 1.B.3)	**3,320**	**9,181**	**–5,861**	**3,768**	**9,968**	**–6,200**
1.B.1 Compensation of employees	883	526	357	912	700	212
1.B.2 Investment income	2,039	8,464	–6,425	2,389	9,032	–6,644
1.B.2.1 Direct investment	1,205	3,204	–1,998	1,504	4,010	–2,507
1.B.2.2 Portfolio investment	22	2,380	–2,358	31	2,039	–2,009
1.B.2.3 Other investment	84	2,880	–2,796	52	2,982	–2,930
1.B.2.4 Reserve assets	728	1	727	803	1	802
1.B.3 Other primary income	398	191	206	467	236	231
1.C Secondary Income (1.C.1+1.C.2)	**17,269**	**1,103**	**16,166**	**15,304**	**1,317**	**13,987**
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	17,134	867	16,267	15,248	1,087	14,161
1.C.1.1 Personal transfers (Current transfers between resident and/ non-resident households)	16,529	790	15,739	14,683	863	13,820
1.C.1.2 Other current transfers	605	76	529	565	225	341
1.C.2 General government	134	236	–102	56	230	–173
2 Capital Account (2.1+2.2)	**84**	**76**	**8**	**221**	**65**	**156**
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	3	11	–8	32	8	24
2.2 Capital transfers	81	65	16	189	57	131
3 Financial Account (3.1 to 3.5)	**140,967**	**133,781**	**7,186**	**128,935**	**128,978**	**–42**
3.1 Direct Investment (3.1A+3.1B)	**15,449**	**5,447**	**10,003**	**14,174**	**10,086**	**4,088**
3.1.A Direct Investment in India	14,129	2,680	11,448	11,749	5,852	5,897
3.1.A.1 Equity and investment fund shares	12,050	2,617	9,432	11,036	5,784	5,253
3.1.A.1.1 Equity other than reinvestment of earnings	9,735	2,617	7,117	7,874	5,784	2,090
3.1.A.1.2 Reinvestment of earnings	2,315	–	2,315	3,162	–	3,162
3.1.A.2 Debt instruments	2,079	63	2,016	713	69	644
3.1.A.2.1 Direct investor in direct investment enterprises	2,079	63	2,016	713	69	644
3.1.B Direct Investment by India	1,321	2,766	–1,446	2,425	4,234	–1,809
3.1.B.1 Equity and investment fund shares	1,321	1,994	–674	2,425	3,196	–771
3.1.B.1.1 Equity other than reinvestment of earnings	1,321	1,160	161	2,425	2,362	63
3.1.B.1.2 Reinvestment of earnings	–	834	–834	–	834	–834
3.1.B.2 Debt instruments	–	772	–772	–	1,038	–1,038
3.1.B.2.1 Direct investor in direct investment enterprises	–	772	–772	–	1,038	–1,038
3.2 Portfolio Investment	**63,655**	**63,705**	**–50**	**57,941**	**55,838**	**2,103**
3.2.A Portfolio Investment in India	63,395	63,612	–216	56,260	55,020	1,241
3.2.1 Equity and investment fund shares	50,887	50,607	280	45,591	43,227	2,365
3.2.2 Debt securities	12,508	13,004	–496	10,669	11,793	–1,124
3.2.B Portfolio Investment by India	260	93	167	1,681	818	863
3.3 Financial derivatives (other than reserves) and employee stock options	**3,847**	**4,594**	**–747**	**6,861**	**3,988**	**2,872**
3.4 Other investment	**58,016**	**48,605**	**9,411**	**49,960**	**52,097**	**–2,137**
3.4.1 Other equity (ADRs/GDRs)	273	–	273	–	–	–
3.4.2 Currency and deposits	16,922	11,313	5,610	11,600	10,195	1,405
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	–	277	–277	27	–	27
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	16,922	11,036	5,886	11,573	10,195	1,378
3.4.2.3 General government	–	–	–	–	–	–
3.4.2.4 Other sectors	–	–	–	–	–	–
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	17,400	11,265	6,135	14,680	17,652	–2,972
3.4.3.A Loans to India	16,700	11,050	5,650	13,841	17,060	–3,218
3.4.3.B Loans by India	700	214	485	838	593	246
3.4.4 Insurance, pension, and standardized guarantee schemes	35	34	–	145	279	–134
3.4.5 Trade credit and advances	22,545	24,905	–2,360	21,000	21,349	–349
3.4.6 Other accounts receivable/payable - other	841	1,089	–248	2,536	2,622	–86
3.4.7 Special drawing rights	–	–	–	–	–	–
3.5 Reserve assets	**–**	**11,430**	**–11,430**	**–**	**6,969**	**–6,969**
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)	–	11,430	–11,430	–	6,969	–6,969
4 Total assets/liabilities	**140,967**	**133,781**	**7,186**	**128,935**	**128,978**	**–42**
4.1 Equity and investment fund shares	68,399	59,941	8,458	67,739	57,291	10,447
4.2 Debt instruments	71,454	61,322	10,133	58,661	62,095	–3,435
4.3 Other financial assets and liabilities	1,114	12,518	–11,405	2,536	9,591	–7,055
5 Net errors and omissions	**–**	**1,075**	**–1,075**	**164**	**–**	**164**

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

(₹ Billion)

Item	Apr-Jun 2015 (PR)			Apr-Jun 2016 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)	**8,053**	**8,442**	**-388**	**8,376**	**8,395**	**-19**
1.A Goods and Services (1.A.a+1.A.b)	**6,746**	**7,789**	**-1,042**	**7,100**	**7,640**	**-539**
1.A.a Goods (1.A.a.1 to 1.A.a.3)	**4,318**	**6,487**	**-2,169**	**4,456**	**6,050**	**-1,594**
1.A.a.1 General merchandise on a BOP basis	4,212	6,009	-1,798	4,428	5,788	-1,360
1.A.a.2 Net exports of goods under merchanting	106	–	106	28	–	28
1.A.a.3 Nonmonetary gold	–	477	-477	–	262	-262
1.A.b Services (1.A.b.1 to 1.A.b.13)	**2,429**	**1,302**	**1,127**	**2,644**	**1,589**	**1,055**
1.A.b.1 Manufacturing services on physical inputs owned by others	2	0	1	3	1	2
1.A.b.2 Maintenance and repair services n.i.e.	3	5	-3	2	5	-3
1.A.b.3 Transport	229	262	-33	261	246	15
1.A.b.4 Travel	290	244	46	321	305	16
1.A.b.5 Construction	22	15	8	31	16	15
1.A.b.6 Insurance and pension services	31	18	13	35	19	15
1.A.b.7 Financial services	82	49	32	94	85	9
1.A.b.8 Charges for the use of intellectual property n.i.e.	10	94	-84	11	109	-97
1.A.b.9 Telecommunications, computer, and information services	1,189	59	1,130	1,261	66	1,194
1.A.b.10 Other business services	495	463	32	539	535	4
1.A.b.11 Personal, cultural, and recreational services	27	31	-4	25	45	-19
1.A.b.12 Government goods and services n.i.e.	8	17	-9	9	11	-2
1.A.b.13 Others n.i.e.	42	45	-2	53	146	-94
1.B Primary Income (1.B.1 to 1.B.3)	**211**	**583**	**-372**	**252**	**667**	**-415**
1.B.1 Compensation of employees	56	33	23	61	47	14
1.B.2 Investment income	129	537	-408	160	604	-444
1.B.2.1 Direct investment	77	203	-127	101	268	-168
1.B.2.2 Portfolio investment	1	151	-150	2	136	-134
1.B.2.3 Other investment	5	183	-177	3	199	-196
1.B.2.4 Reserve assets	46	0	46	54	0	54
1.B.3 Other primary income	25	12	13	31	16	15
1.C Secondary Income (1.C.1+1.C.2)	**1,096**	**70**	**1,026**	**1,024**	**88**	**936**
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	1,088	55	1,033	1,020	73	947
1.C.1.1 Personal transfers (Current transfers between resident and/ non-resident households)	1,049	50	999	982	58	924
1.C.1.2 Other current transfers	38	5	34	38	15	23
1.C.2 General government	9	15	-6	4	15	-12
2 Capital Account (2.1+2.2)	**5**	**5**	**1**	**15**	**4**	**10**
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	–	1	-1	2	1	2
2.2 Capital transfers	5	4	1	13	4	9
3 Financial Account (3.1 to 3.5)	**8,947**	**8,491**	**456**	**8,625**	**8,627**	**-3**
3.1 Direct Investment (3.1A+3.1B)	**981**	**346**	**635**	**948**	**675**	**273**
3.1.A Direct Investment in India	897	170	727	786	391	394
3.1.A.1 Equity and investment fund shares	765	166	599	738	387	351
3.1.A.1.1 Equity other than reinvestment of earnings	618	166	452	527	387	140
3.1.A.1.2 Reinvestment of earnings	147	–	147	212	–	212
3.1.A.2 Debt instruments	132	4	128	48	5	43
3.1.A.2.1 Direct investor in direct investment enterprises	132	4	128	48	5	43
3.1.B Direct Investment by India	84	176	-92	162	283	-121
3.1.B.1 Equity and investment fund shares	84	127	-43	162	214	-52
3.1.B.1.1 Equity other than reinvestment of earnings	84	74	10	162	158	4
3.1.B.1.2 Reinvestment of earnings	–	53	-53	–	56	-56
3.1.B.2 Debt instruments	–	49	-49	–	69	-69
3.1.B.2.1 Direct investor in direct investment enterprises	–	49	-49	–	69	-69
3.2 Portfolio Investment	**4,040**	**4,043**	**-3**	**3,876**	**3,735**	**141**
3.2.A Portfolio Investment in India	4,024	4,038	-14	3,763	3,680	83
3.2.1 Equity and investment fund shares	3,230	3,212	18	3,050	2,891	158
3.2.2 Debt securities	794	825	-31	714	789	-75
3.2.B Portfolio Investment by India	16	6	11	112	55	58
3.3 Financial derivatives (other than reserves) and employee stock options	**244**	**292**	**-47**	**459**	**267**	**192**
3.4 Other investment	**3,682**	**3,085**	**597**	**3,342**	**3,485**	**-143**
3.4.1 Other equity (ADRs/GDRs)	17	–	17	–	–	–
3.4.2 Currency and deposits	1,074	718	356	776	682	94
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	–	18	-18	2	–	2
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	1,074	700	374	774	682	92
3.4.2.3 General government	–	–	–	–	–	–
3.4.2.4 Other sectors	–	–	–	–	–	–
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	1,104	715	389	982	1,181	-199
3.4.3.A Loans to India	1,060	701	359	926	1,141	-215
3.4.3.B Loans by India	44	14	31	56	40	16
3.4.4 Insurance, pension, and standardized guarantee schemes	2	2	0	10	19	-9
3.4.5 Trade credit and advances	1,431	1,581	-150	1,405	1,428	-23
3.4.6 Other accounts receivable/payable - other	53	69	-16	170	175	-6
3.4.7 Special drawing rights	–	–	–	–	–	–
3.5 Reserve assets	**–**	**725**	**-725**	**–**	**466**	**-466**
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)	–	725	-725	–	466	-466
4 Total assets/liabilities	**8,947**	**8,491**	**456**	**8,625**	**8,627**	**-3**
4.1 Equity and investment fund shares	4,341	3,805	537	4,531	3,832	699
4.2 Debt instruments	4,535	3,892	643	3,924	4,154	-230
4.3 Other financial assets and liabilities	71	795	-724	170	642	-472
5 Net errors and omissions	**–**	**68**	**-68**	**11**	**–**	**11**

No. 42: International Investment Position

(US$ Million)

Item	As on Financial Year /Quarter End							
	2015-16		2015		2016			
			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	141,626	293,880	134,186	271,378	141,626	293,880	143,435	294,113
1.1 Equity Capital and Reinvested Earnings	96,961	280,267	92,131	258,806	96,961	280,267	97,732	280,143
1.2 Other Capital	44,665	13,613	42,055	12,572	44,665	13,613	45,703	13,970
2 Portfolio Investment	2,461	224,766	1,595	236,275	2,461	224,766	1,598	220,493
2.1 Equity	1,541	141,864	1,480	151,386	1,541	141,864	680	141,510
2.2 Debt	919	82,901	115	84,889	919	82,901	918	78,983
3 Other Investment	45,790	392,617	42,986	388,752	45,790	392,617	43,701	390,682
3.1 Trade Credit	2,913	82,280	5,080	81,316	2,913	82,280	2,412	82,087
3.2 Loan	6,713	170,523	4,432	174,117	6,713	170,523	4,757	170,518
3.3 Currency and Deposits	20,861	127,109	17,116	120,059	20,861	127,109	21,325	126,455
3.4 Other Assets/Liabilities	15,303	12,705	16,359	13,260	15,303	12,705	15,208	11,622
4 Reserves	360,177	–	356,001	–	360,177	–	363,506	–
5 Total Assets/ Liabilities	550,054	911,263	534,769	896,405	550,054	911,263	552,240	905,288
6 IIP (Assets - Liabilities)		–361,209		–361,636		–361,209		–353,048

Payment and Settlement Systems

No. 43: Payment System Indicators

System	Volume (Million)				Value (₹ Billion)			
	2015-16	2016			2015-16	2016		
		Jun.	Jul.	Aug.		Jun.	Jul.	Aug.
	1	2	3	4	5	6	7	8
1 RTGS	**98.34**	**8.83**	**8.26**	**8.56**	**1,035,551.64**	**106,101.49**	**96,016.24**	**98,591.56**
1.1 Customer Transactions	93.95	8.46	7.92	8.21	700,899.82	72,024.19	64,718.26	66,495.95
1.2 Interbank Transactions	4.37	0.37	0.33	0.35	123,678.19	11,810.82	10,201.29	11,092.37
1.3 Interbank Clearing	0.016	0.002	0.002	0.002	210,973.63	22,266.48	21,096.69	21,003.23
2 CCIL Operated Systems	**3.12**	**0.31**	**0.35**	**0.34**	**807,370.42**	**87,278.50**	**89,800.06**	**94,427.60**
2.1 CBLO	0.22	0.02	0.02	0.02	178,335.28	17,272.29	17,332.33	19,583.26
2.2 Govt. Securities Clearing	1.02	0.11	0.19	0.17	269,778.20	31,205.54	40,872.50	41,104.59
2.2.1 Outright	0.88	0.09	0.17	0.16	97,285.41	11,238.84	21,145.09	19,631.47
2.2.2 Repo	0.134	0.016	0.014	0.016	172,492.78	19,966.70	19,727.41	21,473.12
2.3 Forex Clearing	1.89	0.18	0.14	0.15	359,256.94	38,800.68	31,595.23	33,739.74
3 Paper Clearing	**1,096.37**	**86.19**	**85.85**	**88.23**	**81,860.79**	**6,359.68**	**6,282.11**	**6,451.21**
3.1 Cheque Truncation System (CTS)	958.39	78.64	79.24	81.62	69,889.15	5,734.50	5,716.59	5,924.66
3.2 MICR Clearing	–	-	-	-	–	–	–	–
3.2.1 RBI Centres	–	-	-	-	–	–	–	–
3.2.2 Other Centres	–	-	-	-	–	–	–	–
3.3 Non-MICR Clearing	137.98	7.55	6.60	6.60	11,971.64	625.19	565.52	526.55
4 Retail Electronic Clearing	**3,141.53**	**316.88**	**336.73**	**307.55**	**91,408.14**	**9,622.29**	**9,040.77**	**9,726.54**
4.1 ECS DR	224.75	0.99	0.87	0.83	1,651.50	3.22	2.60	2.49
4.2 ECS CR (includes NECS)	39.00	0.80	0.60	0.95	1,059.44	9.64	7.49	9.65
4.3 EFT/NEFT	1,252.88	118.91	113.48	118.55	83,273.11	8,815.31	8,145.39	8,764.13
4.4 Immediate Payment Service (IMPS)	220.81	29.68	32.18	33.89	1,622.26	237.17	251.22	268.49
4.5 National Automated Clearing House (NACH)	1,404.08	166.50	189.60	153.33	3,801.83	556.96	634.06	681.78
5 Cards	**10,038.67**	**927.27**	**961.25**	**971.81**	**29,397.65**	**2,601.89**	**2,608.91**	**2,640.63**
5.1 Credit Cards	791.67	76.90	80.05	84.59	2,437.02	242.41	246.34	260.50
5.1.1 Usage at ATMs	6.00	0.59	0.61	0.65	30.41	2.86	2.92	3.04
5.1.2 Usage at POS	785.67	76.31	79.44	83.95	2,406.62	239.56	243.41	257.46
5.2 Debit Cards	9,247.00	850.37	881.20	887.22	26,960.63	2,359.48	2,362.57	2,380.13
5.2.1 Usage at ATMs	8,073.39	732.17	752.13	756.68	25,371.36	2,204.48	2,191.65	2,196.44
5.2.2 Usage at POS	1,173.61	118.20	129.07	130.54	1,589.27	155.01	170.92	183.69
6 Prepaid Payment Instruments (PPIs)	**748.02**	**76.98**	**77.85**	**96.28**	**487.58**	**53.47**	**53.40**	**56.46**
6.1 m-Wallet	603.98	58.63	59.45	70.68	205.84	27.74	27.60	30.74
6.2 PPI Cards	143.47	18.29	18.35	25.56	253.77	23.01	23.09	23.69
6.3 Paper Vouchers	0.56	0.05	0.05	0.04	27.97	2.71	2.71	2.03
7 Mobile Banking	**389.49**	**62.52**	**64.44**	**70.05**	**4,040.91**	**662.72**	**668.04**	**721.82**
8 Cards Outstanding	**686.04**	**716.68**	**723.17**	**738.77**	–	–	–	–
8.1 Credit Card	24.51	25.54	25.94	26.38	–	–	–	–
8.2 Debit Card	661.54	691.14	697.22	712.39	–	–	–	–
9 Number of ATMs (in actuals)	**212061**	**215192**	**216030**	**216997**	–	–	–	–
10 Number of POS (in actuals)	**1385668**	**1432727**	**1443899**	**1496769**	–	–	–	–
11 Grand Total (1.1+1.2+2+3+4+5+6)	**15,126.04**	**1,416.46**	**1,470.29**	**1,472.76**	**1,835,102.59**	**189,750.86**	**182,704.81**	**190,890.75**

Note : Data for latest 12 month period is provisional.

Occasional Series

No. 44: Small Savings

(₹ Billion)

Scheme		2014-15	2015		2016	
			Feb.	Dec.	Jan.	Feb.
		1	2	3	4	5
1 Small Savings	**Receipts**	**2,411.58**	**208.25**	**340.50**	**347.66**	**375.07**
	Outstanding	**6,323.39**	**6,266.32**	**6,537.43**	**6,619.53**	**6,689.88**
1.1 Total Deposits	**Receipts**	**2,137.49**	**179.21**	**301.34**	**305.27**	**326.76**
	Outstanding	**3,961.81**	**3,947.00**	**4,163.20**	**4,189.82**	**4,224.29**
1.1.1 Post Office Saving Bank Deposits	Receipts	1,142.29	96.53	170.21	177.62	197.89
	Outstanding	474.28	464.27	567.51	586.76	606.63
1.1.2 MGNREG	Receipts	–	–	–	–	–
	Outstanding	–	–	–	–	–
1.1.3 National Saving Scheme, 1987	Receipts	0.44	–	0.01	–	0.05
	Outstanding	36.89	36.45	34.94	34.79	34.68
1.1.4 National Saving Scheme, 1992	Receipts	0.03	–	–	0.01	–
	Outstanding	2.32	2.34	1.28	1.26	1.22
1.1.5 Monthly Income Scheme	Receipts	215.69	17.76	35.26	33.77	35.20
	Outstanding	2,005.57	2,010.35	1,951.46	1,943.21	1,935.86
1.1.6 Senior Citizen Scheme	Receipts	30.11	2.79	13.14	12.76	12.87
	Outstanding	179.75	181.76	196.79	203.69	213.51
1.1.7 Post Office Time Deposits	Receipts	330.69	27.35	43.69	43.34	43.12
	Outstanding	517.57	508.76	641.52	659.80	678.18
1.1.7.1 1 year Time Deposits	Outstanding	361.53	354.68	458.18	470.89	482.51
1.1.7.2 2 year Time Deposits	Outstanding	20.31	20.03	25.37	26.48	27.77
1.1.7.3 3 year Time Deposits	Outstanding	41.42	41.32	44.34	45.08	45.96
1.1.7.4 5 year Time Deposits	Outstanding	94.31	92.73	113.63	117.35	121.94
1.1.8 Post Office Recurring Deposits	Receipts	418.24	34.78	39.03	37.77	37.63
	Outstanding	745.13	742.75	769.35	759.96	753.85
1.1.9 Post Office Cumulative Time Deposits	Outstanding	0.08	0.10	0.08	0.08	0.08
1.1.10 Other Deposits	Receipts	–	–	–	–	–
	Outstanding	0.22	0.22	0.27	0.27	0.28
1.2 Saving Certificates	**Receipts**	**192.52**	**22.07**	**34.14**	**35.83**	**39.44**
	Outstanding	**1,834.10**	**1,827.80**	**1,889.18**	**1,902.23**	**1,916.46**
1.2.1 National Savings Certificate VIII issue	Receipts	165.84	15.27	8.47	9.97	12.94
	Outstanding	856.08	844.62	873.42	874.61	877.22
1.2.2 Indira Vikas Patras	Receipts	0.04	–	–	–	–
	Outstanding	8.87	7.97	8.90	8.86	8.87
1.2.3 Kisan Vikas Patras	Receipts	5.54	1.48	1.41	1.39	1.49
	Outstanding	848.41	872.57	702.45	689.26	675.76
1.2.4 Kisan Vikas Patras - 2014	Receipts	21.1	5.32	24.24	24.47	25.01
	Outstanding	26.71	9.27	193.33	217.8	242.81
1.2.5 National Saving Certificate VI issue	Receipts	–	–	0.02	–	–
	Outstanding	–0.82	–0.81	–0.86	–0.88	–0.89
1.2.6 National Saving Certificate VII issue	Outstanding	–0.53	–0.53	–0.55	–0.56	–0.59
1.2.7 Other Certificates	Outstanding	95.38	94.71	112.49	113.14	113.28
1.3 Public Provident Fund	**Receipts**	**81.57**	**6.97**	**5.02**	**6.56**	**8.87**
	Outstanding	**527.48**	**491.52**	**485.05**	**527.48**	**549.13**

Source: Accountant General, Post and Telegraphs.

TABLE 45 : OWNERSHIP PATTERN OF CENTRAL AND STATE GOVERNMENTS SECURITIES

(Per cent)

Central Government Dated Securities					
Category	2015			2016	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
(A) Total (in ₹. Billion)	**42383.69**	**43433.25**	**44870.80**	**45324.73**	**46422.34**
1 Commercial Banks	43.14	43.03	43.59	41.81	39.90
2 Non-Bank PDs	0.35	0.54	0.35	0.33	0.45
3 Insurance Companies	21.37	22.09	21.90	22.18	22.63
4 Mutual Funds	2.37	2.69	2.52	2.09	2.09
5 Co-operative Banks	2.73	2.64	2.71	2.75	2.68
6 Financial Institutions	0.70	0.60	0.68	0.72	0.71
7 Corporates	1.12	0.84	0.86	1.28	1.31
8 Foreign Portfolio Investors	3.59	3.57	3.68	3.65	3.63
9 Provident Funds	7.08	7.17	7.11	6.01	5.89
10 RBI	13.06	12.08	12.07	13.47	14.88
11. Others	4.49	4.75	4.51	5.72	5.83
11.1 State Governments	1.72	1.75	1.73	1.84	1.84

State Governments Securities					
Category	2015			2016	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
(B) Total (in ₹. Billion)	**13210.23**	**13704.70**	**14471.93**	**16313.95**	**17277.70**
1 Commercial Banks	42.00	41.12	40.17	42.11	41.20
2 Non-Bank PDs	0.17	0.26	0.21	0.27	0.38
3 Insurance Companies	33.05	33.48	34.06	32.50	32.53
4 Mutual Funds	0.41	0.63	0.68	1.05	1.36
5 Co-operative Banks	3.29	3.46	3.72	3.92	4.01
6 Financial Institutions	0.41	0.18	0.22	0.25	0.25
7 Corporates	0.21	0.20	0.17	0.13	0.13
8 Foreign Portfolio Investors	-	-	0.25	0.27	0.22
9 Provident Funds	16.04	16.42	16.69	15.95	16.39
10 RBI	0.01	0.01	0.02	0.04	0.02
11. Others	4.40	4.24	3.81	3.51	3.52
11.1 State Governments	-	-	-	-	-

Treasury Bills					
Category	2015			2016	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
(C) Total (in ₹. Billion)	**4128.61**	**4018.67**	**4256.00**	**3644.02**	**4310.09**
1 Commercial Banks	58.62	59.67	58.91	71.79	54.41
2 Non-Bank PDs	2.55	1.32	2.14	1.93	1.85
3 Insurance Companies	1.93	2.19	2.19	1.50	1.83
4 Mutual Funds	6.60	9.05	5.86	1.66	11.77
5 Co-operative Banks	2.19	2.27	1.90	2.75	2.23
6 Financial Institutions	4.56	5.28	3.80	3.61	3.09
7 Corporates	1.16	1.50	2.30	1.79	2.22
8 Foreign Portfolio Investors	-	-	-	-	-
9 Provident Funds	0.11	0.05	0.06	0.25	0.03
10 RBI	0.36	0.17	0.23	0.31	0.25
11. Others	21.91	18.50	22.62	14.42	22.30
11.1 State Governments	17.37	15.19	19.26	10.52	18.26

Explanatory Notes to the Current Statistics

Table No. 1

1.2 & 6: Annual data are averages of months.

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

4.1 to 4.4, 4.8, 4.12 & 5: Relate to the last day of the month/financial year.

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

4.9 to 4.11: Relate to the last auction day of the month/financial year.

Table No. 2

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

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

Table No. 4

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

Table No. 5

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

Table No. 6

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

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

Table Nos. 7 & 11

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

Table No. 8

NM_2 and NM_3 do not include FCNR (B) deposits.

2.4: Consist of paid-up capital and reserves.

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

Table No. 9

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

L_1 and L_2 are compiled monthly and L_3 quarterly.

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

Table No. 13

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

Table No. 15 & 16

Data are provisional and relate to select banks which cover 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 & 1.1.1.1.1.4: 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 revised this quarter, 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.

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

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Notes

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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