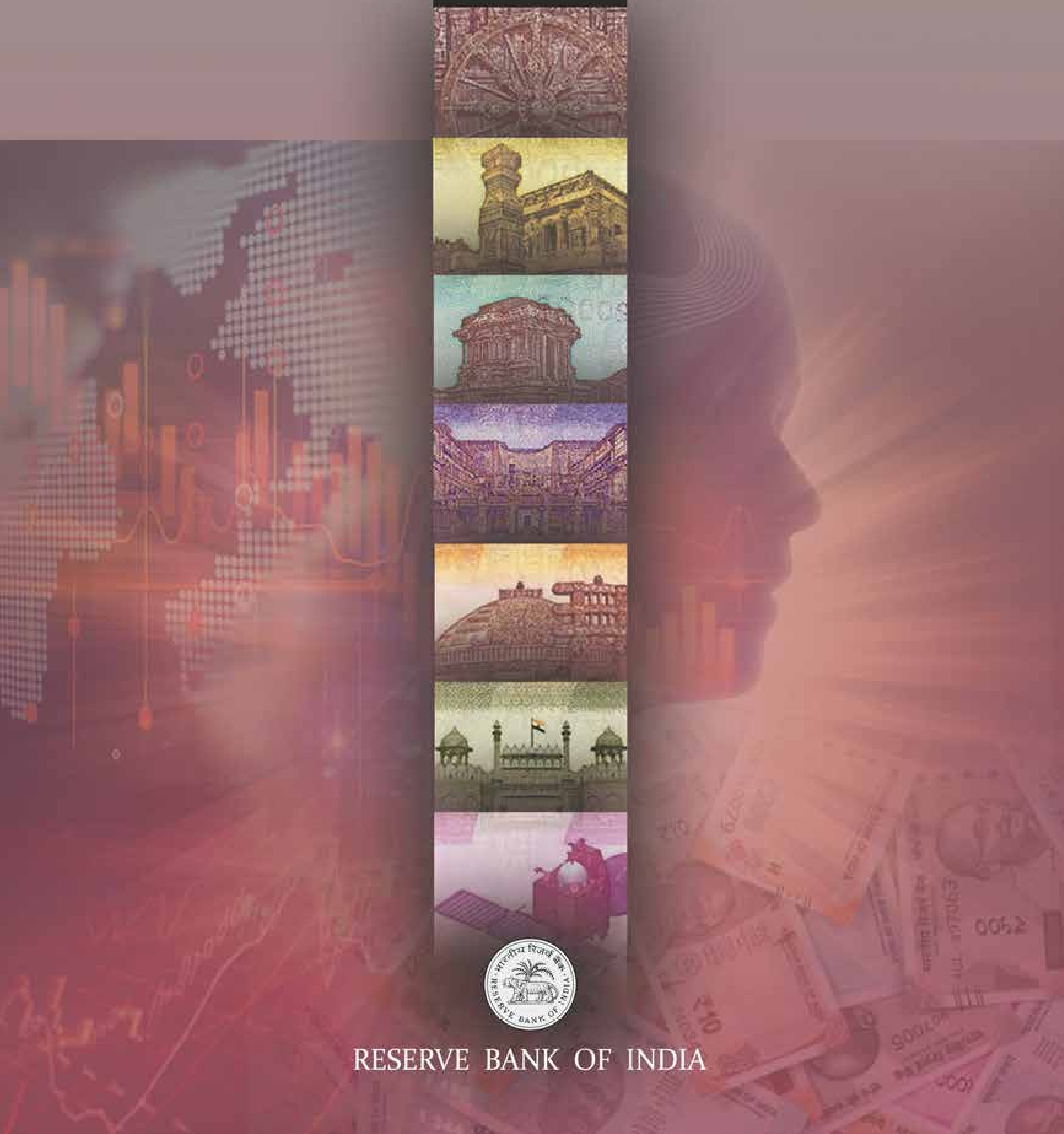
ANNUAL REPORT
2018-19



RESERVE BANK OF INDIA

Report of the Central Board of Directors on the working of the Reserve Bank of India for the year ended June 30, 2019 submitted to the Central Government in terms of Section 53(2) of the Reserve Bank of India Act, 1934

RESERVE BANK OF INDIA ANNUAL REPORT 2018-19

भारतीय रिज़र्व बैंक
RESERVE BANK OF INDIA
www.rbi.org.in

गवर्नर
GOVERNOR

LETTER OF TRANSMITTAL

Ref. No. SYD. 348 / 02.16.001 /2019 -20

August 27, 2019
Bhadrapada 5, 1941 (Saka)

The Finance Secretary
Government of India
Ministry of Finance
New Delhi – 110 001

Dear Finance Secretary,

In pursuance of Section 53 (2) of the Reserve Bank of India Act, 1934, I have the pleasure in transmitting the following documents:

(i) A copy of the Annual Accounts for the year ended June 30, 2019 certified by the Bank's Auditors and signed by the Chief General Manager-in-Charge, the Deputy Governors and I; and

(ii) Two copies of the Annual Report of the Central Board on the working of the Bank during the year ended June 30, 2019.

Sincerely,

Shaktikanta Das

केन्द्रीय कार्यालय भवन, शहीद भगतसिंह मार्ग, मुम्बई - 400 001, भारत
फोन: +91 22 2266 0868 / 2266 1872 / 2266 2644 फैक्स: +91 22 2266 1784 ई-मेल: governor@rbi.org.in
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हिंदी आसान है, इसका प्रयोग बढ़ाइए

CENTRAL BOARD / LOCAL BOARDS

GOVERNOR

Shaktikanta Das

DEPUTY GOVERNORS

N. S. Vishwanathan

B. P. Kanungo

Mahesh Kumar Jain

DIRECTORS NOMINATED UNDER SECTION 8 (1) (b) OF THE RBI ACT, 1934

Prasanna Kumar Mohanty

Dilip S. Shanghvi

Revathy Iyer

Sachin Chaturvedi

DIRECTORS NOMINATED UNDER SECTION 8 (1) (c) OF THE RBI ACT, 1934

Natarajan Chandrasekaran

Bharat Narotam Doshi

Sudhir Mankad

Ashok Gulati

Manish Sabharwal

Satish Kashinath Marathe

Swaminathan Gurumurthy

DIRECTORS NOMINATED UNDER SECTION 8 (1) (d) OF THE RBI ACT, 1934

Rajiv Kumar

Atanu Chakraborty

MEMBERS OF LOCAL BOARDS

WESTERN AREA

Dilip S. Shanghvi

Vallabh Roopchand Bhanshali

EASTERN AREA

Sachin Chaturvedi

Sunil Mitra

NORTHERN AREA

Revathy Iyer

Raghvendra Narayan Dubey

SOUTHERN AREA

Prasanna Kumar Mohanty

(Position as on August 16, 2019)

PRINCIPAL OFFICERS

(As on August 19, 2019)

EXECUTIVE DIRECTORS	Deepak Mohanty
	Michael D. Patra
	M. Rajeshwar Rao
	Malvika Sinha
	S. Ganesh Kumar
	Uma Shankar
	Parvathy V. Sundaram
	Lily Vadera
	Rabi N. Mishra
	Nanda S. Dave
	Anil K. Sharma
	Sudha Balakrishnan, Chief Financial Officer
CENTRAL OFFICE	
Central Vigilance Cell	Sadhana Varma, Chief General Manager & Chief Vigilance Officer
Consumer Education and Protection Department	D. Sethy, Chief General Manager
Corporate Strategy and Budget Department	H. N. Panda, Chief General Manager
Department of Banking Regulation	Saurav Sinha, Chief General Manager-in-Charge
Department of Banking Supervision	J. K. Dash, Chief General Manager-in-Charge
Department of Communication	Yogesh K. Dayal, Chief General Manager
Department of Co-operative Bank Regulation	Neeraj Nigam, Chief General Manager
Department of Co-operative Bank Supervision	Reena Banerjee, Chief General Manager
Department of Corporate Services	P. Vijayakumar, Chief General Manager
Department of Currency Management	Ajay Michyari, Chief General Manager-in-Charge
Department of Economic and Policy Research	Rajiv Ranjan, Adviser & Officer-in-Charge
Department of External Investments and Operations	Usha Janakiraman, Chief General Manager
Department of Government and Bank Accounts	Nirmal Chand, Chief General Manager-in-Charge
Department of Information Technology	Deepak Kumar, Chief General Manager-in-Charge
Department of Non-Banking Regulation	Manoranjan Mishra, Chief General Manager
Department of Non-Banking Supervision	Ashok Narain, Chief General Manager
Department of Payment and Settlement Systems	P. Vasudevan, Chief General Manager
Department of Statistics and Information Management	O. P. Mall, Officer-in-Charge
Enforcement Department	R. Subramanian, Chief General Manager
Financial Inclusion and Development Department	G. P. Borah, Chief General Manager-in-Charge
Financial Markets Operation Department	R. S. Ratho, Chief General Manager
Financial Markets Regulation Department	T. Rabi Sankar, Chief General Manager
Foreign Exchange Department	Ajay Kumar Misra, Chief General Manager-in-Charge
Financial Stability Unit	R. Gurumurthy, Chief General Manager
Human Resource Management Department	Vivek Deep, Chief General Manager-in-Charge
Inspection Department	R. L. Sharma, Chief General Manager
Internal Debt Management Department	T. K. Rajan, Chief General Manager
International Department	M. K. Saggar, Adviser-in-Charge
Legal Department	A. Unnikrishnan, Legal Adviser & Officer-in-Charge
Monetary Policy Department	Janak Raj, Principal Adviser
Premises Department	M. M. Majhi, Chief General Manager-in-Charge
Rajbhasha Department	Sadhana Varma, Chief General Manager
Risk Monitoring Department	Gunveer Singh, Chief General Manager
Secretary's Department	Susobhan Sinha, Chief General Manager & Secretary
COLLEGES	**PRINCIPALS**
College of Agricultural Banking, Pune	M. Sarkar Deb
Reserve Bank Staff College, Chennai	R. Kesavan
OFFICES	**REGIONAL DIRECTORS**
Chennai	S. M. Narasimha Swamy
Kolkata	S. C. Murmu
Mumbai	B. K. Mishra
New Delhi	Ajay Kumar
BRANCHES	
Ahmedabad	S. K. Panigrahy
Bengaluru	Jose J. Kattoor
Bhopal	Vivek Aggarwal
Bhubaneswar	M. K. Mall
Chandigarh	Rachna Dikshit
Dehradun	Rajesh Kumar
Guwahati	Manoranjan Dash
Hyderabad	Subrata Das
Jaipur	Arun Kumar Singh
Jammu	Thomas Mathew
Kanpur	Tuli Roy
Lucknow	R. Lakshmi Kanth Rao
Nagpur	Indrani Banerjee
Raipur	A. Sivagami
Thiruvananthapuram	Reeny Ajith
	OFFICERS-IN-CHARGE
Agartala	Tamal Biswas, General Manager (O-i-C)
Aizawl	Mary Lianlunkim Deng, General Manager (O-i-C)
Belapur	K. Nikhila, General Manager (O-i-C)
Gangtok	R. V. Sangvai, General Manager (O-i-C)
Imphal	Tangpua M. L. N. C. Gwite, General Manager (O-i-C)
Kochi	K. P. Patnaik, General Manager (O-i-C)
Panaji	S. T. Kannan, General Manager (O-i-C)
Patna	Shankar Suman, General Manager-in-Charge
Ranchi	Sanjiv Dayal, General Manager (O-i-C)
Shillong	Anurag Asthana, General Manager (O-i-C)
Shimla	K. C. Anand, General Manager (O-i-C)
Srinagar	-

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BOXES

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SELECT ABBREVIATIONS

ABCI	-	Association of Business Communicators of India
ACU	-	Asian Clearing Union
AEs	-	Advanced Economies
AIF	-	Alternative Investment Funds
AIFIs	-	All India Financial Institutions
AMRMS	-	Audit Management and Risk Monitoring System
APMC	-	Agricultural Produce Marketing Committee
ARCs	-	Asset Reconstruction Companies
ARMS	-	Audit and Risk Management Sub-Committee
AUM	-	Assets Under Management
BBPOU	-	Bharat Bill Payment Operating Unit
BCBS	-	Basel Committee on Banking Supervision
BCM	-	Business Continuity Management
BCPs	-	Business Continuity Plans
BFS	-	Board for Financial Supervision
BIS	-	Bank for International Settlements
BPSS	-	Board for Regulation and Supervision of Payment and Settlement Systems
BRBNMPL	-	Bharatiya Reserve Bank Note Mudran Private Limited
BSBDAs	-	Basic Savings Bank Deposit Accounts
BSE	-	Bombay Stock Exchange
CA	-	Concurrent Audit
CAB	-	College of Agricultural Banking
CAFRAL	-	Centre for Advanced Financial Research and Learning
CBGG	-	Central Bank Governance Group
CBLO	-	Collateralised Borrowing and Lending Obligation
CBS	-	Core Banking Solution
CCB	-	Committee of the Central Board
CCIL	-	Clearing Corporation of India Limited
CCPs	-	Central Counterparties
CD	-	Certificate of Deposit
CERSAI	-	Central Registry of Securitisation Asset Reconstruction and Security Interest
CFA	-	Chartered Financial Analyst
CFL	-	Centre for Financial Literacy
CFR	-	Central Fraud Registry
CGFS	-	Committee on the Global Financial System
CIMS	-	Centralised Information Management System
CP	-	Commercial Paper
CPC	-	Central Pay Commission
CPIN	-	Common Portal Identification Number
CPMI-IOSCO	-	Committee on Payments and Market Infrastructures - International Organization of Securities Commissions
CRA	-	Contingent Reserve Arrangement
CRAR	-	Capital to Risk Weighted Assets Ratio
CRILC	-	Central Repository of Information on Large Credits
CRR	-	Cash Reserve Ratio
CSAA	-	Control Self-Assessment Audit
CSF	-	Consolidated Sinking Fund

SELECT ABBREVIATIONS

CSITE	-	Cyber Security and Information Technology Examination
CVPS	-	Currency Verification and Processing System
DEA	-	Depositor Education and Awareness Fund
DIDF	-	Dairy Processing and Infrastructure Development Fund
DIF	-	Deposit Insurance Fund
DTAA	-	Double Taxation Avoidance Agreement
EAMS	-	Enterprise Access Management System
ECB	-	European Central Bank
EDC	-	Executive Directors' Committee
EDMS	-	Electronic Document Management System
EMEs	-	Emerging Market Economies
EMV	-	Europay, Mastercard and Visa
eNAM	-	National Agriculture Market
ERM	-	Enterprise-wide Risk Management
ETCD	-	Exchange Traded Currency Derivatives
ETP	-	Electronic Trading Platform
FATF	-	Financial Action Task Force
FBIL	-	Financial Benchmark of India Private Limited
FCCB	-	Foreign Currency Convertible Bonds
FCI	-	Food Corporation of India
FDI	-	Foreign Direct Investment
FEMA	-	Foreign Exchange Management Act
FETERS	-	Foreign Exchange Transactions Electronic Reporting System
FIAC	-	Financial Inclusion Advisory Committee
FICN	-	Fake Indian Currency Notes
FIDF	-	Fisheries and Aquaculture Infrastructure Development Fund
FinTech	-	Financial Technologies
FIPs	-	Financial Inclusion Plans
FIRMS	-	Foreign Investment Reporting and Management System
FMCG	-	Fast-Moving Consumer Goods
FMI	-	Financial Market Infrastructure
FPI	-	Foreign Portfolio Investment
FRBM	-	Fiscal Responsibility and Budget Management Act
FSB	-	Financial Stability Board
FSDC	-	Financial Stability and Development Council
FVCI	-	Foreign Venture Capital Investor
FWG	-	Framework Working Group
GFCE	-	Government Final Consumption Expenditure
GFCF	-	Gross Fixed Capital Formation
GFD	-	Gross Fiscal Deficit
GNDI	-	Gross National Disposable Income
GRF	-	Guarantee Redemption Fund
GRIHA	-	Green Rating for Integrated Habitat Assessment
G-sec	-	Government Securities
GVA	-	Gross Value Added
HLCCSM	-	High Level Committee on Currency Storage and Movement
HQLA	-	High Quality Liquid Assets

SELECT ABBREVIATIONS

HRM-SC	-	Human Resource Management Sub-Committee
HTM	-	Held to Maturity
IBC	-	Insolvency and Bankruptcy Code
ICCOMS	-	Integrated Computerised Currency Operations Management System
ICMTS	-	Integrated Compliance Management and Tracking System
ICSD	-	International Central Securities Depositories
IDRBT	-	Institute for Development and Research in Banking Technology
IESH	-	Inflation Expectations Survey of Households
IFA	-	International Financial Architecture
IFRS	-	International Financial Reporting Standards
IFTAS	-	Indian Financial Technology and Allied Services
IGBC	-	Indian Green Building Council
IGIDR	-	Indira Gandhi Institute of Development Research
IIBs	-	Inflation Indexed Bonds
IIBM	-	Indian Institute of Bank Management
IL&FS	-	Infrastructure Leasing & Financial Services Limited
Ind AS	-	Indian Accounting Standards
IMD	-	India Meteorological Department
IPOs	-	Initial Public Offers
IRAC	-	Income Recognition and Asset Classification
IRDAI	-	Insurance Regulatory and Development Authority of India
IRTG	-	Inter-Regulatory Technical Group
IT-SC	-	Information Technology Sub-Committee
IVRS	-	Interactive Voice Response System
KCC	-	Kisan Credit Card
KYC	-	Know Your Customer
LAF	-	Liquidity Adjustment Facility
LBS	-	Lead Bank Scheme
LCR	-	Liquidity Coverage Ratio
LEEP	-	Leadership and Executive Education Programme
LEI	-	Legal Entity Identifier
LPA	-	Long Period Average
LRS	-	Liberalised Remittance Scheme
LSE	-	London School of Economics
LTV	-	Long Term Visa
MCLRs	-	Marginal Cost of Funds Based Lending Rates
MCMTP	-	Mid-Career Mandatory Training Programme
MHP	-	Minimum Holding Period
MIS	-	Management Information System
MoE	-	Memorandum of Errors
MoU	-	Memorandum of Understanding
MPC	-	Monetary Policy Committee
MSF	-	Marginal Standing Facility
MSMEs	-	Micro, Small and Medium Enterprises
MSP	-	Minimum Support Price
MTFP	-	Medium Term Fiscal Policy
MTM	-	Mark-to-Market

SELECT ABBREVIATIONS

MUNFI	-	Monitoring Universe of Non-Bank Financial Intermediation
NACH	-	National Automated Clearing House
NCFE	-	National Centre for Financial Education
NCLAT	-	National Company Law Appellate Tribunal
NETC	-	National Electronic Toll Collection
NIBM	-	National Institute of Bank Management
NSFI	-	National Strategy for Financial Inclusion
NSSF	-	National Small Savings Fund
OBICUS	-	Order Books, Inventories and Capacity Utilisation Survey
OIS	-	Overnight Index Swaps
OMO	-	Open Market Operations
OPEC	-	Organization of the Petroleum Exporting Countries
OSDT	-	Ombudsman Scheme for Digital Transactions
OTC	-	Over the Counter
PADO	-	Public Administration, Defence and Other Services
PFCE	-	Private Final Consumption Expenditure
PFRDA	-	Pension Fund Regulatory and Development Authority
PLF	-	Plant Load Factor
PML	-	Prevention of Money Laundering
POS	-	Point of Sale
PPIs	-	Prepaid Payment Instruments
PSLCs	-	Priority Sector Lending Certificates
QIP	-	Qualified Institutional Placement
RBIA	-	Risk Based Internal Audit
RBSC	-	Reserve Bank Staff College
RDB	-	Rupee Denominated Bonds
REER	-	Real Effective Exchange Rate
SARFAESI	-	Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest
SARTTAC	-	South Asia Regional Training and Technical Assistance Center
SBNs	-	Specified Bank Notes
SDLs	-	State Development Loans
SEACEN	-	South East Asian Central Banks
SEBI	-	Securities and Exchange Board of India
SFMS	-	Structured Financial Messaging System
SGB	-	Sovereign Gold Bond
SIFIs	-	Systemically Important Financial Institutions
SLBC	-	State Level Bankers' Committee
SLCC	-	State Level Coordination Committee
SMEs	-	Small and Medium Enterprises
SPMCIL	-	Security Printing and Minting Corporation of India Limited
SSCI	-	Service Sector Composite Index
TReDS	-	Trade Receivables Discounting System
UAN	-	Udyog Aadhaar Number
UAT	-	User Acceptance Testing
UNCTAD	-	United Nations Conference on Trade and Development
UPI	-	Unified Payments Interface

VA-PT	-	Vulnerability Assessment and Penetration Testing
VCFs	-	Venture Capital Funds
VRR	-	Voluntary Retention Route
WACR	-	Weighted Average Call Rate
WAM	-	Weighted Average Maturity
WAY	-	Weighted Average Yield
WLA	-	White Label ATM
WLAOs	-	White Label ATM Operators
XBRL	-	eXtensible Business Reporting Language
ZTCs	-	Zonal Training Centres

This Report can be accessed on Internet
URL : www.rbi.org.in

*For the Year July 1, 2018 to June 30, 2019**

PART ONE: THE ECONOMY - REVIEW AND PROSPECTS

I ASSESSMENT AND PROSPECTS

I.1 Half way through the financial year 2019-20, several uncertainties weigh on the near-term outlook for the global economy and India. After growing strongly in January-March 2018, the global economy began to slow in subsequent months. The loss of speed spread to different parts as political developments purveyed heightened uncertainty, world trade froze, investment slumped, while manufacturing weakened worldwide. From the early months of 2018, a combination of global spillovers - from attempted monetary policy normalisation by systemic central banks; elevated and volatile crude oil prices; geopolitical tensions; trade tensions; and Brexit - triggered safe haven flights that swept capital flows out of emerging market economies (EMEs) as an asset class. Bouts of turbulence unsettled financial markets, leaving in their wake currency depreciations, asset price volatility, reserve depletions and macroeconomic losses which impacted EMEs almost continuously till early October, 2018. It was only with some ebbing of the vortex of global spillovers that calm returned in the ensuing months. India was not immune to these negative externalities.

I.2 India's real GDP growth clocked an average of 7.7 per cent during 2014-18 and 8 per cent in Q1 of 2018-19, but it began to shed momentum through the rest of 2018-19. The year 2018-19 began on a robust note, but it was to be marked by unanticipated swings and turning points that would take their toll on India's macroeconomic performance. The drivers of growth were hit by downturns at different points of time. Gross fixed capital formation slowed in Q2, which further deepened during subsequent quarters, with knock-on effects on manufacturing and net exports in Q2 and Q3. As in the rest of the world, private consumption remained resilient, supporting services. From the second half of the year, however, and right up to the time of writing, this mainstay of aggregate demand in India has weakened more than initially anticipated. Meanwhile, the growth of value added in agriculture and allied activities decelerated from Q3. This, in turn, pulled down rural demand.

I.3 India's macroeconomic stability provided a silver lining, with inflation remaining below target of 4 per cent for the second financial year in succession under the monetary policy committee (MPC); the current account deficit (CAD) settled below 1 per cent of GDP in Q4 (2018-19); and the fiscal deficit for the year as a whole was contained at 3.4 per cent of GDP. External sector faced headwinds during 2018-19 as CAD exceeded net capital inflows, though reserve losses were partially recouped toward the close of the year. Yet, it is unclear now whether this stability mitigated a deeper loss

* While the Reserve Bank of India's accounting year is July-June, data on a number of variables are available on a financial year basis, *i.e.*, April-March, and hence, the data are analysed on the basis of the financial year. Where available, the data have been updated beyond March 2019. For the purpose of analysis and for providing proper perspective on policies, reference to past years as also prospective periods, wherever necessary, has been made in this Report.

of activity or whether it reflected the symptoms of the slowdown itself. This dilemma becomes all the more acute when juxtaposed with issues relating to financial stability. The ongoing repair of banks' balance sheets and rebuilding of capital buffers brought about a plateauing of stressed assets and a rekindling of credit flows in anticipation of the reinvigoration of growth impulses. With aggregate demand slowing in a broad-based manner, the gains in restoring financial stability may be at risk, exacerbated by credit and liquidity stress in the non-banking space, which are, however, being addressed by the Reserve Bank.

I.4 The key question that confronts the Indian economy as it looks ahead to the rest of 2019-20 is: are we dealing with a soft patch, or a cyclical downswing, or a structural slowdown? This will determine the policy responses - illustratively, a soft patch can be looked through, while a cyclical downswing will warrant counter-cyclical actions in terms of monetary and fiscal policies, but a structural slowdown will need deep-seated reforms. The diagnosis is difficult; these conditions are hard to disentangle cleanly, at least in the formative state. Proximate answers could perhaps be found in the lessons of the experience of 2018-19, with which it could be feasible to assess the outlook for 2019-20 and the challenges that lie ahead.

Lessons from the 2018-19 Experience

I.5 As mentioned earlier, 2018-19 turned out to be a high-wire year in terms of the unanticipated nature of shifts in macroeconomic and financial conditions, and their sheer magnitude. Sifting through these eventful developments for underlying drivers could provide insights into the current state of the economy and policy perspectives in that context.

I.6 Throughout the year, protectionist policy pronouncements and actions in the form of labelling, bilateral tariff escalations, sanctions and retaliations dominated the global political arena. They dealt a body blow to world trade, roiled financial markets and posed risks to macroeconomic prospects of several economies, advanced and emerging alike, that have sought to employ the engine of trade to integrate into the global economy. They also fuelled an animated debate on the end of globalisation. Yet, the unfolding of events during the year demonstrated that the world remains coupled, or at least uniformly vulnerable to global shocks.

I.7 Macroeconomic outcomes in the first quarter of calendar year 2018 seemed to indicate that the global economy was on an extended expansionary phase. Crude oil prices rose to confirm expectations of robust demand. Normalisation of ultra-accommodative monetary policy gathered advocacy and even some traction in the form of interest rate increases and some balance sheet contraction by the Fed and tapering down of quantitative easing (QE) by the ECB. The consequent stampede of capital flows out of emerging markets did not distinguish between jurisdictions, including between economies that were on high growth trajectories and those emerging tentatively out of recessionary conditions. Fundamentals did not seem to be the main determinant of capital flows. Moving forward, when growth expectations turned out to be illusory towards the close of the year and a slowdown became pervasive in subsequent months, most EMEs irrespective of the level of development or underlying state of macroeconomic conditions, got affected.

I.8 These developments suggest that individual economies have to build strong buffers for themselves against forces that have cross-border effects, especially as neither global collective action nor global financial safety nets are assured. In this context, there is a need for greater sensitivity all around about the deleterious effects of global spillovers while adhering to the extant rules of the game in dealing with them. Spill-backs from emerging markets have become a real danger to global economic prospects. Multilateral solutions are preferable to short-sighted actions that reduce global welfare. Given the high degree of global interconnectedness, the Integrated Policy Framework (IPF) taken up by the IMF in its global policy agenda this year (April 2019) could offer a way forward by jointly considering monetary, exchange rate, macro-prudential and capital flow management policies and their interactions. Its efficacy will hinge around a spirit of cooperation and buy-in by all stakeholders.

I.9 The global slowdown has several channels of contagion. For India, export volumes moderated in spite of a modest real depreciation, showing that it is external demand that is the key determinant of export performance. Moreover, exchange rate pass through has been low due to the spread of global supply chains and 'pricing to market' strategies. Terms of trade became another channel: international crude oil prices rose and were volatile for the greater part of the year in the crossfire of OPEC plus production cuts, ramped up shale supplies and social media statements. Meanwhile, slowing domestic demand led to moderation in non-oil non-bullion imports. The growing incidence of unilateral trade actions warrants an opportunistic export strategy that (i) seizes upon the space opened up by trade diversion and the vacation of niches by large players; (ii) intensifies diversification of products and markets; and (iii) builds on innate strengths and competitive advantages. At the same time, efforts need to be redoubled to move countries towards cooperative multilateral arrangements under the existing institutional architecture, eschewing national self-interest and promoting an open multilateral trading order that includes all.

I.10 Yet another conduit through which trade wars and other sources of global spillovers impacted India during 2018-19 is the intertwining of the finance and confidence channels. The sensitivity of portfolio capital to global spillovers is estimated to have increased several-fold relative to the taper tantrum period. This has been ascribed to the increasing prominence of 'passive investment' strategies in which fund managers employ vehicles such as exchange traded funds that track returns on a particular index or benchmark. Consequently, risk-on risk-off swings in sentiment have amplified the mobility and volatility of capital flows, with spillovers to financial markets and eventually to economic activity. For countries like India which traditionally run current account deficit, viable external financing can become an additional consideration for holding adequate precautionary buffers. It is prudent to bear in mind the experience of 2018-19 when a crude oil price induced expansion in the current account deficit through the first three quarters of the year was coincident with risk-averse portfolio outflows, warranting the use of reserves for meeting financing requirements.

I.11 The trade channel has itself become the mode of transmission of global impulses to domestic manufacturing and investment. This is evident in the close synchronisation across borders of sluggishness in industrial production and of the 'reluctance to invest'. In India, the deceleration in industrial output and its main component – manufacturing – to below 4 per cent during 2012-19 has larger consequences in terms of employment and income generation in both rural and urban areas. While the persisting weakness in capital goods production has evoked concerns about the investment slowdown, a source of worry is the subdued performance of consumer non-durables as well. In coincident movements, sales of leading consumer goods companies have slumped, and volume growth of FMCG products has fallen to single digit rates. Clearly, rural demand has been sapped by weaker harvests in 2018-19 relative to preceding years, and depressed crop prices. This has brought forward concerns about consumption joining investment in the overall slowdown, which is worrisome as consumption accounts for 57 per cent of GDP. This challenge naturally ascends the hierarchy of policy priorities.

I.12 Although consumption is the bedrock of domestic demand in India, it is investment that provides the turning points in the growth trajectory – phases of sustained high growth in the economy are usually triggered by investment upturns and *vice versa*. The investment rate – measured by the ratio of gross capital formation to GDP – had fallen to 32.3 per cent in 2017-18. It was staging a tenuous recovery from the second half of 2017-18 when in a span of barely 12 months, it is losing that momentum. Survey-based measures are reporting higher than trend levels of capacity utilisation, typically a trigger for investment in new capacity addition. Currently, however, the capex cycle remains muted – firms are preferring to intensely utilise existing capacity to meet demand rather than expand it. The downslide in sales growth of manufacturing companies is impacting sentiments. What ails the animal spirits? At the core is the issue of domestic demand. And what should be the policy focus? Continuing focus on improving ease of doing business; reforms in factors of production, *viz.*, land and labour; capitalising on opportunities opened up by the heightened trade tensions (as alluded to earlier in para I.9); and faster implementation of capital expenditures by public authorities, and similar other measures have the potential to inject growth impulses into the economy.

I.13 In the farm sector, excess supply conditions relative to demand, brought about by successive record harvests during 2016-17 and 2017-18, has confronted policy authorities with the *deja vu* of surplus food management - large buffer stocks; less viable opportunities for international trade in view of excess supply conditions in agricultural products worldwide; structurally low food prices in India; and low farm incomes, all in a self-reinforcing spiral. At the core is the fact that 44 per cent of the total labour force is absorbed by the agriculture sector which generates only about 17 per cent of gross value added with an annual average growth of about 3.1 per cent (2011-12 to 2017-18).

I.14 Enhancing the income levels of farmers while sustaining the benefits of low food inflation for price stability emerged as a formidable challenge during 2018-19. Effective income transfers under the PM-KISAN scheme at the central government level and under a variety of schemes at the sub-national level have emerged as the preferred policy response, alongside the usual supports in the form of MSPs, rural employment programmes, supply side infrastructure such as irrigation, availability of inputs, and interlinking APMCs through e-NAM. The time has come to rethink the whole approach to the farm sector and the quality of policy interventions. The amendment of APMC rules by states remains far from complete, hindering agricultural marketing reforms that could enable direct purchase of agricultural produce from farmers by bulk buyers, retailers and exporters. This would help farmers get assured prices and market access. If accomplished, this would be a game changing reform in agricultural marketing which can unleash fresh investment across the value chain. Development of the food processing industry can push up demand and reduce losses associated with wastage. While the number of cold storages has increased over time, India faces an acute shortage of aggregation points at the back-end where agricultural produce can be stored, packaged by grade, pre-cooled and despatched to final destinations. Investment in cold supply chain network holds the key to the future of seamless delivery of fresh products. Supply chain networks can be fortified by investing in rural roads and transportation infrastructure, the goal being to fetch higher prices for farmers in markets that are integrated and free of localised frictions[1].

I.15 Turning to the financial sector, steadfastly pursued recognition, repair and resolution resulted in gross non-performing assets (GNPA) ratio of the banking system declining to 9.1 per cent as at end-March 2019 from 11.2 per cent in the previous year. Fresh slippages declined and the system-level provision coverage ratio jumped to 60.9 per cent, after hovering around 50 per cent until recently. Capital buffers have been strengthened by recapitalisation of the order of ₹2.7 trillion, including the budgetary allocations for 2019-20. The abatement of stress has rekindled bank credit flows, which are getting broad-based.

I.16 After initial teething difficulties, the insolvency and bankruptcy code is proving to be a game changer: recoveries have gradually improved and as a result, deadlocks in the potential path of the investment cycle are easing. New norms for resolution of stressed assets framed in June 2019 by the Reserve Bank provide incentives for early resolution, with discretion to lenders on resolution processes. The objective is to ring-fence future build-ups of NPA stress and protect the banking sector. The Large Exposure Framework was revised in order to capture exposures and concentration risks more accurately and to align the framework with the international best practices. The minimum leverage ratio has been revised for domestic systemically important banks and other banks for greater harmonisation with Basel III standards.

I.17 While the mounting overhang of impaired assets inhibited lending by the banking system, non-banking financial companies (NBFCs) stepped in to intermediate resources to various sectors of the economy. As the events of 2018-19 showed, there was irrational exuberance and considerable overleveraging, with asset-liability mismatches. Even though NBFCs constitute around 12 per cent of the total assets of banking and non-banking space, the emergence of stress following isolated but large credit events and a wider perception of liquidity shortages revealed the degree of interconnectedness in the financial system and the systemic ramifications. The ongoing strengthening of the liquidity and regulatory framework for NBFCs will be informed by this experience, especially in efforts to remove regulatory arbitrage.

[1] The Agricultural Produce Market Regulation Act authorised the states governments to set up and regulate marketing practices in wholesale markets. Over time, an increased number of middlemen formed a virtual barrier between the farmer and the consumer. The licensing of commission agents in the state regulated markets led to the monopoly of the licensed traders acting as a major entry barrier for new entrepreneurs. Consequently, the inter-ministerial task force on agricultural marketing reforms (2002) recommended the Agriculture Produce Marketing Committee (APMC) Act be amended to allow for direct marketing and the establishment of agricultural markets by the private and cooperative sector to provide more efficient marketing and creating an environment conducive to private investment. In response, the Union Ministry of Agriculture proposed a model act on agricultural marketing in consultation with state governments for adoption by the states. A total of 19 states have amended their APMC rules to effect direct purchase of agricultural produce from farmers by bulk buyer, retailer and exporter. States like Odisha, Nagaland, Sikkim, Maharashtra, Jharkhand and Uttarakhand have established private market yards/private markets. Most of these states have also granted direct marketing license to commodity exchanges registered under the commodity market regulator - the Forward Markets Commission to promote e-trading in agricultural produce. Proper implementation of amended APMC Act will allow the businesses get in touch with farmer producer organisations and self-help groups to procure farm products directly from them. This would help farmers to get assured prices and market access and create backward linkages as well as assurance of quality control for the corporates.

I.18 Significant progress was achieved during the year in promoting the usage of electronic modes of payments on the path towards a less cash economy. During the financial year 2018-19, the retail electronic payment transactions increased by 59 per cent to 23.3 billion from 14.6 billion in the previous year, resulting in an increase in the share of electronic transactions in the total volume of retail payments to 95.4 per cent during the year from 92.6 per cent in the previous year. FinTech and digitalisation emerged as new growth drivers. The policy challenge, though, is to balance the expansion of the digital economy with the minimisation of risks associated with data and technology misuse so that public confidence and trust is sustained, and the efficiency and soundness of the payment and settlement system is ensured. The comprehensive exercise to evaluate India's payment systems, which was reflected in the Report on Benchmarking India's Payment Systems (June 2019), shows India's leading/strong position *vis-à-vis* peer countries in terms of several parameters pertaining to digital transactions, technology infrastructure, and payment and settlement laws and regulations. Yet, as the experience during the year gone by has demonstrated, these are areas in which regulators have to constantly innovate and adapt to keep pace with the advances taking place in retail payment and settlement processes and choice of payment instruments. Although considerable progress has been made, a vast potential exists.

I.19 Against the backdrop of these developments, it is apposite to circle back to the question posed earlier in this chapter. A decomposition of various seasonally adjusted indicators of economic activity, aggregate and sectoral, into trend and cyclical components suggests that the recent deceleration could be in the nature of a soft patch mutating into a cyclical downswing, rather than a deep structural slowdown. Nonetheless, there are still structural issues in land, labour, agricultural marketing and the like, which need to be addressed. The disaggregated analysis confirms that a broad-based cyclical downturn is underway in several sectors – manufacturing; trade, hotels, transport, communication and broadcasting; construction; and agriculture. It is important to note, however, that trend growth has witnessed slight moderation since 2016-17, contributed mainly by the services sector, especially trade, hotels, transport, communication and broadcasting, and financial, real estate and professional services. Issues and challenges in these sectors need to be addressed for achieving broad-based upturn.

I.20 These stylised facts and empirical findings conditioned the setting of monetary and fiscal policies during 2018-19. They warrant a careful evaluation, at least from the point of view of ascertaining the headroom available for counter-cyclical policy responses, if the slowdown gets prolonged.

I.21 Beginning with fiscal policy, the central government's gross fiscal deficit is broadly in line with the budget target of 2018-19 despite shortfalls in collections under GST and other indirect taxes, and also in income tax, which pulled down overall tax buoyancy. On the expenditure front, the improvement in 2015-16 and 2016-17 in the quality of expenditure, measured by the ratio of revenue expenditure to capital expenditure could not be sustained in 2017-18 and 2018-19. Furthermore, a primary surplus (gross fiscal deficit *minus* interest payments) has not been achieved since 2007-08.

I.22 For States, the actual fiscal outcome for 2018-19 may continue to be influenced by farm loan waivers, implementation of the 7th Pay Commission recommendations and financing of income support schemes. Consequently, the space available for delivering a fiscal stimulus to the economy, if warranted, is constrained. Nonetheless, a modest fiscal stimulus was delivered on the back of the implementation of House Rent Allowance (HRA) and staggered arrear payments relating to the 7^{th} Pay Commission awards by the centre and few states. Excluding government final consumption expenditure (GFCE), real GDP growth would have been 0.8 percentage points less in 2017-18 and by 0.3 percentage points in 2018-19.

I.23 The conduct of monetary policy had to be two-sided to contend with opposite shifts in evolving inflation and growth dynamics. During the first half of 2018-19, monetary policy was tightened in response to rising inflationary pressures from higher international crude oil prices, volatility in financial markets and firm underlying inflation. A cumulative increase in the policy rate by 50 basis points (bps) was backed up by a change in the policy stance from neutral to calibrated tightening in October 2018. In the following months, however, macroeconomic and financial conditions altered dramatically. Inflation moderated with the softening of global crude oil prices and food prices sank into deflation. Consumer price inflation averaged 3.4 per cent in 2018-19, remaining below the target of 4 per cent for the second financial year in succession under the period of reference of the current monetary policy committee (MPC). Although inflation risks ebbed, domestic activity lost pace amidst a deteriorating global economic outlook. Accordingly, the policy repo rate was cut in February 2019 and the stance of monetary policy was changed to neutral. As the next section will elaborate, this has been followed up with further accommodation and liquidity operations to keep the system flush with liquidity.

I.24 Through 2018-19, the Reserve Bank actively managed liquidity with a variety of instruments, including repo/reverse repo of various maturities, outright open market operations (OMOs) and foreign exchange swaps. Banks' deposit and lending rates had moved up in response to the 50 bps increase in the policy rate during June-August 2018. Transmission was, however, uneven across sectors, with the maximum pass-through recorded in the weighted average lending rate (WALR) on fresh rupee loans, which increased by 57 bps during June 2018-January 2019. In the wake of the February 2019 monetary policy action, reinforced by those in April and June this year, interest rates in the banking system and in financial markets have modestly softened, as will be discussed in the following section.

Prospects for 2019-20

I.25 The macroeconomic environment remains unsettled and financial markets are experiencing considerable flux as the financial year 2019-20 progresses. Global economic activity appeared to rebound in January-March 2019 especially in advanced economies as monetary stances were eased in response to the slowdown. Crude oil prices remained soft and financial market recouped some lost ground. In the ensuing months, however, these expectations have been belied by incoming data. Purchasing managers indices (PMI) have moderated, even pointing to contraction in some large economies. Risk appetite has diminished and the universe of negative yielding bonds has expanded in advanced economies. Several downside risks seem to be materialising in the form of escalation of trade tensions, geopolitical strife and renewed financial volatility in EMEs as portfolio flows have shown signs of weakening. Financial markets have remained edgy and volatile amidst these uncertainties, which are being reflected in repeated downgrades of forecasts of global growth. Notably, the IMF expects global growth to slow down to 3.2 per cent in 2019 from 3.6 per cent in the previous year, its fourth successive downward revision since October 2018. Central banks are gearing up to become increasingly accommodative, with reductions in policy rates. This has stoked apprehensions that the global economy may be weakening more than what the headline numbers suggest.

I.26 Turning to India, the MPC projected real GDP growth for 2019-20 at 6.9 per cent in its August 2019 meeting, with risks somewhat tilted to the downside. Effectively, the MPC marked down its projection by 50 basis points since its first projection of real GDP growth for 2019-20 was placed in the public domain in February 2019. It is useful to review how recent data arrivals stack up against this baseline forecast.

I.27 Starting with the production sectors, the south-west monsoon which impacts the performance of agriculture (14.4 per cent of overall economic activity), made landfall a week late on June 8 and was stalled by cyclone *Vayu*. The south-west monsoon gained pace since mid-July and as on August 19, 2019, the country-wide rainfall was 2 per cent above the long period average (LPA). Spatially, rainfall was above LPA in Central India and South Peninsula while it was below LPA in other two meteorological regions *viz.*, North West India (2 per cent), and East and North East India (14 per cent). Despite some catch-up in the last few weeks, *kharif* sowing was lower by 4.2 per cent on August 16, 2019 than a year ago. Buffer stock of cereals were 1.9 times above the norm on August 1, 2019, but for other crops, supply-demand imbalances may warrant imports if food prices are to remain contained. On July 4, hikes in MSPs for 2019 *kharif* crops were announced in the range of 1.1 - 9.2 per cent.

I.28 In pursuance of the objective of doubling farmer incomes, the Union Budget has outlined a strategy of forming new Farmer Producer Organisations (FPO), expansion of benefits of e-NAM to larger number of farmers and introduction of Zero Budget Farming. As regards the allied activities sector, the Budget proposes the *Pradhan Mantri Matsya Sampada Yojana* (PMMSY) to establish a robust fisheries management framework. Apart from income support measures, the Budget envisages an integrated approach towards farming, including rural infrastructure, irrigation and marketing.

I.29 The index of industrial production decelerated in April-June, pulled down by manufacturing and mining. On the other hand, strong growth in electricity generation propelled by rising demand mitigated the slowdown. In terms of uses, capital goods production remained sluggish, awaiting a turnaround in the investment cycle. The slowing down of infrastructure goods output on account of cement products could be pointing to a soft patch in construction activity: steel consumption, another indicator for the construction sector, sustained its momentum through Q1:2019-20. A recent positive development was the acceleration in consumer non-durables by 7.3 per cent during April-June, 2019, *albeit* heavily reliant on sunflower oil production and anti-malarial drugs. Consumer durables production, on the other hand, remained weak and contracted in Q1: 2019-20, with a slump in auto (including two-wheelers) and white goods sales. The output of eight core industries moderated in June 2019 largely on account of petroleum products which were affected by temporary maintenance shutdowns in major refineries. After remaining muted during Q1:2019-20, the purchasing managers index (PMI) for manufacturing expanded in July 2019 driven by acceleration in output, new domestic orders and employment.

I.30 As regards services sector activity, signals from coincident indicators for Q1:2019-20 were mixed. In the transport sub-sector, commercial vehicle sales contracted by 9.5 per cent in Q1:2019-20 continuing through July 2019, partly due to unfavourable base effects. Sales of passenger vehicles contracted by 18.4 per cent in Q1:2019-20, reflecting flagging urban demand. Growth of cargo handled at major ports remained subdued in Q1:2019-20 at 1.5 per cent, essentially mirroring the downturn in exports and imports in response to the slowdown in world trade. While domestic and international air passenger and cargo traffic contracted in April-May 2019, this was mainly on account of the drag from the closure of the services of a major domestic airline. In June, however, both domestic and international air passenger traffic recovered and posted growth rates of 4.6 per cent and 2.7 per cent, respectively, as the vacation season picked up. In the hospitality sub-sector, foreign tourist arrivals in April-June 2019 increased by 3.3 per cent, up from 1.2 per cent a year ago. In the communications sub-sector, the base of telephone subscribers continued to expand, and robust growth in broadband services was sustained in April-May 2019. Financial services maintained the recent acceleration in growth, with coincident indicators - bank credit and aggregate deposits of SCBs - rising on a y-o-y basis by 12.2 per cent and 10.1 per cent, respectively, as on August 2, 2019. Life insurance first year premium during April-June 2019 also accelerated to register a vigorous y-o-y growth of 65.1 per cent, while non-life gross direct premium also maintained momentum, growing at 9.8 per cent during Q1:2019-20 over Q1:2018-19.

I.31 Turning to indicators of aggregate demand, private final consumption expenditure (PFCE), appears to have moderated in Q1:2019-20 across both urban and rural constituents. The delayed onset and skewed distribution of the south-west monsoon rainfall may pose downside risks to crop production and to rural consumption demand. This is already evident in a sharp contraction in sales of motorcycles and tractors by 8.8 per cent and 14.1 per cent, respectively, during Q1:2019-20. The recent acceleration in the production of consumer non-durables, if sustained, could provide a buffer. As regards urban demand, both passenger car sales and domestic air passenger traffic registered contraction in recent months. Production of consumer durables contracted in June 2019 (-5.5 per cent) due to a fall in output of TV sets, hand tools, passenger vehicles, electrical apparatus and two-wheelers.

I.32 In Q1:2019-20, government final consumption expenditure (GFCE) as reflected in revenue expenditure by Union government less interest payments and subsidies was lower at 1.7 per cent compared to 14.5 per cent a year ago. The slowdown is sharper in the case of state governments.

I.33 Indicators of gross fixed capital formation (GFCF) registered either moderation or contraction in Q1:2019-20. Investment in dwellings, other buildings and structures proxied by construction gross value added (GVA) moderated as the growth in cement production fell to 1.2 per cent in April-June, 2019 from 16.3 per cent a year ago. Steel consumption has also slowed down to 6.6 per cent in Q1:2019-20 from 8.8 per cent a year ago. Production of capital goods contracted at about 2.4 per cent in April-June 2019 (8.6 per cent a year ago) and imports of capital goods registered a contraction in Q1:2019-20.

I.34 Several measures have been adopted to boost infrastructure in order to revive demand. They include a comprehensive restructuring of the National Highway Programme to ensure that a national highway grid of desirable length and capacity is created; public-private partnership (PPP) for developing railway infrastructure like development and completion of tracks, rolling stock manufacturing and delivery of passenger freight services; and making India a hub for aircraft financing, leasing, and maintenance, repair and overhaul (MRO). The 'scheme of fund for upgradation and regeneration of traditional industries' (SFURTI) is expected to give impetus to employment generation by emphasising traditional labour intensive industries. Streamlining of labour regulations for ease of doing business in the economy is also underway.

I.35 The inflation outlook remains benign and the recent catch-up in the progress of monsoon and *kharif* sowing has eased earlier concerns from the delayed onset of monsoon. Food inflation has picked up in the typical summer hardening of vegetables and fruits prices. Prices of pulses and protein-rich items have also risen in the early months of 2019-20 although it remains to be seen as to how long these pressures are likely to last. In the fuel and light group, a recovery in LPG prices in line with international prices imparted some upside pressures in Q1:2019-20, which has since eased in July. In contrast, inflation excluding food and fuel eased significantly and in a broad-based manner reflecting the weakening of demand, *albeit* with some recovery in July. Headline CPI inflation was 3.1 per cent in Q1 and in July 2019. In the third bi-monthly monetary policy statement of August 2019, inflation was projected at 3.1 per cent for Q2:2019-20 and 3.5-3.7 per cent for H2:2019-20, with risks evenly balanced. CPI inflation for Q1:2020-21 was projected at 3.6 per cent.

I.36 Domestic financial markets have been volatile against this backdrop. Equity markets registered losses up to August 20, 2019. In the recent months, the BSE Sensex has traded below its all-time peak on June 3, 2019. After trade tensions eased in May, the Indian rupee had started reflecting an appreciating bias, helped by softness in global crude oil prices. However, rupee came under pressure in August 2019 after China allowed its currency to depreciate to a decade low level. Money and G-Sec markets have remained broadly stable during the first quarter of 2019-20, with surplus liquidity conditions since June 2019 following sharp drawdown in government cash balances and decline in currency in circulation helping to moderate interest rates in both segments. Nonetheless, global spillovers may portend downside risks going forward.

I.37 India's external sector outlook is vulnerable to downside risks from global developments, especially the possibility of the global downturn deepening, the uncertainty surrounding international crude oil prices and the volatility of capital flows. During the first four months of 2019-20, India's exports as well as imports have dipped into contraction. Net FDI inflows were robust at US$ 14.5 billion in Q1:2019-20 as compared with US$ 9.6 billion a year ago. Foreign portfolio investment recorded net inflow of US$ 2.4 billion in 2019-20 so far (up to August 16) as against net outflow of US$ 8.2 billion in the corresponding period of 2018-19. India's foreign exchange reserves at US$ 430.5 billion as on August 16, 2019 increased by US$ 17.6 billion since end-March 2019.

I.38 Against this backdrop, and particularly taking note of the slowdown in investment activity and headline inflation trajectory remaining below target, the MPC reduced the policy rate by 85 bps during April-August 2019 (in addition to the 25 bps reduction in February 2019), along with a change in the stance from neutral to accommodative in June 2019. The conduct of monetary policy would continue to be guided by the objective of achieving the medium-term target for CPI inflation of 4 per cent within a tolerance band of +/- 2 per cent, while supporting growth.

I.39 The Union Budget 2019-20 has projected the gross fiscal deficit at 3.3 per cent in 2019-20 (3.4 per cent in 2018-19). During April-June 2019-20, the gross fiscal deficit at 61 per cent of Budget Estimates (BE) was lower than a year ago. On the receipts side, gross tax collections were lower under indirect taxes though direct taxes remained buoyant, while total expenditure was marginally higher. With regard to the fiscal position of states in 2019-20, budget estimates envisage revenue neutrality and a lower fiscal deficit, though the quality of expenditure is budgeted to deteriorate, with lower growth in capital spending *vis-à-vis* revenue heads. Accordingly, the combined gross fiscal deficit of the centre and states is budgeted at 5.7 per cent in 2019-20, down from 5.9 per cent in the revised estimates for 2018-19[2]. Going forward, fiscal readjustments to boost growth without accumulating public debt warrant improvement in spending for infrastructure and the social sector, given the high capital expenditure multiplier. On the revenue side, tapping the full potential of GST and digitisation, coupled with renewed efforts towards improving ease of compliance may help open up room for reduction of tax rates where possible, while maintaining revenue neutrality.

I.40 During 2019-20, the banking sector is poised to build upon the consolidation achieved in the year gone by. Stress tests for credit risk conducted by the Reserve Bank[3] indicate that under the baseline scenario, SCBs' gross NPA ratio may decline further to 9.0 per cent by end-March 2020 (9.1 per cent as at end-March 2019). This would release headroom for provisioning efforts, a turnaround in financial performance and for energising and broadening the flow of credit to the productive sectors of the economy. Concomitantly, several regulatory and supervisory measures are underway to strengthen the soundness of the banking system. The Reserve Bank will issue draft guidelines on (a) corporate governance in banks; and (b) revised standardised approach for calculating minimum capital requirement for operational risk in order to align the current regulatory framework with global best practices. Further, draft revised guidelines will be issued on capital charge for credit risk as well as on securitisation. The regulatory framework for Interest Rate Risk in Banking Book will be finalised. These measures will work in conjunction with the revised prudential framework for resolution of stressed assets framed in June 2019 and the large exposures framework, effective April 1, 2019 to incentivise a prudent credit culture.

I.41 A Discussion Paper followed by final guidelines will be issued for the purpose of transition to a non-operative financial holding company structure for banks. In the emerging FinTech landscape, a Regulatory Sandbox framework will be operationalised. Subject to legislative amendments, the Reserve Bank will align Indian Accounting Standards for banks and AIFIs with international norms to converge with International Financial Reporting Standards (IFRS). A Discussion Paper will be released on implementation of macro-prudential policies for banks for addressing incipient credit risks in the system. Data from banks/Central Repository of Information on Large Credits (CRILC) will be examined for re-assessing the implementation of the framework for credit supply to large borrowers through market mechanism. Digital on-boarding of bank customers would be facilitated, enabling video-based KYC for individuals within the framework of the extant Prevention of Money Laundering (PML) Rules.

[2] Data pertains to 27 states.
[3] Financial Stability Report, June 2019.

I.42 The Reserve Bank has constituted a Committee on the development of housing finance securitisation market (Chairman: Dr. Harsh Vardhan) and a Task Force on the development of secondary market for corporate loans (Chairman: Shri T. N. Manoharan) for the development and deepening of securitisation and corporate bond markets. Towards fine tuning the supervisory process to adequately capture the health of the banks in cooperative sector, an improved rating framework is being introduced from the ensuing inspection cycle. Occurrences of frauds in the UCB sector are proposed to be captured through reporting to a Centralised Fraud Registry which can be accessed by all UCBs.

I.43 The Reserve Bank proposes to strengthen the asset-liability management (ALM) framework for NBFCs. In pursuance of the announcement made in the Union Budget 2019-20, the Government of India has rolled out a scheme offering to provide a one-time partial credit guarantee for first loss up to 10 per cent to public sector banks (PSBs) for purchase of high-rated pooled assets amounting to ₹1 trillion from financially sound NBFCs/Housing Finance Companies (HFCs). This policy measure will support NBFCs' access to funding from the PSBs. On its part, the Reserve Bank will provide required liquidity backstop to the banks against their excess G-sec holdings. The Reserve Bank has also front-loaded increase in the facility to avail liquidity for liquidity coverage ratio (FALLCR) of 0.5 per cent each of banks' NDTL scheduled for August 1 and December 1, 2019, respectively, for incremental credit given to NBFCs and HFCs, over and above credit outstanding to NBFCs and HFCs as on July 5, 2019. Dispensing with the Debenture Redemption Reserve (DRR) will also facilitate the issuance of bonds by NBFCs.

I.44 With regard to payment and settlement, the Reserve Bank proposes to empower every Indian with a bouquet of safe, secure, convenient, quick and affordable e-payment options as envisaged in the Payment System Vision 2019-21. The Reserve Bank, on its part, has abolished charges levied by it for transactions processed in the RTGS and NEFT systems. It is reviewing actions in respect of the entire gamut of ATM charges and fees. The recommendations of the High-Level Committee on Deepening of Digital Payments (Chairman: Mr. Nandan Nilekani) aim to strengthen safety and security of digital payments and to evolve a medium-term strategy for expanding digital payments. Efforts are also underway for strengthening credit information infrastructure by providing a 360-degree view of all borrowers on near real time basis, facilitating quick and efficient credit decision-making by the credit institutions.

I.45 With the implementation of the Centralised Information Management System (CIMS) during the year, a state-of-the-art big-data based information management ecosystem for processing high volume structured and unstructured data with machine learning (ML) and artificial intelligence (AI) will become available. The CIMS will provide a Data Science Lab platform, a Granular Data Access Lab (GDAL), a centralised analytical layer and automation of data flow from the regulated entities.

I.46 Reviving consumption demand and private investment has assumed the highest priority in 2019-20. This may involve strengthening the banking and non-banking sectors, a big push for spending on infrastructure and implementation of much needed structural reforms in the areas of labour laws, taxation, and other legal reforms, which will also enhance ease of doing business in pursuit of fulfilling the vision of India becoming a US$ 5 trillion economy by 2024-25.

II ECONOMIC REVIEW

Economic activity moderated during the financial year (FY) 2018-19 dragged down by subdued global demand and also some slack in government consumption expenditure. Inflation eased further to 3.4 per cent and undershot the target of 4 per cent for the second successive year, led by a sharp decline in food inflation. Monetary indicators such as currency, deposits and credit moved further towards their pre-demonetisation trend, reflecting underlying macroeconomic and financial developments. Financial markets exhibited resilience except sporadic volatility as evident from the buoyant equity market, two-way movement in INR and call money rate remained aligned to the policy repo rate albeit with downward bias. Public finances recorded modest deviations from budgetary targets of gross fiscal deficit across the general government. On the external front, net capital flows remained moderate relative to current account deficit, which led to depletion of foreign exchange reserves during the year.

II.1 THE REAL ECONOMY

II.1.1 Over the year gone by *i.e.,* April 2018 to March 2019, macroeconomic and financial conditions underwent pronounced shifts that were largely unanticipated. Global growth, which had accelerated in a broad cyclical upswing through calendar year 2017 right up to the early part of 2018, began to shed momentum thereafter. By the second half of 2018, the weakening of the global expansion had spread across geographies, encircling advanced economies (AEs) and emerging market economies (EMEs) alike in its embrace.

II.1.2 Several forces were at work, often in conjunction – the normalisation of monetary policy in the United States (US); escalation of trade tensions; volatile crude prices; uncertainty looming over Brexit; disruption in the auto sector in Germany due to stricter emission norms; the slowing down of the Chinese economy; macroeconomic crisis in some large EMEs; and the tightening of financial conditions. This cocktail of global spillovers stirred up turbulence in financial markets as risk on sentiment herded investors to safe havens, shunning EMEs as an asset class. In the event, these economies were confronted with capital outflows, currency depreciations and asset price volatility to which India too was not immune. In the second half of 2018-19 and especially in the early months of 2019, some global risks ebbed, with greater accommodation in monetary policies across the world, the easing of macroeconomic stress in the crisis-affected EMEs and some rekindling of investors' risk appetite. Yet risks to global growth and its near-term outlook remain tilted to the downside.

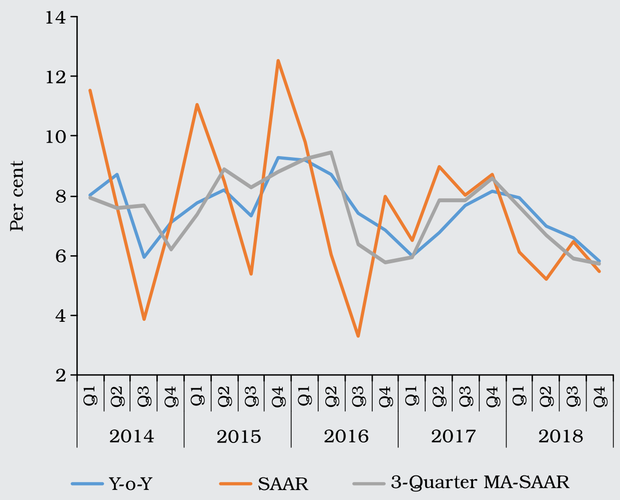
II.1.3 In this environment, real GDP growth in India which had weakened in 2017-18 after peaking in the year before, slid down to a five-year low in 2018-19 (Appendix Table 1). The loss of speed became evident from Q2 as some drivers of growth – notably investment – began to fade, *albeit* cushioned by still resilient consumption spending, both private and government. Through the second half of the year, high frequency indicators have flashed slowing sales growth among manufacturing and non-IT services sector corporations, with evidence of private consumption losing pace, especially in the fast-moving consumer goods (FMCG) segment. Financial conditions eased, but bank credit is yet to become broad-based and flow of resources from non-bank financial intermediaries has not yet gained its earlier traction. Abstracting from a brief surge in March 2019, export growth has decelerated and non-oil non-gold imports are in contraction mode, indicative of the underlying weakness of domestic demand. On the supply side, activity in manufacturing and in some categories of services, such as trade, transportation, communication and broadcasting moderated in the second half of the year and agricultural production remained modest, but in relation to the record levels achieved in the preceding two years.

II.1.4 Overall the outlook appears clouded as the Indian economy begins its course through 2019-20. Against this backdrop, component-wise analysis of aggregate demand follows this Sub-section. Developments in aggregate supply conditions in terms of the performance of agriculture, value added in the industrial sector, and the resilient performance of services is sketched out in Sub-section 3, *i.e.,* aggregate supply. An analysis of job creation in the economy based on high frequency indicators as also major policy initiatives in the area are covered in the last Sub-section.

2. Aggregate Demand

II.1.5 The May 2019 release of the National Statistical Office (NSO) confirmed that aggregate demand, measured by year-on-year (y-o-y) growth of GDP at 6.8 per cent in 2018-19, weakened 0.4 percentage points in relation to the preceding year, and 0.3 percentage points below its decennial trend rate of 7.1 per cent. In fact, the GDP growth of 6.2 per cent in H2:2018-19 was the lowest in five years (Chart II.1.1). The slackening of demand in the economy was also evident in the opening of the negative output gap (*i.e.*, deviation of actual output from its potential level) in Q3 and Q4 of 2018-19.

Chart II.1.1: GDP Growth: Y-o-Y and 3-Quarter MA-SAAR



MA-SAAR: Moving average seasonally adjusted annualised growth rate.
Source: NSO and RBI staff calculations.

II.1.6 Over the period 2003-19, the performance of the economy reveals several interesting attributes (Table II.1.1). First, average GDP growth during 2014-19 has been robust by historical standards,

Table II.1.1: Underlying Drivers of Growth

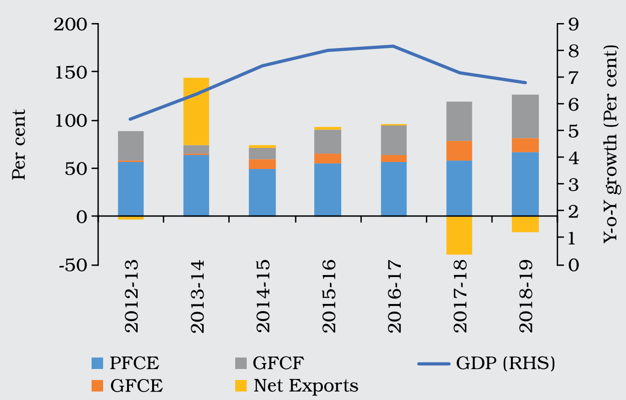
Components	Growth (per cent)					Contribution to Growth (per cent)				
	2003-08	2008-09	2009-11	2011-14	2014-19	2003-08	2008-09	2009-11	2011-14	2014-19
1	2	3	4	5	6	7	8	9	10	11
I. Total Consumption Expenditure	6.1	5.5	6.5	6.1	7.8	53.7	118.2	53.5	71.5	69.8
Private	6.2	4.5	5.9	6.7	7.6	46.3	81.9	40.4	66.2	57.5
Government	5.8	11.4	9.7	2.6	9.0	7.4	36.3	13.1	5.3	12.3
II. Gross Capital Formation	15.3	-2.6	14.5	2.0	7.1	58.5	-31.4	64.1	16.6	32.9
Fixed investment	12.6	3.2	9.4	6.2	7.4	43.1	32.6	35.9	37.9	31.7
Change in stocks	73.5	-51.4	56.2	-27.4	15.3	12.5	-75.4	17.9	-16.7	0.7
Valuables	27.8	26.9	45.0	-11.1	4.9	3.0	11.4	10.3	-4.6	0.6
III. Net Exports						-7.7	-72.4	-4.1	8.9	-10.5
Exports	17.8	14.8	7.3	10.0	3.7	36.1	99.0	16.2	42.3	10.9
Imports	20.0	22.4	6.9	6.1	6.5	43.8	171.4	20.3	33.4	21.4
IV. GDP	7.9	3.1	8.2	5.7	7.5	100.0	100.0	100.0	100.0	100.0

Source: NSO and RBI staff calculations.

but lower than the high growth phases of 2003-08 and 2009-11. Second, the expansion of aggregate demand in the 2014-19 phase was driven by robust consumption – both private and government – and could have buffered the economy from the transient shock of demonetisation. By contrast, burgeoning fixed investment was the driver of growth during 2003-08, and fiscal stimulus was the locomotive during 2009-11. As the stimulus wore off, growth slowed down in the next three years.

II.1.7 Compositional shifts in aggregate demand were evident during the year in terms of shares as well as weighted contributions (Chart II.1.2 and Appendix Table 2). Private final consumption expenditure (PFCE), the dominant component at 56.9 per cent of GDP, recorded a marginal increase in its share in 2018-19 in relation to a year ago, but its contribution to GDP growth in 2014-19 fell by 8.7 percentage points below its level in the preceding triennium, *i.e.*, 2011-14. The resulting slack was partly filled by government final consumption expenditure (GFCE) – its contribution to GDP growth rose by 7 percentage points in 2014-19 *vis-à-vis* 2011-14. Even though gross fixed capital formation (GFCF) – the main constituent of investment in the economy – recorded an increase for the fifth successive year in 2018-19, its contribution to growth fell by 6.2 percentage points in 2014-19 in comparison with the preceding triennium. Notably, the drag from net exports came down significantly in 2018-19 on a year-on-year basis but their contribution to aggregate demand contracted sizeably in 2014-19 as against a positive contribution of 8.9 per cent in 2011-14. The evolution of net exports is covered in detail in Section II.6 on external sector.

Chart II.1.2: Contribution to GDP Growth by Components



PFCE: Private final consumption expenditure;
GFCE: Government final consumption expenditure;
GFCF: Gross fixed capital formation; GDP: Gross domestic Product.
Note: Component-wise contributions do not add up to GDP growth as change in stocks, valuables and statistical discrepancies are not included.
Source: NSO.

Consumption

II.1.8 Consumption expenditure moderated during 2018-19. Nonetheless, its contribution to GDP increased for the second successive year. Private final consumption expenditure, the major component of aggregate demand, accelerated in the first half of the year, supported by higher disposable income on account of lower food expenses. The pick-up in activity in labour intensive sectors like construction provided additional cushion to household consumption demand. Rural demand, however, was affected by moderation in agricultural growth as reflected in tractors and two wheelers sales. Indicators of urban demand revealed a mixed picture in contrast. Air passenger traffic recorded its lowest growth in the last five years. Passenger vehicles sales were the lowest in five years on account of increase in insurance costs, volatile fuel prices, and lack of financing options due to the liquidity stress in the non-banking sector. The production of consumer non-durables slumped to its lowest level in the past three years. Going forward, public expenditure directed to rural areas through the *Pradhan Mantri Kisan Samman Nidhi* (PM-KISAN) and farm loan waivers by some states are expected to hold up rural demand. The analysis of high frequency information in the form of coincident economic indicators in the absence of concurrent GDP data helps in early assessment of economic activity as an input for policy formulation (Box II.1.1).

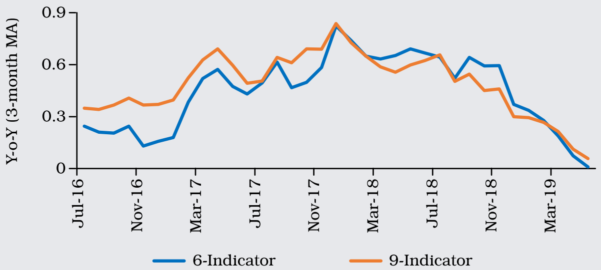
Box II.1.1
Nowcasting India's GDP Growth

Globally, central banks rely on high-frequency economic indicators for a forward-looking assessment of the state of the economy, given the lags in the availability of official statistics. A Coincident Economic Indicator for India (CEII) is constructed using the single-index dynamic factor model (Stock and Watson, 1989) based on economic indicators which correlate strongly with the dynamics of GDP growth. Two indices are considered – a 6-indicator CEII comprising the production of consumer goods, non-oil non-gold imports, auto sales, rail freight, air cargo, and government receipts, and a 9-indicator CEII, which additionally includes IIP-core, exports, and foreign tourist inflows (Chart 1).

A parsimonious autoregressive model of GDP growth augmented by CEII is used to nowcast quarterly GDP growth for the full period 2004:Q1-2019:Q1 (Table 1). The CEII emerges as statistically significant in explaining GDP growth, with the in-sample fit (adjusted R-squared) slightly higher for the 9-indicator model.

Chart 1: Movements in Coincident Economic Indicator for India

Growth in CEII: 6-Indicator and 9-Indicator



Source: RBI staff estimates and CEIC database.

However, the out-of-sample root mean squared error (RMSE) for the sample 2017:Q1-2019:Q1 is lower for the 6-indicator model.

The nowcasts based on the 6-indicator and 9-indicator models along with the actual GDP growth are plotted in Chart 2A and 2B. It is observed that the nowcasts track GDP dynamics and turning points reasonably well over the estimation sample.

In India, the first release of quarterly GDP is published approximately 7-8 weeks after the end of the reference quarter. To provide an early estimate, CEII is used to nowcast the current quarter GDP. Overall, the above findings indicate that the CEII based nowcasts help gauge the current state of the economy, thereby lending a greater degree of foresight to policy formulation.

Table 1: Nowcasting GDP Growth Using Coincident Economic Indicator for India

Dependent Variable	GDP (Y-o-Y)	
	Model 1 (6-Indicator)	Model 2 (9-Indicator)
Constant	3.05	2.81
CEII (Y-o-Y)	2.91	3.96
GDP (Y-o-Y), Lag 1	0.38	0.32
Model Diagnostics		
Adjusted R-squared	0.53	0.54
B-G Serial Correlation LM Test	0.18	0.12
Out-of-Sample RMSE	0.61	0.65

Notes:
1. All coefficient estimates are significant at 1 per cent.
2. B-G test is for serial correlation in errors up to 12 lags.
3. Out-of-Sample RMSE pertains to 2017:Q1 to 2019:Q1.

Chart 2A: Long-term Performance of Nowcasts *vis-à-vis* Actual GDP Growth

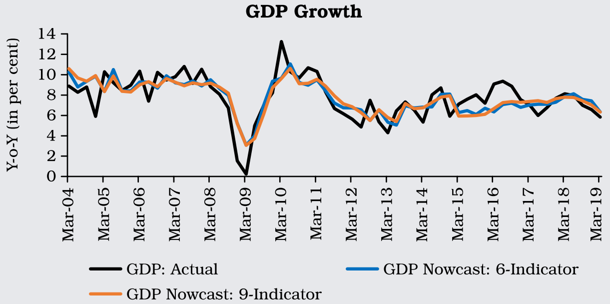
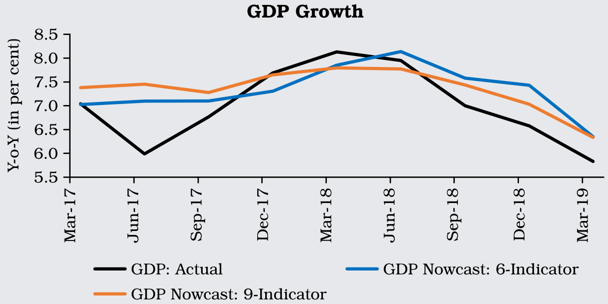


Chart 2B: Recent Performance of Nowcasts *vis-à-vis* Actual GDP Growth



Source: RBI staff estimates and CEIC database.

References:

1. Stock, J. H. and M. W. Watson (1989), 'New Indexes of Coincident and Leading Economic Indicators', *NBER Macroeconomics Annual 1989,* Vol. 4.
2. Gerlach, S. and M. S. Yiu (2004), 'A Dynamic Factor Model for Current-Quarter Estimates of Economic Activity in Hong Kong', Hong Kong Institute for Monetary Research, *Working Paper* No. 16.

Investment and Saving

II.1.9 The rate of gross domestic investment in the Indian economy, measured by the ratio of gross capital formation (GCF) to GDP at current prices had risen to a peak of 39.8 per cent in 2010-11 before a prolonged slowdown set in taking it down to 30.9 per cent in 2016-17. A modest recovery took hold in the following year. Although data on gross domestic investment are not yet available for 2018-19, movement in its constituents suggest that the uptick could not be sustained. While the ratio of real gross fixed capital formation (GFCF) to GDP increased to 32.3 per cent in 2018-19 from 31.4 per cent in 2017-18, this upswing that started in Q3:2017-18 may have been a bounce-back from the transient impact of demonetisation and uncertainties related to the implementation of the GST that lasted for five consecutive quarters. However, growth in fixed investment collapsed to a fourteen-quarter low in Q4:2018-19 as production of capital goods registered a sharp contraction and imports nosedived in a coincident manner (Box II.1.2).

Box II.1.2

Policy Uncertainty Index for India – Big Data Analysis

Uncertainty prompts consumers and producers to alter their behaviour in terms of spending, investing and hiring decisions. Unanticipated outcomes on GDP growth, employment, stock indices and corporate earnings and even statements, actions and decisions made by policymakers with respect to fiscal, monetary, structural and regulatory policies, can turn out to be sources of uncertainty for economic agents and the wider macroeconomic environment. As a result, uncertainty has emerged as a key input into the decision making framework of policymakers across the globe.

Unlike risk, which has a well-defined distribution of expected probabilities, uncertainty is unobservable. In the post-global financial crisis (GFC) period, however, the effects of uncertainty on macroeconomic and financial conditions appears to have become more pronounced and pervasive – uncertainty shocks have translated into investment slowdowns, and declines in economic activity and asset prices. These developments have imparted urgency to empirically capture and quantify the impact of uncertainty on the economy. These efforts can be broadly classified (a) volatility-based measures (Bloom, 2007); (b) dispersion in forecasts (Bachman, *et al.* 2013); (c) sentiment-based analysis using newspaper coverage frequency (Baker, *et al*. 2016); and (d) internet-based search intensity exercises (Castelnuovo and Tran 2017).

An index, following Baker, *et al*. 2016, is constructed by text mining of leading Indian business news dailies[1] to pick up the frequency of usage of keywords pertaining to 'economic' (E), 'policy' (P) and 'uncertainty' (U) or *EPU* (a news article must contain at least one word each belonging to EPU in order to be classified as signaling uncertainty), and a Google Uncertainty Index (*GUI)* following Castelnuovo and Tran 2017*,* based on internet search intensity of 70 keywords pertaining to fiscal, monetary and trade policies *via* Google Trends for the period January 2004 to June 2019. These indices reveal reasonably close co-movement with key macroeconomic variables, especially those related to production and investment.

The indices are able to capture major domestic and external events that were expected to have contributed to uncertainty in the economy (Chart 1). They also exhibit strong correlations with conventional market-based volatility and risk indicators (Chart 2), such as India VIX Index and risk premia (calculated as the spread between 5-year AAA-rated corporate bonds and 5-year G-sec yields).

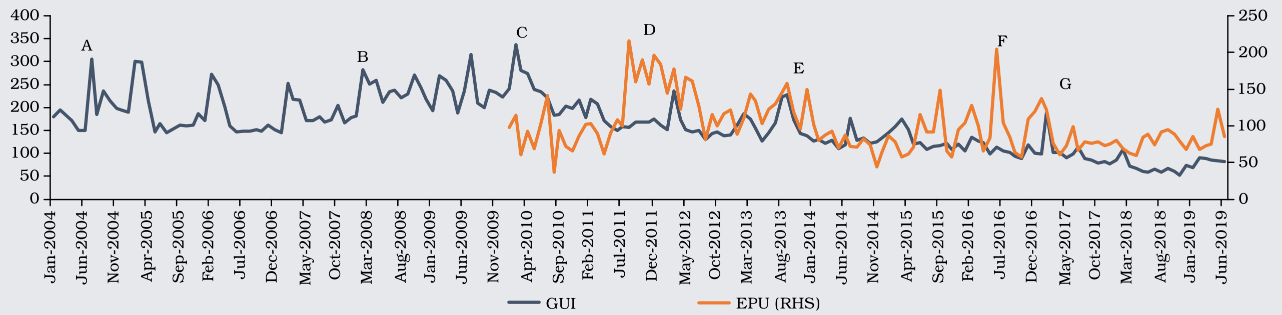
A vector autoregression (VAR) model with four variables, *i.e.,* GUI, the risk premia, real weighted-average lending rate and gross fixed capital formation (GFCF) to GDP ratio for the period 2005:Q1 to 2018:Q4, is estimated to analyse the impact of uncertainty on economic activity in India.

The results of the VAR model suggest that there is an instantaneous increase in risk premia following an uncertainty shock (Chart 3). On the other hand, a three-quarter lagged negative impact is observed in respect of GFCF. The impulse response of GFCF to lending rates turn

(Contd...)

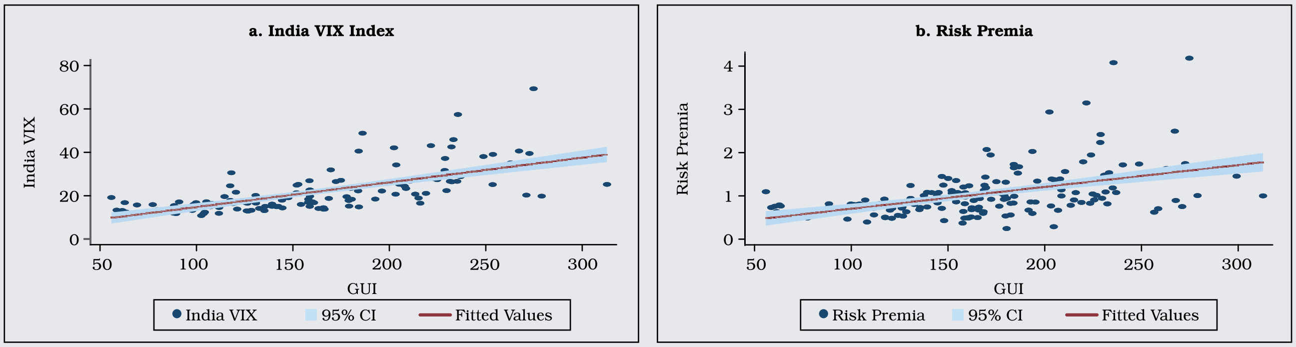
[1] For this exercise, articles published from 2010 onwards in *The Hindu Business Line, The Economic Times* and *The Financial Express*, available in *ProQuest* database, are included.

Chart 1: Uncertainty Indices for India



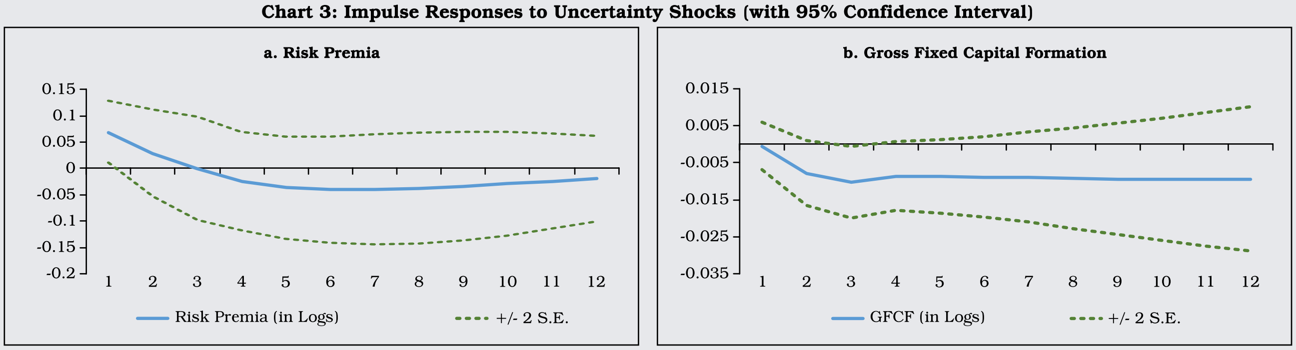
A – General Elections; B – Global Financial Crisis 2008; C – Eurozone Debt Crisis; D – Inflationary Concerns; E – Taper Tantrum; F – Brexit; G – Demonetisation Effect and Trump Administration.

Chart 2: Correlation with Volatility and Risk Indicators



CI: Confidence Interval.

Chart 3: Impulse Responses to Uncertainty Shocks (with 95% Confidence Interval)



Note: The impulse responses (solid blue line) is presented with 95% confidence intervals (dashed lines). The lag length of one is chosen using Schwarz criterion in VAR estimation.

Source: RBI staff estimates.

statistically significant from the fourth quarter onwards implying the impact of monetary policy on investments in a delayed manner, working mainly through the interest rate channel. Overall results suggest that uncertainty negatively impacts investment activity in India.

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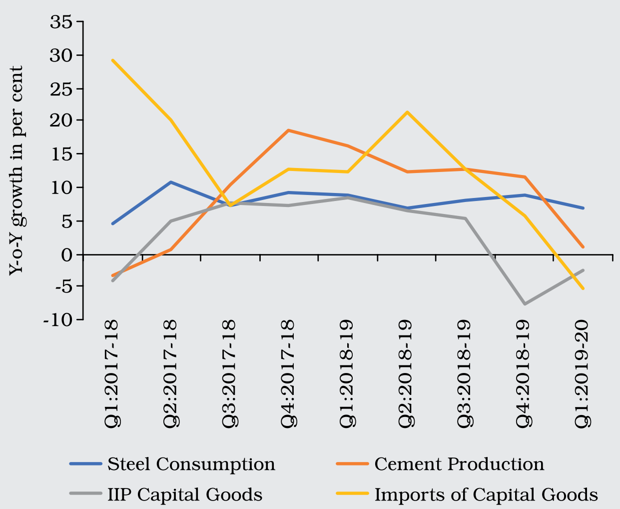
1. Bachmann, R., S. Elstner, and E. R. Sims (2013), ‘Uncertainty and Economic Activity: Evidence from Business Survey Data’, *American Economic Journal*: *Macroeconomics*, 5(2), 217-49.
2. Bloom, N. (2007), ’Uncertainty and the Dynamics of R&D’, *American Economic Review*, 97(2), 250-255.
3. Baker, S. R., N. Bloom, and S. J. Davis (2016), ’Measuring Economic Policy Uncertainty’ *The Quarterly Journal of Economics*, 131(4), 1593-1636.
4. Castelnuovo, E., and T. D. Tran (2017), ‘Google it Up! A Google Trends-based Uncertainty Index for the United States and Australia’, *Economics Letters*, 161, 149-153.

II.1.10 Among the determinants of GFCF, construction activity remained ebullient in 2018-19, driven by the government's focus on infrastructure and affordable housing, and registered its highest growth in the last seven years. This was also reflected in its proximate coincident indicators – steel consumption and cement production (Chart II.1.3). For the year as a whole, growth in cement production at 13.3 per cent was the highest in the past ten years. Steel consumption continued to grow at a robust pace of 7.6 per cent despite a slowdown in automobile production. However, private investment in machinery and equipment exhibited signs of weakness with both its proximate coincident indicators – imports and production of capital goods – registering deceleration.

II.1.11 At a disaggregated level, fixed investment in dwellings, other buildings and structures had declined by 0.3 percentage points to 15.4 per cent of GDP in 2017-18, mainly due to the household sector (Chart II.1.4). On the other hand, fixed investment in machinery and equipment led by the non-financial corporations and the household sector had increased to 12.0 per cent of GDP in 2017-18 from 11.3 per cent in 2016-17. Investment in intellectual property products (IPP) – expenditure on research and development; mineral exploration; computer software; and other intellectual property products by non-financial corporations – both public and private, had also picked up in 2017-18. Limited information that has become available for 2018-19 suggests that investment in dwellings, other buildings and structures, and IPP may register an increase while investment in machinery and equipment may exhibit a fall.

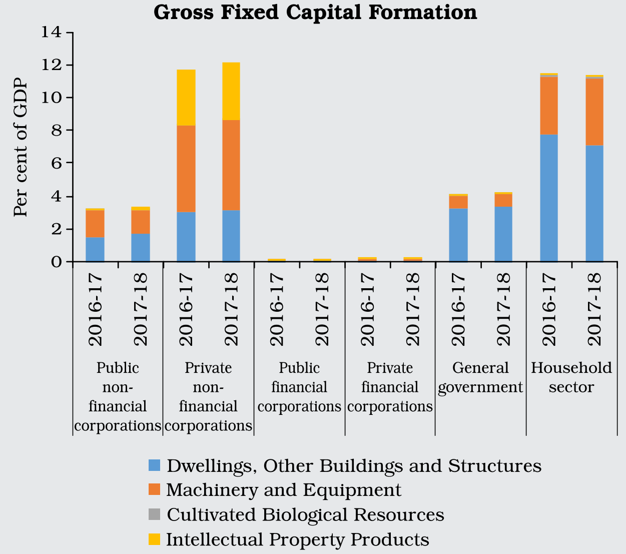
II.1.12 As per the Order Books, Inventories and Capacity Utilisation Survey (OBICUS) of the Reserve Bank, capacity utilisation in manufacturing rose through 2018-19, peaking at 76.1 per cent in Q4:2018-19. However, seasonally adjusted capacity utilisation declined by over one percentage point in Q4:2018-19. Declining sales led to an increase in inventory to sales ratio. The Industrial Outlook Survey (IOS) points to a modest improvement in demand conditions in Q2:2019-20 than in preceding quarters based on sentiments expressed on various parameters such as production, employment, exports and imports, capacity utilisation, and inventory position. However, with moderation expected in the cost of raw materials and optimistic outlook on overall financial situation, manufacturers

Chart II.1.3: Indicators of Investment Demand



Source: Joint Plant Committee, Office of Economic Adviser, NSO and DGCI&S.

Chart II.1.4: Sectoral Composition of Gross Fixed Capital Formation



Source: NSO.

are upbeat about profit margins in Q2:2019-20, despite pessimism in selling prices.

II.1.13 The rate of gross domestic saving had increased marginally to 30.1 per cent of gross national disposable income (GNDI) in 2017-18 from declines in the previous two years (Appendix Table 3A). While the saving of private non-financial corporations had increased marginally, the general government's dissaving had increased. The household financial saving – the most important source of funds – had increased by 0.3 percentage points of GNDI, though it had remained much lower than 7.3 per cent during 2011-16 (Appendix Table 3B).

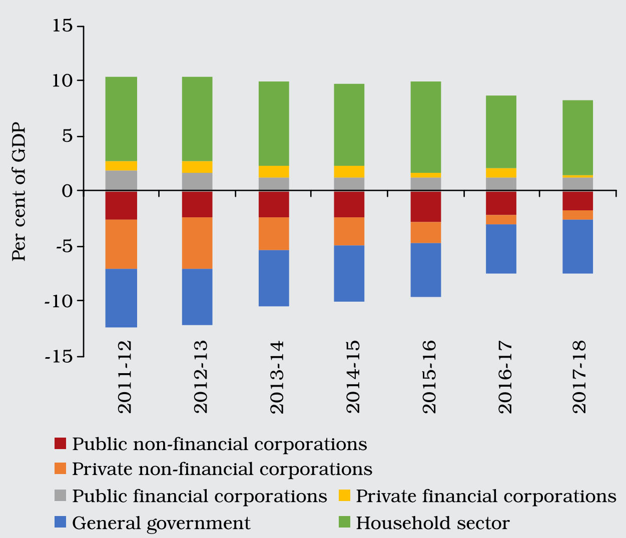
II.1.14 The saving-investment gap has come down over the years, indicating that a larger part of the requirement to fund investment is being met through domestic resources and conversely, the net inflow of resources from abroad has declined, which corresponds to the degree of openness of the economy. The household sector continues to remain the net supplier of funds to the deficit sectors, *i.e.,* non-financial corporations and general government (Chart II.1.5). In recent years, however, it is evident that resource gap of non-financial corporations, both public and private, has got significantly reduced, indicating that their investment needs are met through their internal resources. The drawdown on saving by the general government sector continues to remain at an elevated level. Developments in GFCE are addressed in Section II.5 on government finances.

3. Aggregate Supply

II.1.15 Aggregate supply, measured by gross value added (GVA) at basic prices, slowed to 6.6 per cent in 2018-19, 30 basis points (bps) lower from a year ago and 20 bps lower than its decennial rate of 6.8 per cent (Appendix Table 2). Disentangling momentum from base effects, GVA's quarter-on-quarter (q-o-q) seasonally adjusted annualised growth rate (SAAR) exhibited a turning point in Q4:2017-18 and weakened thereafter, barring a transient improvement in Q3:2018-19, notwithstanding favourable base effects in H1:2018-19 (Chart II.1.6), and underlying loss of speed appears to be a slowing down of productivity (Box II.1.3).

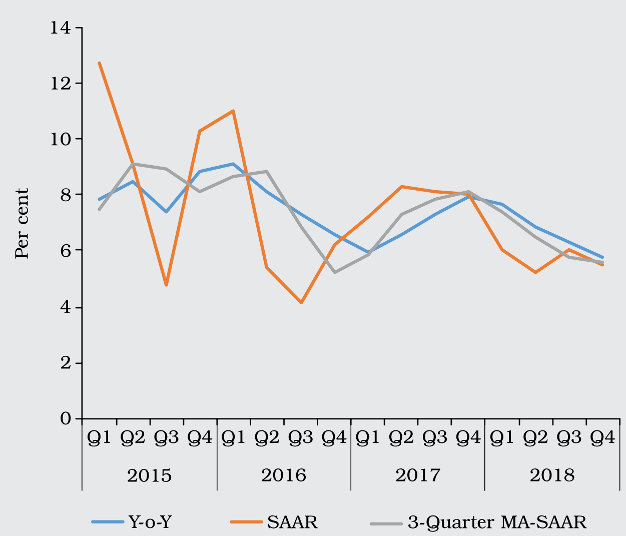
II.1.16 An analysis of the growth path of the economy over the last 16 years from the supply side reveals that growth is primarily driven by services sector which has exhibited resilience over the entire period, barring 2008-09

Chart II.1.5: Sectoral Resource Gap



Source: NSO.

Chart II.1.6: GVA Growth: Y-o-Y and 3-Quarter MA-SAAR



Source: NSO and RBI staff calculations.

Box II.1.3
Drivers of Factor Productivity in India

The global economy experienced a productivity slowdown since the global financial crisis (GFC) of 2008, with notable declines in both output per worker (labour productivity) and total factor productivity or TFP (Adler, *et al*., 2017). In India too, TFP growth decelerated from 1.8 per cent during 2003-07 to 0.8 per cent during 2008-16 (Chart 1).

Improvement in labour productivity is attributed to (a) capital deepening; (b) efficiency in the existing capital stock; (c) quality of labour supply; and (d) TFP. In a growth accounting framework, TFP is captured as a residual (ECB, 2007 and Jorgenson *et al.,* 2007), after adjusting for growth in labour and capital inputs.

Over the period of study, a compositional shift is evident in sync with the GDP growth trajectory: the contribution of agriculture to TFP growth has fallen while that of services has gone up and manufacturing's share has remained stable. Growth in value added in the agricultural sector has closely co-moved with its TFP growth, reflecting the lower importance of factor inputs in shaping agricultural performance (Chart 2).

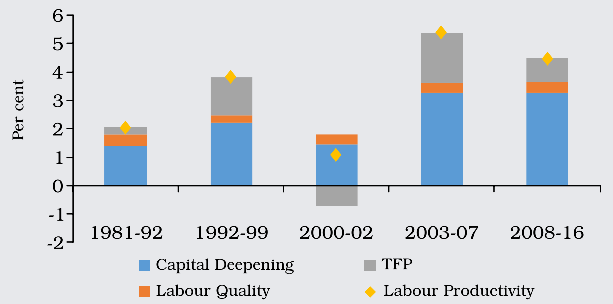
On the other hand, divergence has become marked in respect of both manufacturing and services, with TFP growth slowing down persistently in both sectors and markedly so in case of the latter, compared to value added (Chart 3). The contribution of TFP to services sector[2] growth has been lower than for manufacturing, especially in recent years (Chart 4).

Using a Harberger Plot[3], it is observed that there are some consistent contributors to TFP growth like chemical and chemical products, post and telecommunications, and transport and storage (Chart 5). The penetration of information and communication technologies (ICT) has greatly benefited sectors like telecommunications, financial services and business services, and their importance in TFP growth has increased in recent years.

Some sectors have, however, remained laggards over the years. In order to check for convergence across sectors, a panel regression is estimated in the form given below (European Commission, 2014).

$$TFP_{i,t} = \beta_0 + \beta_1\, TFPgap_{i,t-1} + \beta_2\, \mathrm{TFPmax}_{it} + \gamma Year + \theta Ind + \epsilon_{i,t}$$

Chart 1: Sources of Labour Productivity Growth in India*



*: Capital deepening includes increase in efficiency of existing capital stock.

Chart 3: GVA and TFP - Manufacturing

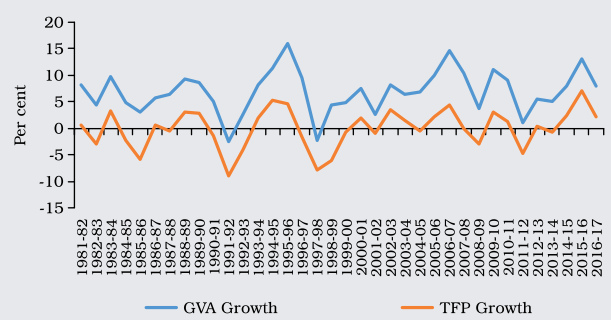


Chart 2: GVA and TFP - Agriculture

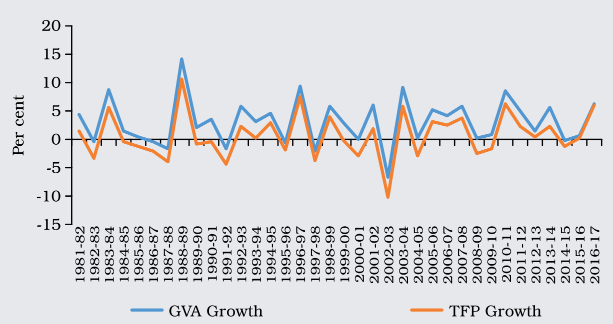
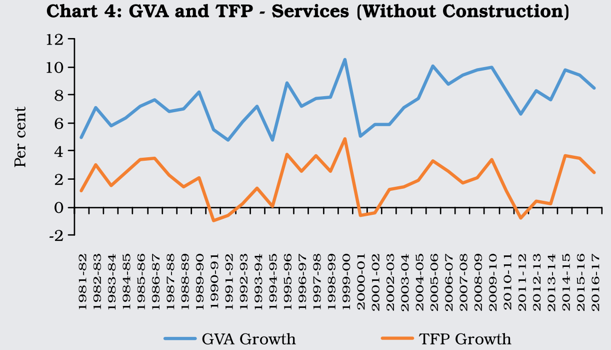


Chart 4: GVA and TFP - Services (Without Construction)

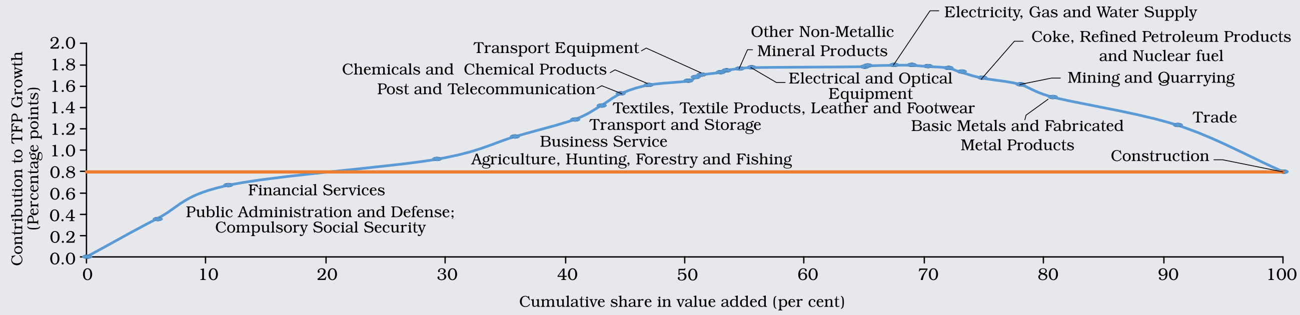


Source: The India KLEMS database, NSO and RBI staff estimates.

(Contd...)

[2] The services sector does not include construction as the latter is employment- intensive and its TFP is negative for most of the years.

[3] Sectors are ordered according to their contributions to aggregate TFP growth. Accordingly, sectors closer to the origin represent those with the highest TFP contributions to the overall TFP growth.



Source: The India KLEMS database, NSO and RBI staff estimates.

where,

$TFP_{i,t}$ = TFP growth of industry i at time t

$TFPgap_{i,t-1}$ = log difference between TFP levels for the given industry and TFP levels for industry with highest productivity in the year $t-1$

TFPmax = TFP growth of the industry with highest productivity level for a given year t

In this specification, TFPgap captures convergence between leading sector and other industries while TFPmax captures spillover effects from the leading sector. A negative sign of TFPgap implies a larger potential gain for laggard industries with higher distance from the TFP frontier by adopting enhanced technology and advanced managerial practices. On the other hand, a positive sign of TFPmax suggests the existence of spillover of TFP from leading sector with high penetration of ICT like financial services to others. The regression results support presence of TFP convergence and spillover channels in India (Table 1). The fastest convergence is witnessed in the last period, *i.e.,* 2009-16, when financial services emerged as the sector with the highest TFP.

Evidence from Harberger plot and convergence model suggests the need for higher investments in human capital through skilling and training to enable other sectors to adopt advanced technology and benefit through the convergence and spillover effects from industries using ICT technologies.

Table 1: Sectoral Convergence and Spillover of TFP

Variables	1981-2016	1981-1992	1992-1999	2003-2007	2009-2016
1	2	3	4	5	6
TFPgap	-0.047*	-0.269***	-0.274*	-0.304*	-0.428***
	(0.023)	(0.063)	(0.136)	(0.174)	(0.107)
TFPmax	0.144**	0.374***	1.054	-1.396	2.762***
	(0.619)	(0.111)	(0.668)	(0.833)	(0.577)
Constant	-0.065**	-0.393***	-0.338**	-0.363*	-0.568***
	(0.282)	(0.091)	(0.151)	(0.199)	(0.136)
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	972	324	216	135	216
R-squared	0.08	0.24	0.12	0.13	0.29
Number of Indcode	27	27	27	27	27

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

References:

1. Adler, G., R. Duval, D. Furceri, S. K. Çelik, K. Koloskova, and M. Poplawski-Ribeiro (2017), ‘Gone with the Headwinds: Global Productivity’, *IMF Staff Discussion Note, SDN/17/04*.
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4. Jorgenson, D. W., M. S. Ho, J. D. Samuels, and K. J. Stiroh (2007), ‘Industry Origins of the American Productivity Resurgence’, *Economic Systems Research, 19*(3), 229 –252.

Table II.1.2: Real GVA Growth

Sectors	Growth (per cent)					Contribution to Growth (per cent)				
	2003-08	2008-09	2009-11	2011-14	2014-19	2003-08	2008-09	2009-11	2011-14	2014-19
1	2	3	4	5	6	7	8	9	10	11
I. Agriculture, forestry and fishing	**4.5**	**-0.2**	**4.0**	**4.5**	**2.9**	**12.0**	**-1.2**	**8.7**	**14.6**	**6.1**
II. Industry	**8.4**	**3.4**	**9.1**	**2.9**	**8.1**	**24.9**	**18.6**	**29.2**	**11.8**	**25.1**
i. Mining and quarrying	5.2	-2.5	9.7	-5.6	7.1	3.1	-2.4	5.0	-4.4	2.8
ii. Manufacturing	9.6	4.7	9.3	4.5	8.4	19.7	18.5	22.2	14.1	20.0
ii. Electricity, gas, water supply and other utility services	7.1	4.9	6.5	5.1	7.5	2.1	2.5	2.0	2.1	2.3
III. Services	**8.6**	**6.4**	**8.0**	**7.0**	**8.2**	**62.0**	**82.6**	**62.1**	**73.6**	**68.8**
i. Construction	12.8	5.6	6.4	5.4	5.7	13.4	11.6	7.9	9.0	6.5
ii. Trade, hotels, transport, communication and services related to broadcasting	9.4	2.4	9.0	7.5	8.4	20.3	9.6	19.8	24.0	21.4
iii. Financial, real estate and professional services	7.6	5.2	5.6	8.5	8.8	19.4	23.5	15.0	28.8	25.7
iv. Public administration, defence and other services	6.3	15.8	11.8	5.1	8.8	8.9	37.8	19.4	11.7	15.2
IV. GVA at basic prices	**7.7**	**4.3**	**7.4**	**5.6**	**7.3**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

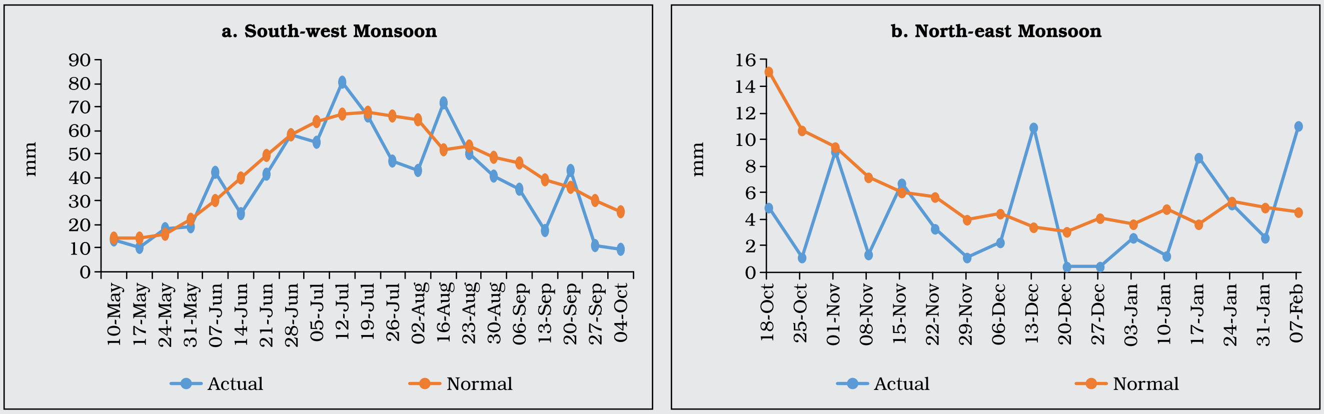
Source: NSO and RBI staff calculations.

(Table II.1.2). Secondly, growth of agriculture, forestry and fishing is unpredictable reflecting reliance on monsoon, though the increasing share of allied activities which is relatively insulated from weather uncertainties has imparted some resilience to the sector. Consequently, agriculture has lost its share in overall GVA to services sector. Industrial GVA on the other hand, has been driven by its largest constituent – manufacturing – and has broadly sustained its share, reflecting its forward and backward linkages with other sectors.

II.1.17 GVA by agriculture and allied activities grew by 2.9 per cent in 2018-19; while the increase in foodgrains and horticulture production turned out to be modest after two successive years of record production, final estimates may reveal a new record, going by the catch-up underway in moving from first to fourth advance estimates. The contribution of agriculture and allied activities to overall GVA growth declined to 6.6 per cent in 2018-19 but remained higher than that of 6.1 per cent during 2014-19.

II.1.18 The south-west monsoon 2018 started off well but lost momentum during mid-July to mid-September, with uneven distribution of rainfall across states (Chart II.1.7a). Overall, the cumulative rainfall during the south-west monsoon season was 9 per cent below the Long Period Average (LPA). This took its toll on *kharif* sowing, initially exacerbated by delayed announcement of minimum support prices (MSPs), and persisting deflation in wholesale prices of *kharif* crops, but there was a catch up in the closing weeks of the season. As per the fourth advance estimates of the Ministry of Agriculture and Farmers' Welfare, *kharif* foodgrains production increased by 0.9 per cent in 2018-19 over the final estimates for 2017-18. The production of rice increased by 5.1 per cent, buoyed by a 12.9 per cent hike in MSP for paddy. Output of pulses and coarse cereals, however, declined. Among the cash crops, growth in production of sugarcane at 5.3 per cent was higher than 2.8 per cent average growth of last five years, but cotton output fell by 12.5 per cent as compared to the previous year due to deficient rainfall in major growing states of Gujarat, Maharashtra, Telangana and Karnataka.

Chart II.1.7: Weekly Rainfall



Source: Ministry of Agriculture and Farmers Welfare, GoI.

II.1.19 *Rabi* sowing was delayed due to late harvesting of the *kharif* crops and it could not catch up with the previous year's level. In addition, it was hobbled by a deficiency in the north-east monsoon rainfall (44 per cent below the LPA) (Chart II.1.7b) and *rabi* foodgrains production declined by 0.9 per cent in 2018-19 over the final estimates for 2017-18. Wheat weathered the broad-based decline, however, exceeding the previous year's bumper production (Table II.1.3).

Table II.1.3: Agricultural Production 2018-19

(Million Tonnes)

Crop	Season	2017-18		2018-19			2018-19 Variation (Per cent)			
		4th AE	Final	Target	3rd AE	4th AE	Over 2017-18		Over 2018-19	
							4th AE	Final	3rd AE	Target
1	2	3	4	5	6	7	8	9	10	11
Rice	Kharif	97.5	97.1	99.0	101.7	102.1	4.7	5.1	0.4	3.2
	Rabi	15.4	15.6	15.0	13.9	14.3	-7.3	-8.5	3.0	-4.7
	Total	112.9	112.8	114.0	115.6	116.4	3.1	3.2	0.7	2.1
Wheat	Rabi	99.7	99.9	102.2	101.2	102.2	2.5	2.3	1.0	0.0
Coarse Cereals	Kharif	33.9	34.0	35.7	32.5	31.0	-8.6	-8.9	-4.6	-13.2
	Rabi	13.1	12.9	12.4	10.8	12.0	-8.7	-7.6	10.3	-3.5
	Total	47.0	47.0	48.1	43.3	43.0	-8.6	-8.6	-0.9	-10.7
Pulses	Kharif	9.3	9.3	9.9	8.5	8.6	-8.0	-7.7	0.8	-12.8
	Rabi	15.9	16.1	16.1	14.7	14.8	-6.9	-8.1	0.7	-8.1
	Total	25.2	25.4	26.0	23.2	23.4	-7.3	-7.9	0.8	-9.8
Foodgrains	Kharif	140.7	140.5	144.6	142.8	141.7	0.7	0.9	-0.7	-2.0
	Rabi	144.1	144.5	145.7	140.6	143.2	-0.6	-0.9	1.9	-1.7
	Total	284.8	285.0	290.3	283.4	285.0	0.0	0.0	0.6	-1.8
Oilseeds	Kharif	21.0	21.0	25.5	21.0	21.3	1.3	1.3	1.4	-16.6
	Rabi	10.3	10.5	10.5	10.4	11.0	6.5	5.0	5.3	4.6
	Total	31.3	31.5	36.0	31.4	32.3	3.0	2.5	2.7	-10.4
Sugarcane (Cane)		376.9	379.9	385.0	400.4	400.2	6.2	5.3	-0.1	3.9
Cotton #		34.9	32.8	35.5	27.6	28.7	-17.7	-12.5	4.0	-19.1
Jute & Mesta ##		10.1	10.0	11.2	9.8	9.8	-3.6	-2.6	-0.3	-12.8

#: Lakh bales of 170 kgs. each. AE: Advance Estimates
#: Lakh bales of 180 kgs. each.
Source: Ministry of Agriculture and Farmers Welfare, GoI.

Overall, the foodgrains production in 2018-19 is estimated at 285 million tonnes – same as the record level achieved in 2017-18. While the production of rice and wheat set a record, the output of pulses and coarse cereals declined.

II.1.20 The stock positions in respect of rice and wheat with the Food Corporation of India (FCI) during 2018-19 were on average higher by 2.9 times and 2.5 times, respectively, than the buffer norms. This has necessitated an increase in offtake through the open market sale of 4.12 per cent of annual production in 2018-19 compared to 0.87 per cent of production in the previous year. The surplus food stock and unusually depressed food prices contributed to agrarian distress, including rising indebtedness and sluggish rural wages which calls for proactive and effective supply management policies (Box II.1.4).

Box II.1.4:
The Problems of Plenty

Yield improvement and acreage expansion has boosted the production of cereals, oilseeds and sugar across the world. Wheat production increased significantly in the Black Sea region (Russian Federation, Ukraine and Kazakhstan), due to crop land expansion, crop intensification, investment in fertilisers, machinery and storage facilities by the big agricultural companies. Corn production received a boost in Alaska through area expansion, supported by innovations in hybrid seed technology (Reuters, 2017). As a result, world cereal production outstripped utilisation in most of the years during 2006-07 to 2018-19 (Chart 1a). Stockpiles of cereals, sugar and oilseeds are at all-time highs (Charts 1b, 1c, and 1d).

In India, back-to-back years of bumper production of cereals, pulses, oilseeds and horticulture crops in 2016-17

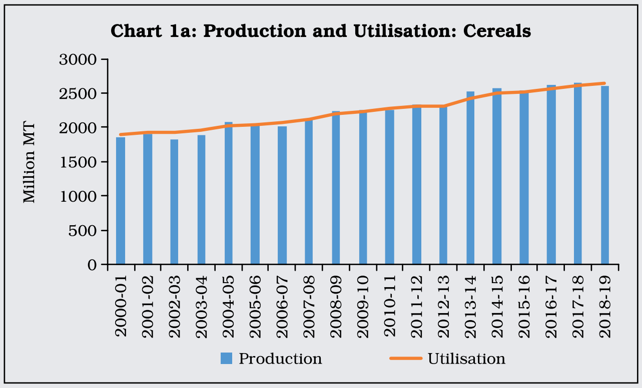


Chart 1a: Production and Utilisation: Cereals

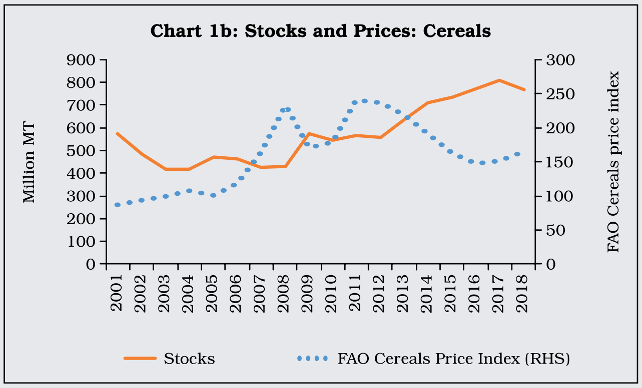


Chart 1b: Stocks and Prices: Cereals

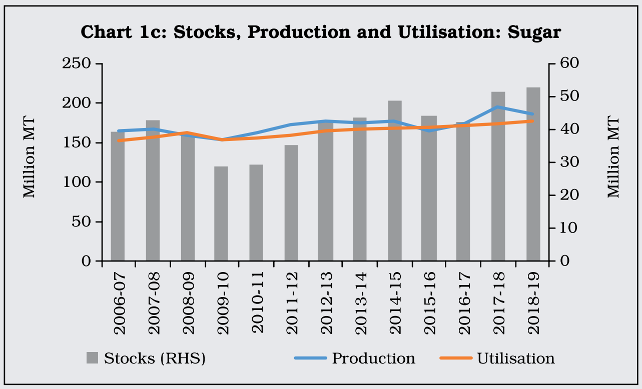


Chart 1c: Stocks, Production and Utilisation: Sugar

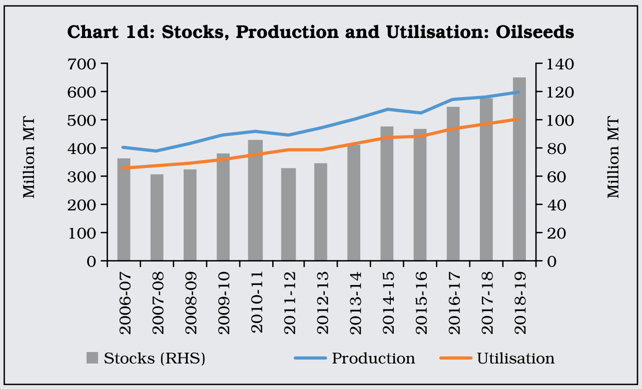
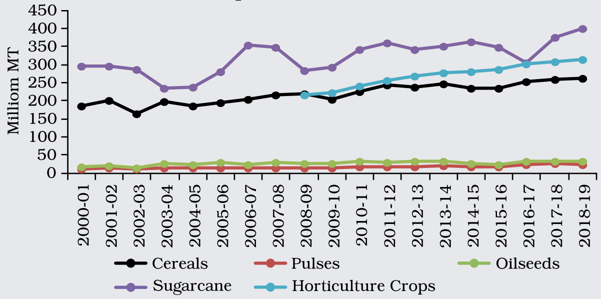


Chart 1d: Stocks, Production and Utilisation: Oilseeds

Source: United States Department of Agriculture (USDA) and Food and Agriculture Organisation (FAO).

(Contd...)

Chart 2: Crop-wise Production in India



Source: Ministry of Agriculture and Farmers Welfare, GoI.

and 2017-18 (Chart 2) has led to the build-up of comfortable stocks. Improvements in supply chains, access to low cost mobile phones, micro-finance and supply management, *albeit* reactive and inopportune, have all contributed to the rare emergence of excess supplies.

Disentangling the various factors at work in a panel data model [pooling crop level data, Singh *et al.* (2014)] for the period from 2006-07 to 2018-19, it is observed that the effects of expanding area under cultivation and boosting yield on the value of output are positive and significant – the 'area' effect in the period 2016-17 to 2018-19 is lower than during 2006-07 to 2012-13, but the yield effect is higher[4]. The effect of relative prices is lower in the recent period because domestic prices were higher than international prices, leading to erosion in the competitiveness of India's farm exports and increased imports, which augmented domestic supply and depressed domestic prices.

References:

1. Reuters, (2017), 'Drowning in Grain - Reuters Special Report on the Global Grains Glut', *Reuters,* accessed at https://farmpolicynews.illinois.edu/2017/09/drowning-grain-reuters-special-report-global-grains-glut/
2. Singh, B.P., P.K. Joshi, D.S. Negi and S. Agarwal (2014), 'Changing Source of Growth in Indian Agriculture: Implications for Regional Priorities for Accelerating Agriculture Growth', *Working Paper 01325*, IFPRI, Washington, USA.

Horticulture

II.1.21 Horticulture, with a share of 33 per cent in agricultural GVA, has outpaced the production of foodgrains since 2012-13. As per the second advance estimates, the production of horticulture crops at 314.9 million tonnes in 2018-19 is a record, driven mainly by spices, flowers and vegetables (Table II.1.4).

Policy Initiatives

II.1.22 MSPs announced in *kharif* 2018-19, were ranging between 3.7-52.5 per cent above those announced in the previous year. The government announced *'Pradhan Mantri Annadata Aay SanraksHan Abhiyan'* (PM-AASHA), an umbrella scheme to ensure reasonable prices for the crops including cereals, pulses, oilseeds, jute and

4 $$\begin{aligned} logCval_{it} = {} & \underset{(0.325)^{*}}{0.525(logA_{it})} + \underset{(0.07)^{***}}{0.842(logY_{it})} - \underset{(0.03)}{0.013(dummy\ RP_{it-1})} + \underset{(0.058)}{0.028(logA_{it} * T_{i2})} \\ & - \underset{(0.014)^{***}}{0.685(logA_{it} * T_{i3})} - \underset{(0.83)}{0.084(logY_{it} * T_{i2})} + \underset{(0.07)^{***}}{0.237(logY_{it} * T_{i3})} \\ & + \underset{(0.082)}{0.037(dummy\ RP_{it-1} * T_{i2})} - \underset{(0.029)^{***}}{0.086(dummy\ RP_{it-1} * T_{i3})} \end{aligned}$$

R-square: 0.77 Number of observations: 78

***,*: *indicates significance at 1 per cent and 10 per cent, respectively.*

i and *t* represent "crops" and "years", respectively. The crops considered in the model are cereals and oilseeds.

$Cval_{it}$: Crop-wise value of output is at 2004-05 constant prices. It was extrapolated for 2017-18 and 2018-19. A_{it}, Y_{it} and RP_{it-1}: Area, yield and lagged relative prices dummy which takes values 1 if the ratio of domestic prices with the international prices is higher than 1.

Interaction terms: Area, yield and lagged relative prices dummy were interacted with time periods, 2006-07 to 2012-13 of high food prices both domestically and globally; 2013-14 to 2015-16 drought/excess rainfall years; and 2016-17 to 2018-19 of record production and fall in food prices.

Model selection (*i.e.*, random effects) based on the Hausman test. Other controls include crop and time dummy.

Table II.1.4: Horticulture Production

(Million Tonnes)

Crops	2017-18		2018-19		Variation (Per cent)		
	2nd AE	Final Estimate (FE)	1st AE	2nd AE	2018-19 2nd AE over 2017-18 2nd AE	2018-19 2nd AE over the 2017-18 FE	2018-19 2nd AE over the 2018-19 1st AE
1	2	3	4	5	6	7	8
Total Fruits	**94.4**	**97.4**	**96.8**	**97.4**	**3.2**	**0.0**	**0.6**
Banana	29.3	30.8	30.0	31.2	6.6	1.3	4.0
Citrus	12.5	12.5	12.3	13.2	5.1	4.8	7.3
Mango	20.5	21.8	22.4	21.0	2.1	-4.0	-6.3
Total Vegetables	**182.0**	**184.4**	**187.5**	**187.4**	**2.9**	**1.6**	**-0.1**
Onion	21.8	23.3	23.6	23.3	6.6	0.1	-1.4
Potato	50.3	51.3	52.6	53.0	5.2	3.2	0.7
Tomato	22.1	19.8	20.5	19.7	-10.9	-0.5	-4.1
Plantation Crops	**18.5**	**18.1**	**18.0**	**17.7**	**-4.3**	**-2.3**	**-1.8**
Total Spices	**8.5**	**8.1**	**8.6**	**8.6**	**0.8**	**6.0**	**0.3**
Aromatics and Medicinal	**1.1**	**0.9**	**0.9**	**0.8**	**-20.2**	**-2.3**	**-4.8**
Total flowers	**2.6**	**2.8**	**2.9**	**2.9**	**12.1**	**3.9**	**1.2**
Total	**307.2**	**311.7**	**314.7**	**314.9**	**2.5**	**1.0**	**0.1**

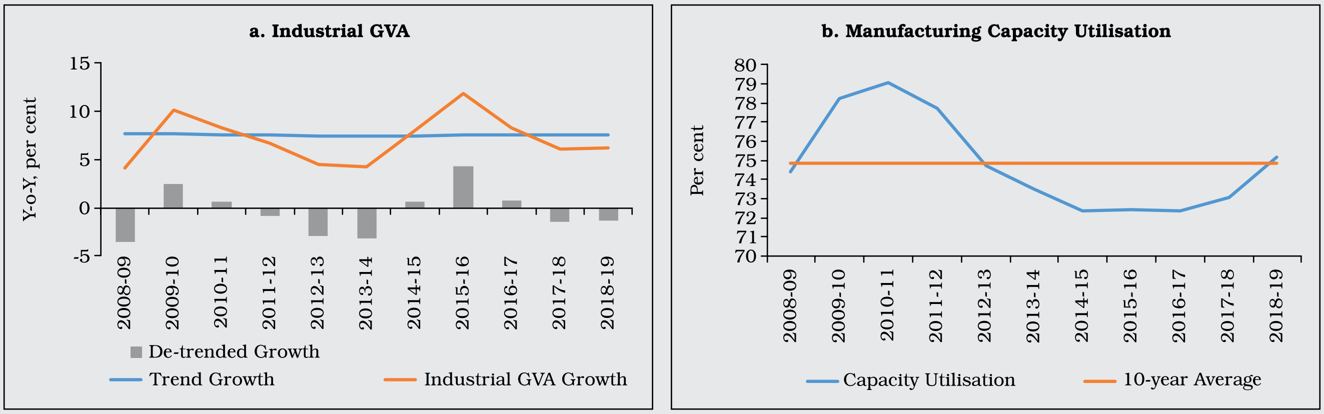
FE: Final Estimate AE: Advance Estimate
Source: Ministry of Agriculture and Farmers Welfare, GoI.

cotton, for effective implementation of MSP. The MSP increase was lower as compared to last year for all the major *rabi* crops.

II.1.23 In order to increase milk production and overall development of the dairy sector, the government has set up a dairy processing and infrastructure development fund (DIDF). It has created a separate Department of Fisheries to provide sustained and focussed attention on the development of the sector. Besides, the government has also approved setting up of a dedicated Fisheries and Aquaculture Infrastructure Development Fund (FIDF) to fill the large infrastructure gaps in fisheries sector. It has also approved a scheme for controlling the foot and mouth disease of livestock.

II.1.24 MSP announced for *kharif* 2019-20 has not changed significantly from the previous year. In continuation with the last year, MSPs have been fixed in such a way that it ensures a minimum return of 50 per cent over the cost of production. In order to provide income support to farmers, in the interim Union Budget 2019-20, the government announced the *Pradhan Mantri Kisan Samman Nidhi* (PM-KISAN), under which vulnerable farmers holding cultivable land up to 2 hectares will receive a direct income support of ₹6,000 per annum (in three instalments of ₹2,000 each) from the central government. Recently, the government has extended this scheme, benefitting around 14.5 crore farmers. Another recent initiative by the government is *Pradhan Mantri Kisan Pension Yojana* – under which small and marginal farmers of age between 18 to 40 years will get a minimum fixed pension of ₹3,000 per month on attaining the age of 60 years by contributing voluntarily, with government contributing an equal amount, to the pension fund. The scheme is expected to cover 5 crore small and marginal farmers in the first three years. The Union Budget 2019-20 announced in July has recognised the need

Chart II.1.8: Growth in Industrial Production and Capacity Utilisation



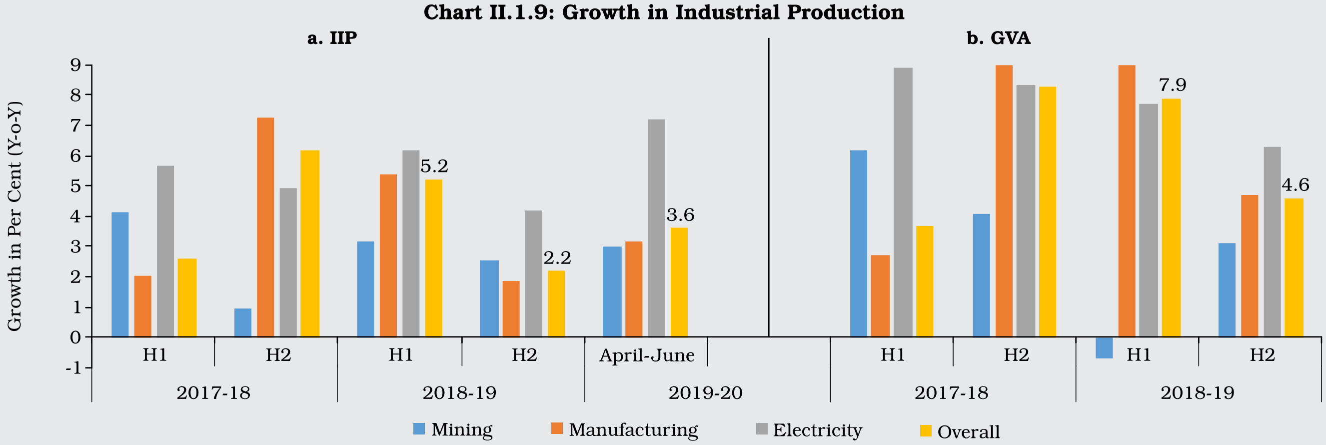
Source: NSO and RBI.

for forming new Farmer Producer Organisations (FPO), expansion of benefits of e-NAM (online agricultural trading platform) to larger number of farmers and introduction of Zero Budget Farming for increasing the farmers' income. The Budget has also proposed to launch *Pradhan Mantri Matsya Sampada Yojana* (PMMSY) to establish a robust fisheries management framework. Further, the government has extended the benefit of interest subvention and the facility of prompt repayment incentive of 3 per cent for rescheduled loans to animal husbandry and fisheries.

Industrial Sector

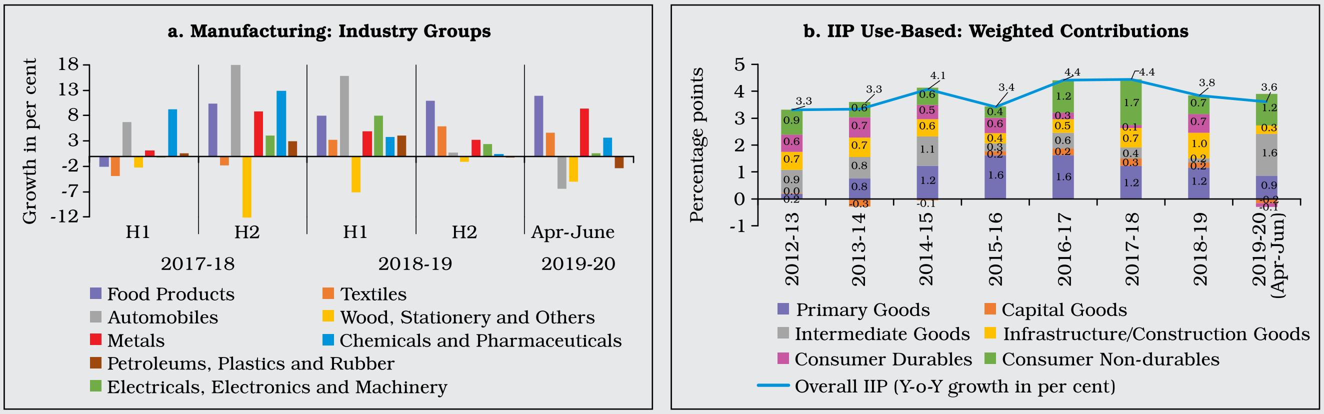
II.1.25 GVA growth in industry accelerated marginally on a y-o-y basis to 6.2 per cent in 2018-19 breaking the sequence of two consecutive years of deceleration. Cyclical component of industrial GVA growth (estimated through a univariate approach using Hodrick-Prescott filter) remained negative during the year while the capacity utilisation in manufacturing recovered sharply over 10-year average level (Chart II.1.8 a & b). On the other hand, the index of industrial production (IIP) growth decelerated during 2018-19 to a 3-year low of 3.8 per cent driven by deceleration in manufacturing. Among the sectoral components of IIP, the growth in mining and electricity generation has been relatively stable during the year. During Q1:2019-20, a sharp upsurge in the electricity growth was recorded while manufacturing and mining remained stable (Chart II.1.9).

Chart II.1.9: Growth in Industrial Production



Source: NSO and RBI staff calculations.

Chart II.1.10: Manufacturing Sector Growth – Industry Groups and Use-based



Source: NSO.

II.1.26 Manufacturing GVA growth reached a 9-quarter high of 12.1 per cent during Q1:2018-19 helped by a favourable base and gain in momentum, before slowing down from Q2:2018-19. Headwinds emanating from subdued demand – both domestic and international, and higher input costs especially oil based, led to slowdown in manufacturing and a widening wedge between IIP and GVA growth.

II.1.27 The deceleration in manufacturing during H2:2018-19 – which constitutes three-fourth of industry was on account of the contraction/deceleration in six out of eight broad industry groups constituting 84.2 per cent of manufacturing IIP, *i.e.,* automobiles; electrical, electronics and machinery; chemicals and pharmaceuticals; metals; petroleum, plastic and rubber; and wood, stationery and others. Only two broad industry groups, *i.e.,* food products and textiles registered acceleration (Chart II.1.10a). In terms of use-based classification, much of the deceleration in manufacturing IIP can be traced to the deceleration in intermediate goods, capital goods and consumer non-durables (also reflected in sales of FMCG companies) (Table II.1.5). In terms of weighted contributions, the fall in consumer non-durables was the heaviest, followed by intermediate goods and capital goods, respectively. Capital goods production remained subdued while intermediate and consumer non-durables recovered sharply in Q1:2019-20 (Chart II.1.10b).

II.1.28 The improvement in the mining sector was on account of sharp pick-up in coal production that more than compensated for the contraction in crude oil and deceleration in natural gas production. Even with a sharp acceleration in coal production, thermal electricity generation slowed down which was partly compensated by strong growth in hydro and renewable generation. Slowdown in manufacturing activities also contributed to reduced demand of electricity by the industrial sector. Historically, IIP manufacturing and electricity generation co-move closely, indicating that a pick-up in manufacturing activities is essential for electricity demand to improve. The power sector, especially, the thermal segment – the mainstay of power supply with around 76 per cent share – at the current juncture is faced with multiple challenges – cheaper and rising share of renewable energy in the overall energy mix (from 3.7 per cent in 2008-09 to 9.2 per cent during 2018-19); market based short-term price discovery through energy exchange at lower price than long-term forward power purchase

Table II.1.5: Index of Industrial Production (Base 2011-12)

(Per cent)

Industry Group	Weight in IIP	Growth Rate						
		2014-15	2015-16	2016-17	2017-18	2018-19	Apr-June 2018	Apr-June 2019
1	2	3	4	5	6	7	8	9
Overall IIP	**100.0**	**4.0**	**3.3**	**4.6**	**4.4**	**3.8**	**5.1**	**3.6**
Mining	14.4	-1.4	4.3	5.3	2.3	2.9	5.4	3.0
Manufacturing	77.6	3.8	2.8	4.4	4.6	3.9	5.1	3.2
Electricity	8.0	14.8	5.7	5.8	5.4	5.2	4.9	7.2
Use-based								
Primary goods	34.0	3.8	5.0	4.9	3.7	3.5	5.9	2.6
Capital goods	8.2	-1.1	3.0	3.2	4.0	2.7	8.6	-2.2
Intermediate goods	17.2	6.1	1.5	3.3	2.3	0.9	0.7	9.3
Infrastructure/Construction goods	12.3	5.0	2.8	3.9	5.6	7.3	8.5	2.4
Consumer durables	12.8	4.0	3.4	2.9	0.8	5.5	8.1	-1.0
Consumer non-durables	15.3	3.8	2.6	7.9	10.6	4.0	2.0	7.3

Source: NSO.

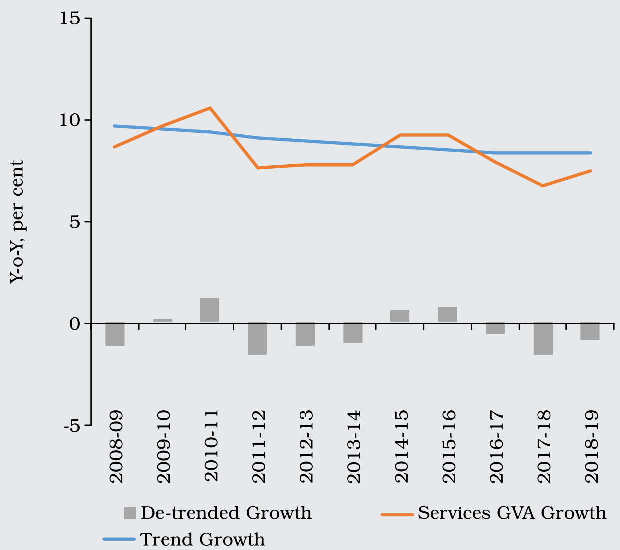
agreements (PPAs)[5] and DISCOMs reeling with financial stress.

II.1.29 Indicators of financial performance of listed manufacturing firms also reveal that the sales growth and EBITDA margin peaked in Q1:2018-19 before declining in Q3-Q4:2018-19. As regards expectations, manufacturing firms polled in the Reserve Bank's Industrial Outlook Survey turned optimistic in Q3-Q4:2018-19, but expectations dipped in Q1-Q2:2019-20 due to weaker prospects for production, order books, profit margins and overall financial situation.

Services Sector

II.1.30 In contrast to the industrial sector, the services sector growth decelerated on a y-o-y basis in 2018-19 extending a sequence beginning in 2015-16. Moreover, the cushion provided by public administration, defence and other services (PADO) waned. Excluding general government services embodied in PADO, services sector GVA accelerated from 6.7 per cent in 2017-18 to 7.4 per cent in 2018-19. Though some recovery was seen in the cyclical component of services GVA (excluding PADO) growth (estimated through a univariate approach using Hodrick-Prescott filter), it remained negative during the year (Chart II.1.11).

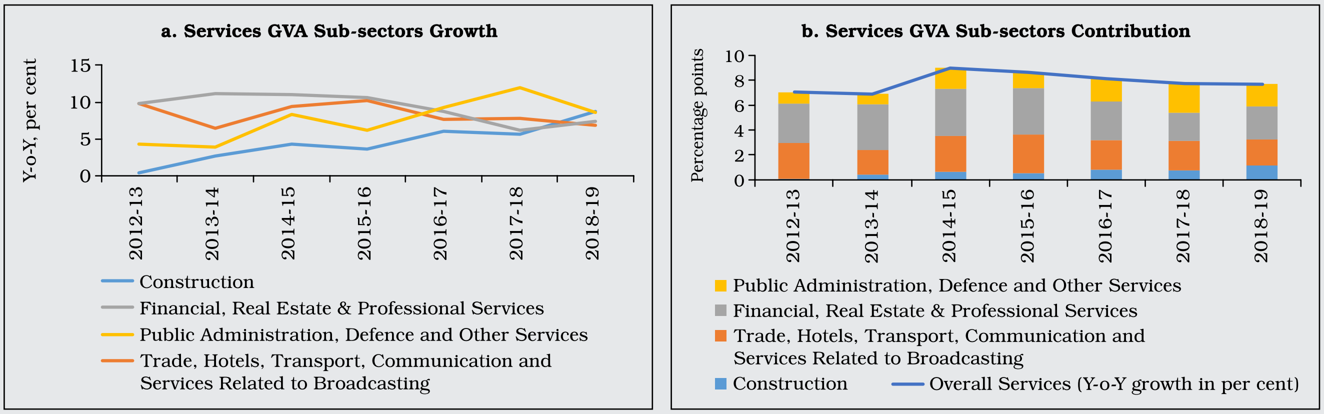
Chart II.1.11: Services GVA (excluding PADO)



Source: NSO and RBI staff estimates.

[5] There is empirical evidence of renewable energy sources having a moderating impact on spot prices of electricity in energy exchange (Agarwal R., S. Gulati and S. Thangzason (2019) 'Renewable Energy and Electricity Price Dynamics in India' *RBI Bulletin*, May 2019.

Chart II.1.12: Services GVA Growth



Sources: NSO and RBI staff calculations.

II.1.31 Among the components of services, GVA in the construction sector continued its trend of acceleration beginning 2012-13 (Chart II.1.12a), as reflected in strong growth in steel consumption and cement production during the year on the back of the support from government's focus on infrastructure and affordable housing.

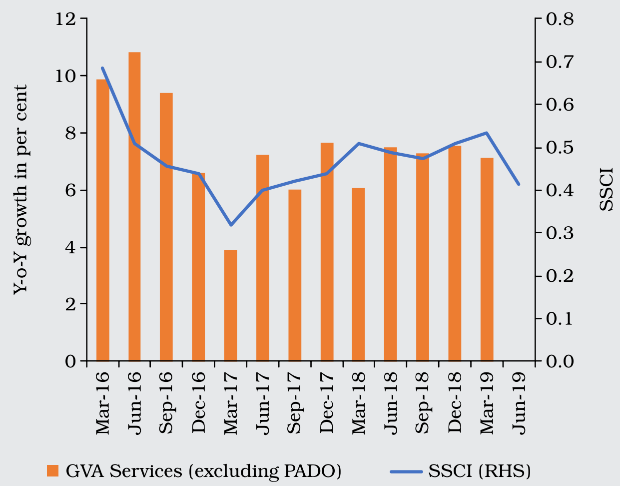
II.1.32 In terms of weighted contributions to growth, financial, real estate and professional services showed improvement (Chart II.1.12b) with key indicators of financial services, *i.e.,* aggregate deposits and bank credit growth picking up and EBITDA of IT services firms accelerating. Weighted contribution of trade, hotels, transport, communication and services related to broadcasting to services growth declined in 2018-19. Among the indicators of the road transport segment, sales of new commercial vehicles slowed down amid a broad-based deceleration in the automobile sector in H2:2018-19. The aviation sector also recorded deceleration from January 2019 primarily due to financial stress in one major airline reflected in domestic air passenger traffic, which had recorded a double-digit growth for 52 months in a row up to December 2018. Only rail transport witnessed marginal improvement in terms of growth of net tonne kilometres of freight.

II.1.33 The Reserve Bank's service sector composite index (SSCI), which combines information collated from high frequency indicators and leads GVA growth in the services sector, is indicating moderation in Q1:2019-20 (Chart II.1.13).

4. *Employment*

II.1.34 The National Statistical Office (NSO) in May 2019 released the Periodic Labour Force Survey (PLFS) which indicates higher regularisation of work force in 2017-18 as compared to previous rounds of Employment

Chart II.1.13: Growth in Services Sector (excluding PADO) and Service Sector Composite Index (SSCI)



PADO: Public Administration, Defence and Other Services.
Source: NSO and RBI staff estimates.

and Unemployment Surveys (EUS). Among total workforce, the share of regular/salaried was higher at 45.7 per cent (43.4 per cent in 2011-12) and 52.1 per cent (42.8 per cent in 2011-12) for urban male and female, respectively. In rural areas also, the share of regular/salaried workforce increased in 2017-18, though their share was still low at 14 per cent for male (10.0 per cent in 2011-12) and 10.5 per cent for female (5.6 per cent in 2011-12). The usual status unemployment rate at 6.1 per cent (6.2 per cent for male and 5.7 per cent for female) in 2017-18, as per the PLFS, may not be strictly comparable with the previous rounds of EUS due to difference in methodology.

II.1.35 Information on formal sector employment, compiled from payroll[6] data of Employees' Provident Fund Organisation (EPFO), Employees' State Insurance Corporation (ESIC) and National Pension System (NPS), indicates a mixed picture with regard to job creation in 2018-19 *vis-à-vis* 2017-18[7]. Net new subscribers added to EPFO per month increased (0.56 million in 2018-19 from 0.19 million during 2017-18) while new subscribers to NPS slowed down. The number of members who paid their contributions to ESIC increased marginally during 2018-19.

II.1.36 Several policy initiatives were taken by the government during the year to boost employment generation. Keeping in view the large employment potential in entertainment industry, single window clearance facility for ease of shooting films, currently available only to foreigners, will be made available to Indian filmmakers as well from 2019-20. The government has also undertaken several steps to strengthen the micro, small and medium enterprises (MSMEs) sector, which provides a lucrative avenue for employment. A scheme of sanctioning loans up to ₹10 million in 59 minutes was put in place for MSMEs. Further, over 10 million youth are being trained every year to help them earn a livelihood through *Pradhan Mantri Kaushal Vikas Yojana*. Employment for the youth is also being promoted through self-employment schemes including MUDRA, Start-up India and Stand-up India.

II.1.37 To sum up, consumption demand remained resilient during 2018-19, *albeit* with some moderation *vis-à-vis* the previous year while gross fixed capital formation which sustained momentum in the first half of the year weakened thereafter in an environment of political uncertainty amidst general elections. External demand operated as a drag for the second successive year. Deficit south-west monsoon and depleted reservoirs dented the performance of agriculture sector. While the industrial sector posted resilient growth mainly driven by manufacturing in the first half, the momentum in construction and financial services sustained the healthy growth of overall services sector. The official estimates suggest more regularisation of employment in 2017-18 and various initiatives undertaken by the government are expected to create avenues for employment generation. Going forward, priority should be accorded to revive consumption and private investment while continuing with structural reforms.

II.2 PRICE SITUATION

II.2.1 Commodity price developments significantly shaped the global inflation environment during 2018 and the early months of 2019. Food prices, in particular, softened markedly in 2018, before a recovery took hold beginning 2019 on the back of firming prices of sugar, dairy products and animal proteins.

[6] EPFO, ESIC and NPS series are not additive due to overlaps in the data.

[7] For 2017-18, data is available only from September 2017.

Metal prices eased, especially from the second half of 2018, on weaker demand from China, although they turned up from February 2019, buoyed by improved global market sentiments and supply disruptions. Crude oil prices came off their October 2018 peak and fell by almost 30 per cent by December 2018, enabled by higher shale production in the US and weakening global demand. Production cuts by Organisation of the Petroleum Exporting Countries (OPEC) and other major producers along with supply disruptions in Venezuela firmed up crude prices in early 2019.

II.2.2 In this milieu, retail inflation measured by consumer prices remained subdued across advanced and emerging market economies (EMEs). In the former, even core inflation remained below targets with wage growth sluggish and demand weakened by slowing global economic activity. In many EMEs, inflation pressures generally moderated, driven down by commodity prices and country-specific supply improvements, especially in respect of food items.

II.2.3 In India, headline inflation[8] eased significantly to average 3.4 per cent during 2018-19, the lowest annual reading in the new consumer price index (CPI) series (Table II.2.1). Accordingly, inflation has undershot the target of 4 per cent for the second financial year in succession under the remit of the monetary policy committee that was formally appointed in September 2016 under the new monetary policy framework. During Q1:2019-20, inflation has remained moderate, averaging at 3.1 per cent.

II.2.4 A sharp decline in food inflation, and an elevated and sticky inflation excluding food and fuel were the defining features of price dynamics in 2018-19, with the persistent wedge between headline inflation and inflation excluding food and fuel becoming a subject of animated public debate (Chart II.2.1). Against this backdrop, Sub-section 2 assesses developments in global commodity prices and inflation. Sub-section 3 discusses movements in domestic headline inflation and major turning points. Sub-section 4 drills down into the granular aspects of price developments in respect of major components, *viz.*, food, fuel, and inflation excluding food and fuel. Sub-section 5 discusses other indicators of prices and costs as well as movements in wages.

Table II.2.1: Headline Inflation – Key Summary Statistics

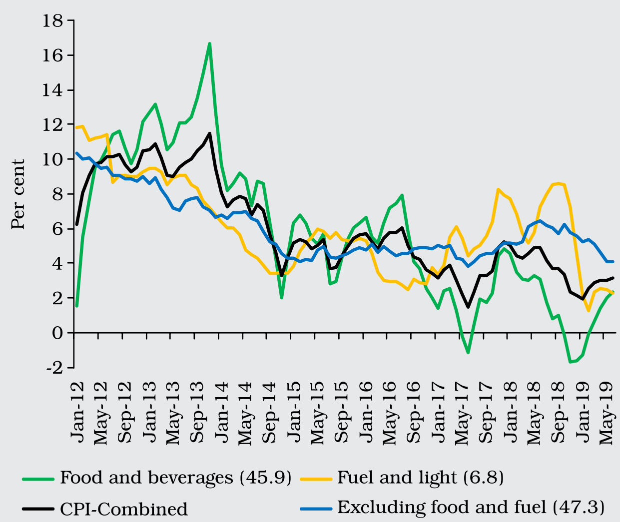
(Per cent)

Statistics	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7	8
Mean	10.0	9.4	5.8	4.9	4.5	3.6	3.4
Standard deviation	0.5	1.3	1.5	0.7	1.0	1.2	1.1
Skewness	0.2	-0.2	-0.1	-0.9	0.2	-0.2	0.1
Kurtosis	-0.2	-0.5	-1.0	-0.1	-1.6	-1.0	-1.5
Median	10.1	9.5	5.5	5.0	4.3	3.4	3.5
Maximum	10.9	11.5	7.9	5.7	6.1	5.2	4.9
Minimum	9.3	7.3	3.3	3.7	3.2	1.5	2.0

Note: Skewness and kurtosis are unit-free.
Source: National Statistical Office (NSO), and RBI staff estimates.

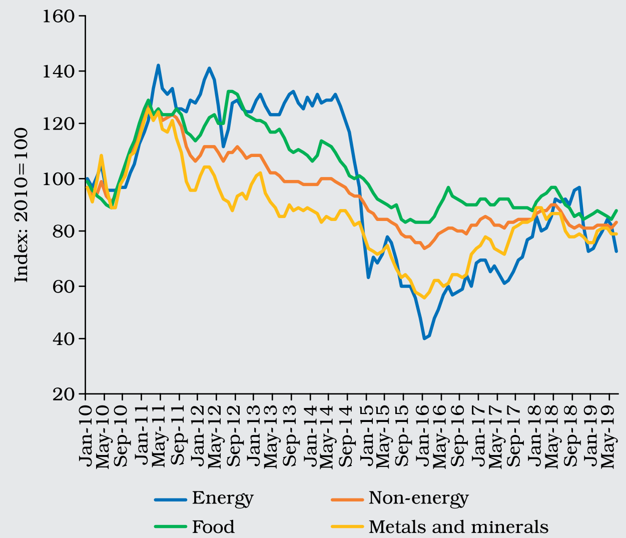
[8] Headline inflation is measured by year-on-year changes in the all-India CPI-Combined (Rural + Urban) with base year: 2012=100 released by the National Statistical Office (NSO), Ministry of Statistics and Programme Implementation, Government of India.

Chart II.2.1: Inflation across Major Components



Note: Figures in parentheses indicate weight in CPI-Combined.
Source: NSO, and RBI staff estimates.

Chart II.2.2: International Commodity Prices



Source: World Bank commodity price data (The Pink Sheet).

2. *Global Inflation Developments*

II.2.5 International food prices, especially of sugar, dairy products and edible oils, remained generally soft during 2018, reflecting abundant supply (Chart II.2.2). In the non-food category, price pressures in metals remained largely weak due to US-China trade tensions and weak global demand. Global crude oil prices reached US$ 77 per barrel[9] in October 2018 – the highest level since December 2014 – following the decision of the OPEC and non-OPEC producers, led by Russia, in November 2017 to extend cuts in oil production by 1.8 million barrels per day till the end of 2018, and US sanctions on exports from Iran. The price of the Indian basket of crude oil moved in tandem and rose to US$ 80 per barrel in October 2018. However, global crude oil prices softened sharply during November-December 2018 on concerns of oversupply amidst weakening of global growth and heightened trade tensions. Prices picked up again during January-March 2019 due to stricter compliance by OPEC members to voluntary reductions in production and increasing crude oil supply disruptions. The price of the Indian basket also increased to US$ 67 per barrel in March 2019 from US$ 58 per barrel in December 2018 in line with global prices.

II.2.6 Reflecting generally soft global commodity price conditions, consumer price inflation remained benign during 2018 and 2019 so far in a number of economies, both advanced and emerging markets. Wage growth remained sluggish despite lower unemployment, effectively muting potential price-wage feedback loops. Accordingly, inflation expectations also remained contained. Many EMEs also experienced easing of inflation pressures, except in countries like Argentina and Turkey faced with country-specific idiosyncrasies. In the second half of 2018, a number of global macro-economic developments such as escalation of US-China trade tensions, regulatory tightening in China to rein in debt, and tightening of financial conditions in line with monetary policy normalisation in some major advanced economies adversely impacted

[9] World Bank commodity price data (The Pink Sheet).

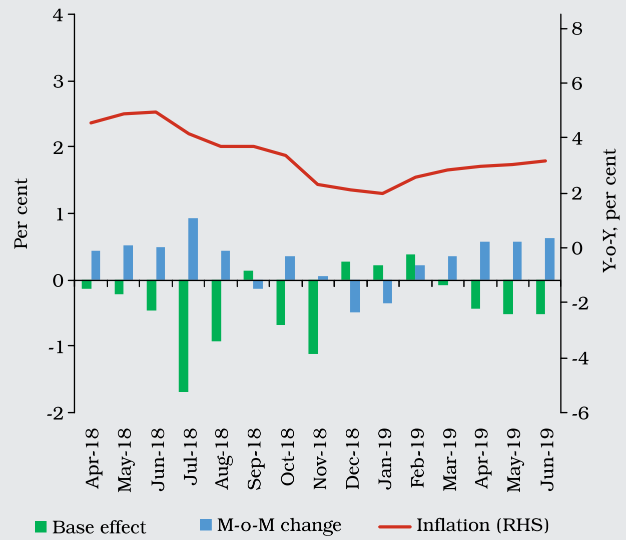
growth and thereby added to the downward pressure on commodity prices and inflation.

3. Headline CPI Inflation in India

II.2.7 Headline inflation in India eased during 2018-19 along with a marginal fall in its dispersion (Table II.2.1). The intra-year distribution of inflation was also more balanced relative to preceding year as reflected in the near zero positive skew. Furthermore, the higher negative kurtosis than a year ago suggests fewer instances of large deviations from mean inflation during the year, which is also reflected in the reduced gap between maximum and minimum inflation during the year. This change in the distribution of inflation was essentially brought about by movements in its constituents, mainly food, within a narrow range during the year.

II.2.8 At a disaggregated level, price pressures in food, and excluding food and fuel groups drove up headline inflation to an intra-year peak of 4.9 per cent in June 2018. Food price inflation eased thereafter, aided by favourable base effects. Contrary to usual historical price movements, the momentum of food prices turned negative from September 2018, dragging food prices into deflation in October 2018. The onset of the usual winter easing in prices of vegetables and fruits accentuated the decline to (-) 1.7 per cent in November 2018, the lowest in the new CPI series, and extended the deflation till February 2019. By January 2019, headline inflation had fallen from its intra-year peak by 295 basis points (bps) to 2.0 per cent, the lowest in 19 months (Chart II.2.3). Prices of fuel and light as well as those of excluding food and fuel group remained at elevated levels through the greater part of the year reflecting, *inter alia*, the hardening of international crude oil

Chart II.2.3: Movements in Headline Inflation



Source: NSO, and RBI staff estimates.

and natural gas prices and one-off surprises in respect of prices of some miscellaneous goods and services under the categories of health and education. Notably, inflation excluding food and fuel peaked at 6.4 per cent in June 2018 – the highest in almost four years.

II.2.9 An early pre-monsoon uptick in food prices set in from March 2019 and returned food inflation to positive territory. With prices of fuel and light rising and partly offsetting the modest easing of inflation excluding food and fuel, headline inflation moved up to 2.9 per cent in March 2019.

II.2.10 For the year 2018-19 as a whole, inflation eased by 17 bps from its level a year ago and by about 430 bps from its decennial average[10]. Households' inflation expectations (median) moderated during the second half of 2018-19 by 160 bps for three months ahead and 170 bps for one year ahead horizons. A decline in inflation expectations is also corroborated by more

[10] Based on back-casted series prior to 2012-13 as available in the Report of the Expert Committee to Revise and Strengthen the Monetary Policy Framework (Chairman: Urjit R. Patel), RBI, 2014.

forward-looking assessments by professional forecasters and in consumer confidence surveys.

4. Constituents of CPI Inflation

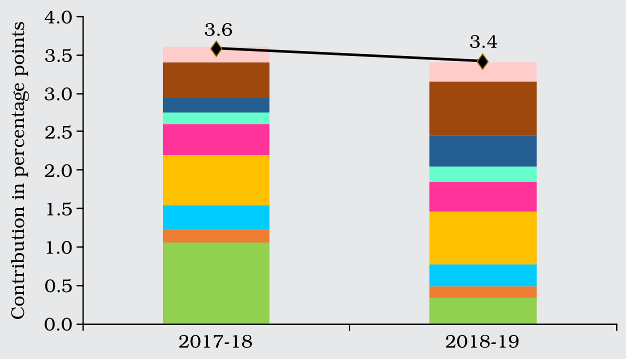
II.2.11 The composition of CPI inflation underwent significant shifts during 2018-19 (Chart II.2.4). Subsequent paragraphs discuss the key drivers of the sharp decline in food inflation, the volatile nature of fuel inflation, and the sharp upturn in inflation excluding food and fuel during 2018-19 as well as its easing in the closing months of the year.

Food

II.2.12 Inflation in food and beverages prices (weight: 45.9 per cent in CPI) plunged during the year, with its contribution to overall inflation dropping to 9.6 per cent in 2018-19 from 29.3 per cent a year ago. Bumper production levels during 2016-18 muted the pre-monsoon uptick in April-August 2018 and food prices began declining from September 2018 and went into deflation during October 2018-February 2019 (Chart II.2.5). Several factors stand out in this remarkable easing: first, the extended winter easing in vegetables prices from December 2017 through April 2018; second, the unprecedented fall in prices of fruits from June 2018 up to January 2019; third, the unusual easing of inflation in respect of cereals, and milk and products during the second half of the year; fourth, continuing deflation in pulses and products prices; and fifth, sugar price deflation becoming more pronounced during the year.

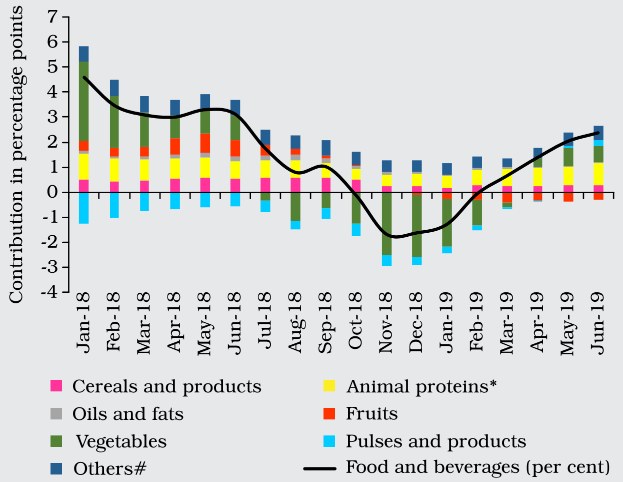
II.2.13 Drilling down into these key drivers, it is observed that as in the previous two years, prices of vegetables (weight: 13.2 per cent in CPI-food and beverages) became pivotal to the overall food inflation trajectory during 2018-19. The extended winter easing in vegetables prices was primarily driven by higher market arrivals of onions and tomatoes, aided by imports and the imposition of a minimum export price (MEP) for onions in November 2017. The pre-monsoon upturn in vegetables prices was less pronounced than in the past and was delayed till May 2018, but it peaked in July in sync with the historical pattern. Price pressures started easing from August, after which vegetables prices moved into contraction, led by a rise in market arrivals of potatoes, onions and

Chart II.2.4: Drivers of Inflation (Y-o-Y)



*: Includes recreation and amusement and personal care and effects.
Source: NSO, and RBI staff estimates.

Chart II.2.5: Drivers of Food Inflation (Y-o-Y)

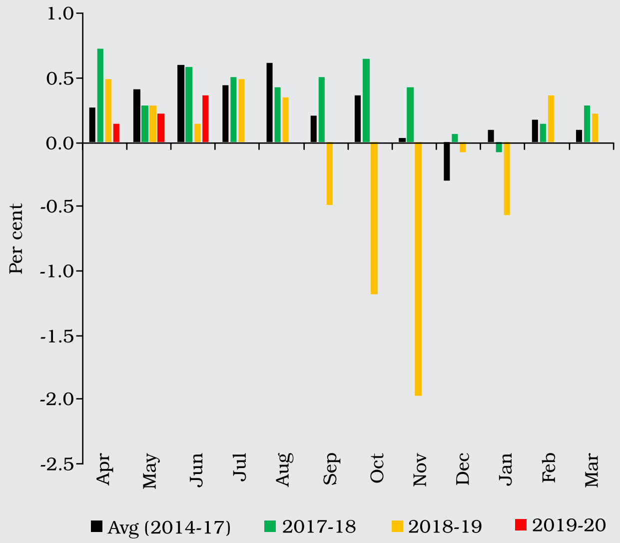


*: Includes meat and fish, egg, and milk and products.
#: Includes sugar and confectionery, spices, non-alcoholic beverages and prepared meals.
Source: NSO, and RBI staff estimates.

tomatoes. A timely winter contraction in prices took overall food group prices into deflation from October 2018, which continued up to February 2019. Barring prices of tomatoes, which were impacted by delayed harvesting in Maharashtra, fungus led crop-damage in Karnataka and cyclone *Gaja* driven crop loss in Tamil Nadu, prices of onions, potatoes and other major vegetables remained soft, until sharp recovery set in during March 2019 (Chart II.2.6a).

II.2.14 In the case of prices of fruits (weight: 6.3 per cent in CPI-food and beverages), summer upside pressures (April-May 2018) dissipated from June 2018 on account of robust domestic arrivals of mangoes and bananas (30.4 per cent of the total weight of CPI-fruits) and imports of apples and citrus fruits, and negative price momentum continued till January 2019. The downward trend in cumulative momentum from August 2018 defied the historical pattern and contributed considerably to the overall fall in food inflation during the year (Chart II.2.6b). Excluding vegetables and fruits, average food inflation would have been higher by around 92 bps at 1.6 per cent during 2018-19 (0.7 per cent including vegetables and fruits).

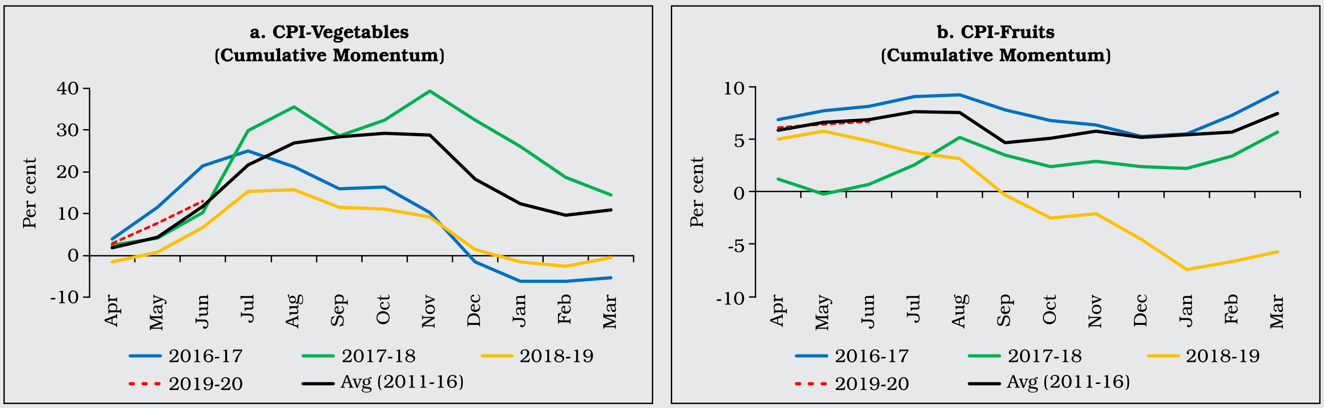
Chart II.2.7: CPI-Rice Momentum



Source: NSO, and RBI staff estimates.

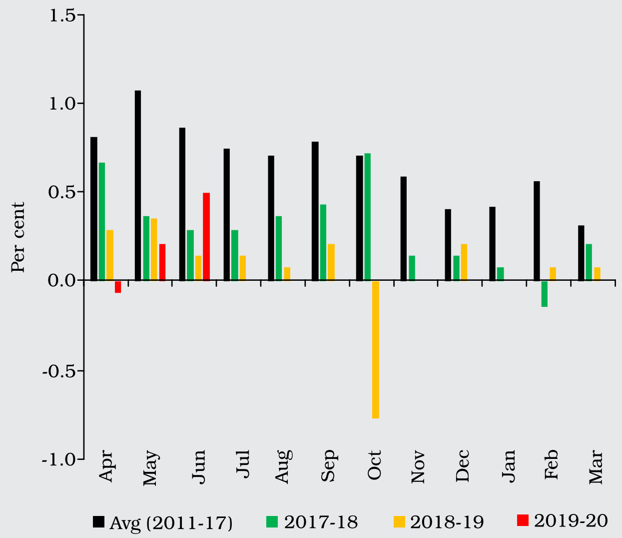
II.2.15 Among the other major food items, inflation in cereals and products prices (largest weight of 21.1 per cent in CPI-food and beverages), almost halved to 1.4 per cent in H2:2018-19. Notably, rice prices contracted for five consecutive months from September 2018, reflecting higher domestic production and adequate stocks (Chart II.2.7). The momentum of wheat prices generally remained strong during the year partly due to a fall in wheat imports caused by hike in import duty to 30 per cent in May 2018 from 20 per cent earlier. Inflation in

Chart II.2.6: Seasonality in Vegetables and Fruits Prices



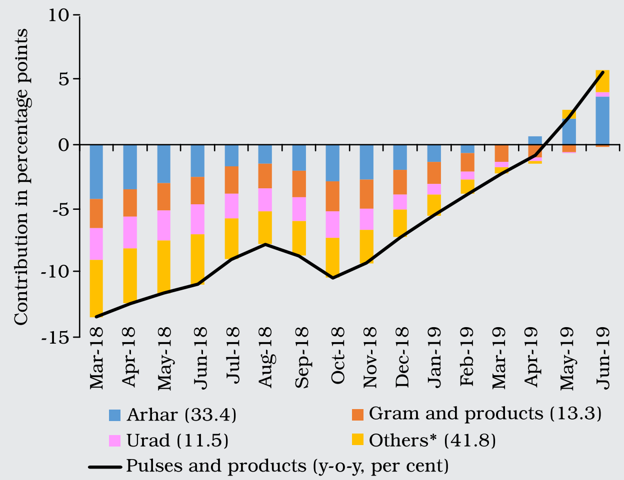
Source: NSO, and RBI staff estimates.

Chart II.2.8: CPI-Milk and Products Momentum



Source: NSO, and RBI staff estimates.

Chart II.2.9: Component-wise Contribution in CPI-Pulses Inflation



*: Includes *moong*, *masur*, peas, *khesari*, *besan* and other pulses and products.
Note: Figures in parentheses indicate weight in CPI-Pulses and products.
Source: NSO, and RBI staff estimates.

milk and products prices (weight: 14.4 per cent in CPI-food and beverages) eased to 0.8 per cent in H2:2018-19 from 2.9 per cent in H1, reflecting adequate domestic availability (Chart II.2.8).

II.2.16 Deflation in prices of pulses (weight: 5.2 per cent in CPI-food and beverages) persisted through 2018-19 due to sizeable excess supply (Chart II.2.9). The negative contribution of pulses to overall inflation decreased from (-) 17.9 per cent during 2017-18 to (-) 5.7 per cent in 2018-19 as *mandi* prices of *arhar* and *urad* edged towards their minimum support prices (MSPs).

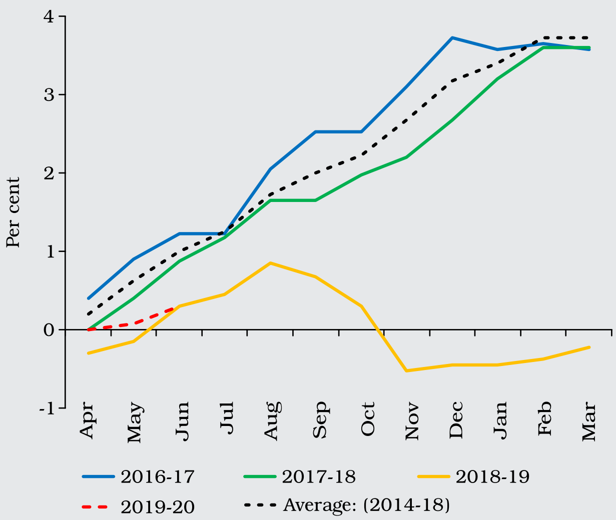
II.2.17 Prices of sugar and confectionery (weight: 3.0 per cent in CPI-food and beverages) remained in deflation since February 2018 reflecting excess supply conditions including increased open market sales. Domestic sugar prices have also closely tracked movements in global sugar prices. Price pressures in oils and fats (weight: 7.8 per cent in CPI-food and beverages) generally remained weak during the year in line with subdued international edible oils prices. Higher production of soybean and mustard during 2018-19 along with the reduction in import duty on crude palm oil, and refined, bleached and deodorised (RBD) palmolein imports from Malaysia and Indonesia, effective January 1, 2019, helped contain prices.

II.2.18 Prices of protein-rich items such as meat and fish (weight: 7.9 per cent in CPI-food and beverages) faced some upside pressures during H2:2018-19, largely reflecting higher prices of maize, which is a key input for poultry and animal feed.

Fuel

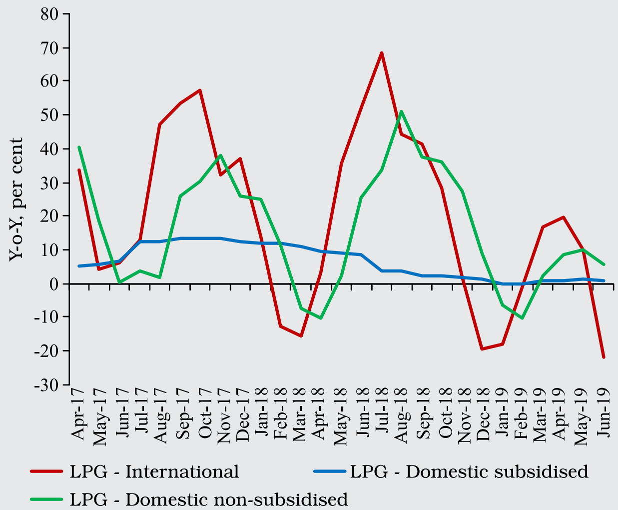
II.2.19 The contribution of the fuel group (weight: 6.8 per cent in CPI) to headline inflation remained unchanged at the previous year's level (11.3 per cent). Two distinct phases are discernible: first, a steep and sustained rise during H1:2018-19 to a peak of 8.6 per cent in September 2018; and second, a sharp softening in inflation during H2:2018-19 to touch a low of 1.2 per cent in February 2019. Domestic LPG and non-subsidised kerosene prices picked up during H1:2018-19 in line with the rise in international prices. Oil marketing companies

Chart II.2.10: CPI Electricity - Cumulative Momentum



Source: NSO, Petroleum Planning and Analysis Cell (PPAC),GoI; and Bloomberg.

Chart II.2.11: Movements in LPG Retail Prices



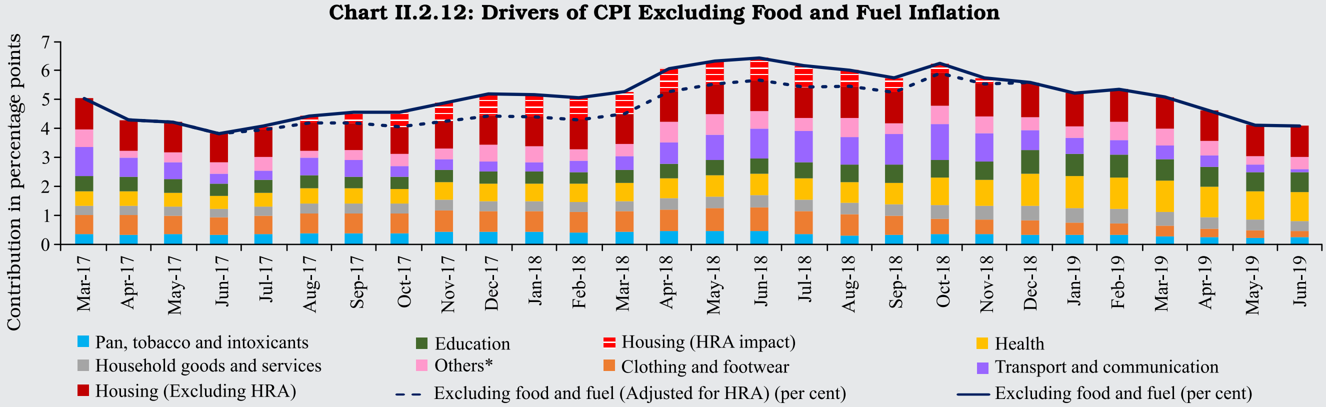
Source: Indian Oil Corporation Ltd. (IOCL), and Bloomberg.

also raised administered kerosene prices in a calibrated manner to phase out the kerosene subsidy. These dynamics, however, reversed during the second half of the year. The cumulative momentum in electricity prices began easing post-August 2018 and turned negative from November (Chart II.2.10). Firewood and chips price pressures remained muted throughout the second half of the year. Domestic LPG prices contracted during December 2018-February 2019, primarily tracking global LPG price movements (Chart II.2.11).

Inflation Excluding Food and Fuel

II.2.20 After remaining moderate at 4.6 per cent during 2017-18 (4.7 per cent during 2015-18), inflation excluding food and fuel surged to 5.8 per cent during 2018-19 (Appendix Table 4), with an intra-year peak of 6.4 per cent in June 2018 (highest since August 2014) (Chart II.2.12). In this category, the momentum of increase in prices of miscellaneous goods and services, which comprise 60 per cent of the category, was noteworthy. Within this sub-category,

Chart II.2.12: Drivers of CPI Excluding Food and Fuel Inflation

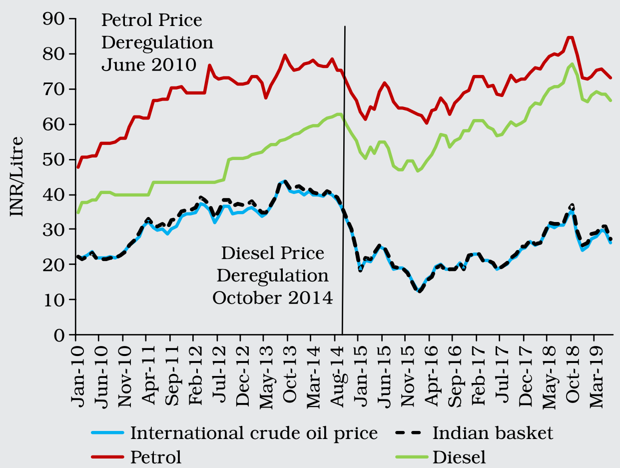


*: Includes recreation and amusement and personal care and effects.
Source: NSO, and RBI staff estimates.

health and education prices surprised on the upside especially in rural areas during October-December 2018 and in respect of medicines, hospital and nursing home charges, prices of books and journals, and fees of private tutors and coaching centres.

II.2.21 Among other items within the miscellaneous category, price pressures remained strong in respect of household goods and services, and transport and communication, the latter impacted by the increase in domestic petrol and diesel prices in line with international price movements (Chart II.2.13). In order to contain price pressures, the central government announced a cut in petrol and diesel prices by ₹2.5 per litre on October 4, 2018 by reducing excise duty by ₹1.5 per litre and asking oil companies to absorb ₹1.0 per litre. Several state governments also announced matching cuts by lowering local taxes. During November-December 2018, however, domestic petrol and diesel prices fell in line with international prices, thus containing transport and communication inflation. Prices

Chart II.2.13: Domestic Oil Price Trends



Note: International crude oil price represents the average price of WTI, Brent and Dubai Fateh.

Source: World Bank Pink Sheet Database, Indian Oil Corporation Ltd. (IOCL), and Petroleum Planning and Analysis Cell (PPAC), GoI.

of recreation and amusement – particularly, charges of cable television connection – and those of personal care and effects (particularly, prices of gold and silver and fast moving consumer goods like toiletries and cosmetics) posed upside pressures in February 2019. In March 2019, an unexpected softening in the momentum of housing prices, fall in gold prices and a favourable base effect pulled down inflation in the category as a whole. As a result, inflation excluding food and fuel fell from 6.2 per cent in October 2018 to 5.2 per cent in January 2019 and further to 5.1 per cent in March 2019, after a marginal uptick in February.

II.2.22 Net of housing, inflation excluding food and fuel averaged 5.6 per cent in 2018-19, up from 4.1 per cent in the previous year. The statistical impact of the increase in house rent allowance (HRA) for central government employees under the 7th Pay Commission started waning from July 2018 and dissipated completely by December 2018. Reflecting this, housing inflation followed a downward trajectory from July 2018 onwards to reach 4.9 per cent in March 2019, from a five-year peak of 8.5 per cent in April 2018.

II.2.23 Clothing and footwear inflation also saw substantial easing to an intra-year low of 2.5 per cent in March 2019, reflecting the impact of lower export of readymade garments to UAE and Saudi Arabia subsequent to the imposition of a value added tax (VAT) of 5 per cent for the first time in January 2018. In terms of the Cotton A index, international prices of cotton, a major input into clothing production, also fell during the major part of the year (particularly July 2018-February 2019) barring some recovery in March 2019.

5. Other Indicators of Inflation

II.2.24 During 2018-19, sectoral CPI inflation based on Consumer Price Index of Industrial Workers (CPI-IW) increased significantly to 7.7 per cent in March 2019 from 4.0 per cent in April 2018, largely due to housing. The housing index under the CPI-IW is adjusted twice a year – in January and July (in contrast to the continuous adjustment under CPI-Combined). Inflation based on the Consumer Price Index of Agricultural Labourers (CPI-AL) and the Consumer Price Index of Rural Labourers (CPI-RL), which do not have housing components, eased during June-November 2018 before picking up during December 2018-March 2019.

II.2.25 Inflation measured by the Wholesale Price Index (WPI) showed mixed movements during 2018-19. It reached an intra-year peak of 5.7 per cent in June 2018 due to price pressures emanating from all the three major groups (*i.e.*, primary articles, fuel and power, and manufactured products) before easing to 4.6 per cent in August 2018. It picked up again during September-October 2018, driven by a sharp uptick in prices of all three major groups, however, it moderated to 3.1 per cent in March 2019, led by a significant softening of price pressures in fuel and power during November 2018-January 2019, which track international prices. On an annual average basis WPI inflation picked up to 4.3 per cent in 2018-19 from 2.9 per cent in 2017-18. A similar rising trend was also visible in the GDP deflator, which picked up to 4.1 per cent in 2018-19 from 3.8 per cent in 2017-18.

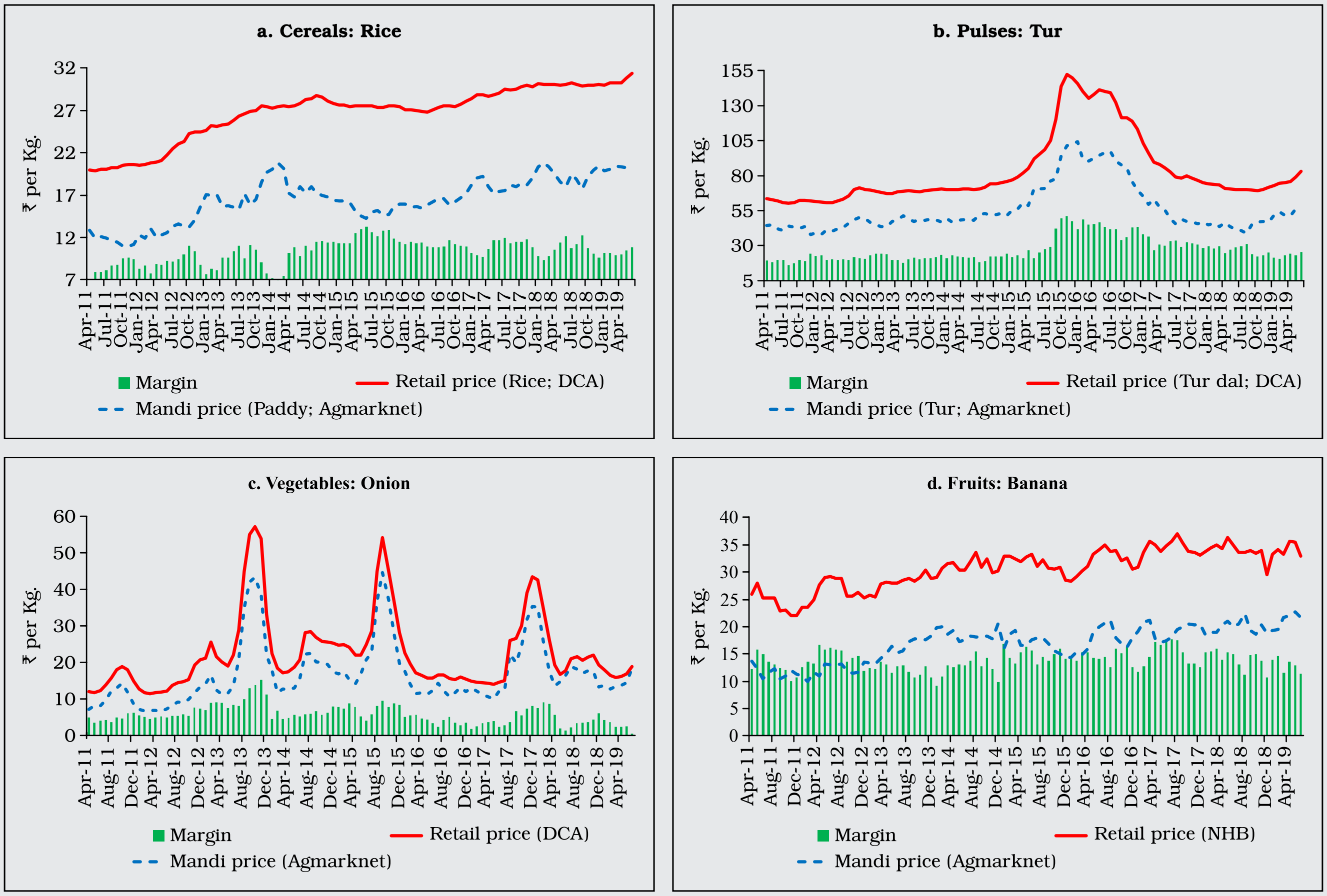
II.2.26 Major increases in MSPs were announced during 2018-19 for *kharif* crops, in line with the provisions of the Union Budget, 2018-19, to ensure at least 50 per cent return over costs (A2+FL)[11]. As a result, MSP of paddy (common) was hiked by 12.9 per cent (from ₹1,550 per quintal in 2017-18 to ₹1,750 per quintal in 2018-19). The extent of MSP increases varied across crops, ranging from 3.7 per cent in the case of *urad* to 52.5 per cent for *ragi*. While the impact of MSP increases was reflected in *mandi* prices of many crops, there was no commensurate increase in consumer prices owing to abundant domestic availability across major food items. Secondary data reveal that mark-ups (*i.e.*, the difference between retail and *mandi* prices) vary across crops and over time (Chart II.2.14). In view of data gaps impeding a full tracking of wholesale/*mandi* price changes into retail inflation, a primary survey was undertaken to understand the behaviour of multi-stage margins over the supply chain for key agricultural commodities in India (Box II.2.1).

II.2.27 Wage growth for agricultural and non-agricultural labourers generally remained subdued during the year, averaging around 4.0 per cent, reflecting low food inflation. In the case of the corporate sector, pressures from staff costs largely remained range-bound during the year.

II.2.28 In sum, headline inflation softened during 2018-19, mainly reflecting significantly low food inflation. With the domestic and global demand-supply balance of key food items expected to remain favourable, the short-term outlook for food inflation remains benign. Spike in vegetables prices from their lows in 2018-19, especially during the summer months, poses some upside risk. The spatial and temporal distribution of

[11] A2 indicates actual costs (all expenses, in cash and in kind, incurred by farmers on seeds, fertilisers, chemicals, hired labour, fuel, irrigation, *etc*.) and FL indicates imputed value of unpaid family labour.

Chart II.2.14: *Mandi* Price *vs.* Retail Price across Key Food Items

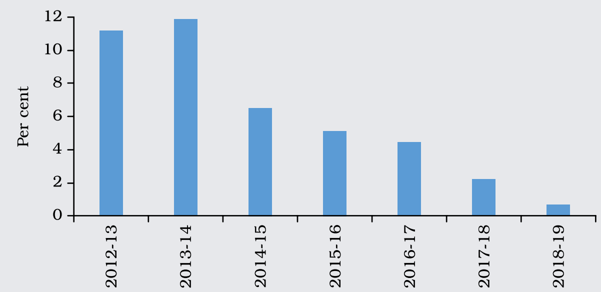


Source: Agmarknet; Department of Consumer Affairs (DCA), GoI; and National Horticulture Board (NHB).

Box II.2.1
Supply Chains and Food Inflation Dynamics

In India, food inflation underwent sustained moderation from 2014-15 (Chart 1). Excess supply conditions relative to demand engendered by successive bumper production during 2016-18 have structurally dampened inflationary impulses (please see Box II.1.4). Alongside, improvements in supply chain dynamics – wider road networks; low cost access to mobile phones enabling easier flow of information between deficit and surplus centres; speedier movement of shipments in the post-GST common market; financial inclusion and spread of micro-finance enabling easier access to working capital for small traders and retailers – may also have contributed to this sustained moderation.

Chart 1: CPI-Food and Beverages Inflation



Source: NSO, and RBI staff estimates.

Available empirical research highlights the influence of mark-ups between farm-gate and retail prices in explaining food inflation and its volatility (Bhattacharya, 2016). Literature also highlights that in the absence of government intervention, behaviour of traders and big retailers could aggravate inflationary impact of a negative supply shock (Lahiri and Ghosh, 2014).

A pan-India survey was conducted in December 2018 to understand supply chain dynamics in the context of

(Contd...)

Table 1: Survey Coverage

Mandi/Centre				Group/Commodities	
Respondents	Consumption Centres	Production Centres	Total	Major Groups	Commodities
				Cereals	Paddy/Rice
Farmers	1,147	1,664	2,811	Pulses	*Tur*, *Moong*, *Urad*, Bengal gram
Traders	2,176	1,008	3,184	Oilseeds	Groundnut, Soybean
Retailers	2,356	1,052	3,408	Vegetables and fruits	Onion, Potato, Tomato, Green chillies, Brinjal, Apple, Banana, Coconut
Total	**5,679**	**3,724**	**9,403**	Spices	Turmeric, Red chillies

the sustained moderation in food inflation. The survey covered a total of 9,403 respondents comprising farmers (2,811), traders (3,184) and retailers (3,408) spread across consumption and production centres (Table 1). It was conducted in 85 *mandis* spread across 16 states covering 16 major *kharif* food crops which form part of the CPI food basket.

The findings revealed that farmers' share in retail prices vary between 28-78 per cent across 14 crops[12] – lower in the case of perishables (vegetables) and higher for non-perishables (oilseeds and spices). Mark-ups are influenced by a number of factors – commissions and *mandi* charges; loading/unloading charges; packing, weighing and assaying charges; transport costs; shop rentals and local taxes; storage costs and membership fees. Cash was reported as the dominant mode of transactions in *mandis,* with its share ranging between 84-93 per cent. Further, it was found that retailers' margins are generally higher than the traders' margins in consumption centres, due to significant product loss at the marketing stage, particularly for perishables. 62 per cent of farmers revealed that their selling prices were higher than their production costs. As regards government policies, minimum support prices (MSPs) and readily available market information are helpful to farmers in realising better prices. Farmers also revealed that reliable weather forecasts, improved storage facilities and government advisory on crops could help them take better cropping decisions. A majority of the traders viewed that improving storage facility and allowing free trade is important, while most retailers believed that government intervention and better availability of information could help in arresting price rise.

Using the survey data, the following multivariate regression equation was estimated by the Ordinary Least Squares (OLS) method, pooling data across crops and states:

$$Markup_{ic} = \alpha + \beta_1 \; Infrastructure_i + \beta_2 \; Socioeconomic\; characteristics_i + \beta_3 \; Agricultural\; statistics_i + \beta_4 \; Commodity\; dummy_c + \beta_5 \; State\; dummy_i + \varepsilon_{ic} \quad ...(1)^{13}$$

where, i and c represent states and commodities, respectively.

The results indicate that improvement in infrastructure such as tele-density (per 100 persons), road density and number of wholesale markets to gross cropped area reduce mark-ups of both traders and retailers. Furthermore, while increase in per capita income influences traders' mark-up positively, literacy rate influences retailers' mark-up negatively.

On the whole, multi-stage mark-ups across crops play an important role in determining the trajectory of food inflation. Surveys can play an important role in gauging the interaction between traders and retailers in mark-up formation during periods of shifts in food inflation behaviour.

References:

1. Lahiri, H., and A. N. Ghosh (2014), 'Government's Role in Controlling Food Inflation', in Ghosh, A., and A. Karmakar (eds.) *Analytical Issues in Trade, Development and Finance, India Studies in Business and Economics*, Springer India.
2. Bhattacharya, R. (2016), 'How does Supply Chain Distortion Affect Food Inflation in India', *NIPFP Working Paper Series,* No. 173.

monsoon will have a bearing too, although the recent catch-up in rainfall may likely mitigate the risk. The outlook for global crude oil prices is hazy, both on the upside and downside. Should the recent slowdown in domestic economic activity accentuate, it may have a bearing on the outlook for inflation.

[12] Farmers' share in retail prices is reported for those crops where substantial data were available.
[13] Mark-up is defined as selling price *less* cost price as a percentage of cost price.

II.3 MONEY AND CREDIT

II.3.1 During 2018-19, monetary and credit conditions aligned with their pre-demonetisation trends and they increasingly reflected underlying macroeconomic and financial developments, often with lead information content. Reserve Money (RM), which had expanded robustly in 2017-18 on the back of a surge in new currency into circulation, reverted to long-term trend growth in 2018-19. In the process, India's currency-GDP ratio increased to 11.2 per cent in 2018-19 from 10.7 per cent a year ago with the expansion matched by liquidity injection through LAF operations as well as outright open market purchases among the sources of reserve money and reflected in net domestic assets in the form of net RBI credit to the Government. By contrast, the RBI's foreign exchange interventions drained liquidity during the year.

II.3.2 Broad Money picked up further in 2018-19, leaving behind a prolonged 10-year deceleration[14]. Deposit growth, has firmed up steadily from December 2017, *albeit* from a secular slowdown that commenced in August 2009. Credit growth turned up ahead of deposit growth *i.e.*, from November 2017 as appetite for lending to the commercial sector improved, especially to less-financially stressed sectors of the economy like households and services along with infrastructure, and subsequently the credit to GDP gap narrowed. The overall brightening of the credit climate compensated for the decline in non-bank sources of resource flow and boosted the total flow of resources to the commercial sector.

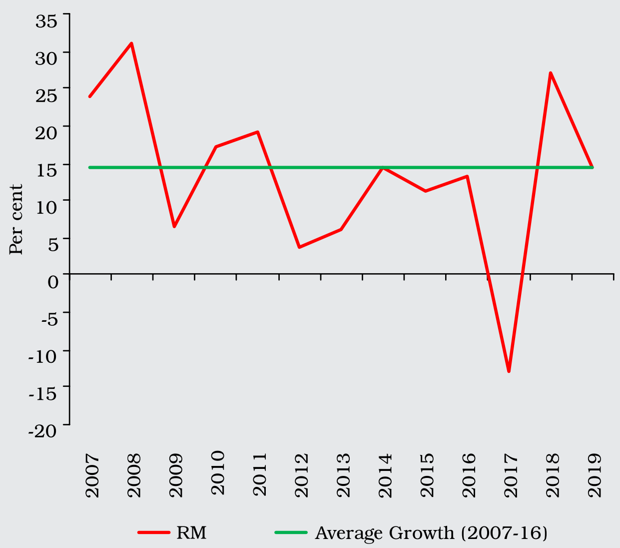
II.3.3 In this milieu, immediately following sub-section on RM brings to the fore, developments pertaining to cash intensity and digital transactions, and the re-emergence of net RBI credit to the government as the largest source of expansion during the year. The follow-up sub-section 3 on money supply indicates recovery in deposit growth and steady increase in credit growth. The credit growth story at both macro and sectoral levels has been covered in sub-section 4.

2. Reserve Money

II.3.4 RM which is essentially an analytical and stylised presentation of the balance sheet of the RBI, focuses on the monetary liabilities of the Reserve Bank. Expanding at 14.5 per cent in 2018-19, it stood a little below its decennial trend (14.6 per cent during 2007-16) after a hiatus in 2016-17 representing the impact of demonetisation (Chart II.3.1; Appendix Table 4). RM growth was 13.5 per cent as on June 28, 2019.

II.3.5 In terms of its components, 87 per cent of expansion in RM in 2018-19 took the form of currency in circulation (CiC). The usual seasonal

Chart II.3.1: RM Growth (end-March)

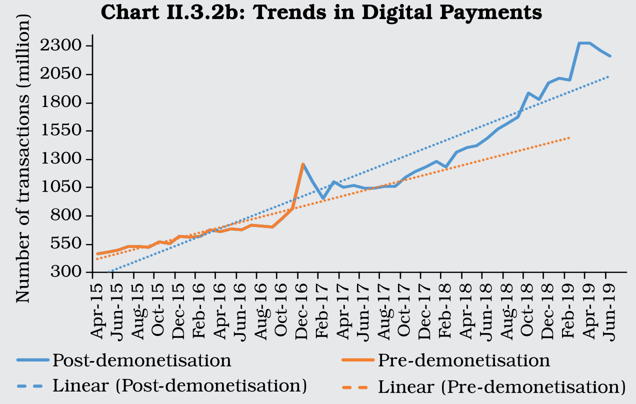


Source: RBI.

14 Except a marginal acceleration of 0.1 per cent in 2012-13.

Chart II.3.2a: Currency-GDP Ratio

Chart II.3.2b: Trends in Digital Payments



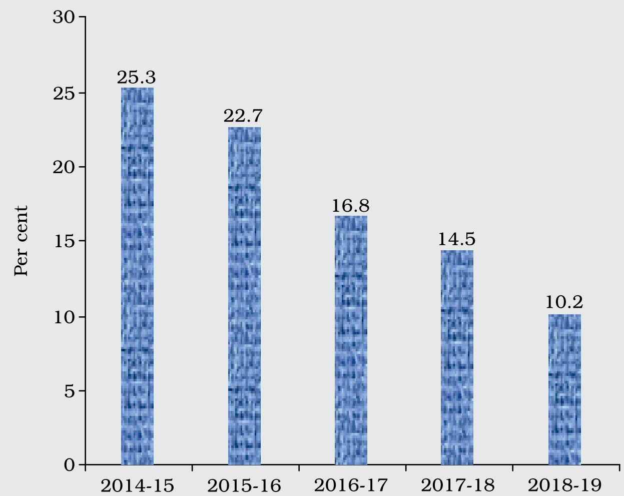
Source: RBI.

spurt in currency demand in Q1- associated with festivals, *rabi* procurement and *kharif* sowing - gave way to a seasonal contraction in the next quarter as cash returned to the system with the ebbing of agricultural activity. Thereafter, however, CiC expanded almost monotonically as cash demand for the *kharif* harvest and festivals in Q3, and the *rabi* harvest crops beginning in Q4 was amplified by election-related spending. In spite of CiC growth of 16.8 per cent for the year as a whole, the currency-GDP ratio remained lower than 11.6-12.2 per cent observed during 2011-2016, perhaps indicating decline in cash intensity of the economy (Chart II.3.2a). The space vacated by cash appears to have been occupied by retail digital payments (Chart II.3.2b).

II.3.6 Bankers' deposits with the Reserve Bank, the other major component of RM[15], remained broadly stable during the year. Nonetheless, higher deposit mobilisation and an unchanged CRR caused them to grow by 6.4 per cent, faster than 3.9 per cent in the previous year. With active liquidity management operations by the Reserve Bank including front-loaded measures to help market participants through the 'year-end balance sheet' phenomenon, banks' demand for excess reserves has been steadily declining over recent years (Chart II.3.3).

II.3.7 Amongst the sources, net domestic assets (NDA) and net foreign assets (NFA) underwent compensating variations, unlike in the preceding year when the large increase in RM

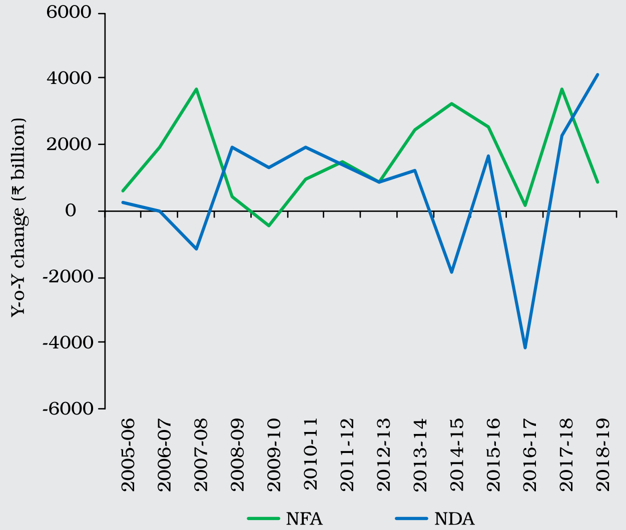
Chart II.3.3: Excess Reserves of Scheduled Commercial Banks (end-March)



Source: RBI.

[15] RM also includes other deposits among its components, which mainly comprises Depositors' Education and Awareness Fund, balances of foreign central banks, balances of Indian financial institutions, among others.

Chart II.3.4: Variation in Domestic and Foreign Assets of the RBI



Source: RBI.

was driven by an expansion in both (Chart II.3.4). Within NDA, net RBI credit to the government contributed 93 per cent of the expansion in RM in 2018-19, boosted by liquidity injections through open market operations (OMO) to the tune of ₹3.0 trillion and a decline in cash balances of the government with the RBI of the order of ₹0.4 trillion. The OMO purchases which began from May 2018, intensified in the subsequent months throughout the year, barring August. The other constituent of NDA *i.e.*, net claims on banks and the commercial sector, by way of LAF operations smoothened transient liquidity mismatches, increasing by ₹895 billion over their level in the previous year. Two distinct phases, in their operations were evident; persisting reverse repo mode in Q1 and most part of Q2 to mainly drain away the liquidity slosh in the system due to government spending; and largely repo mode in the rest of the year as liquidity conditions tightened sharply under the impact of forex sales and currency leakage. Notably, system liquidity experienced shortages despite injection of durable liquidity through OMOs of the order of ₹3.0 trillion, the highest in any year so far.

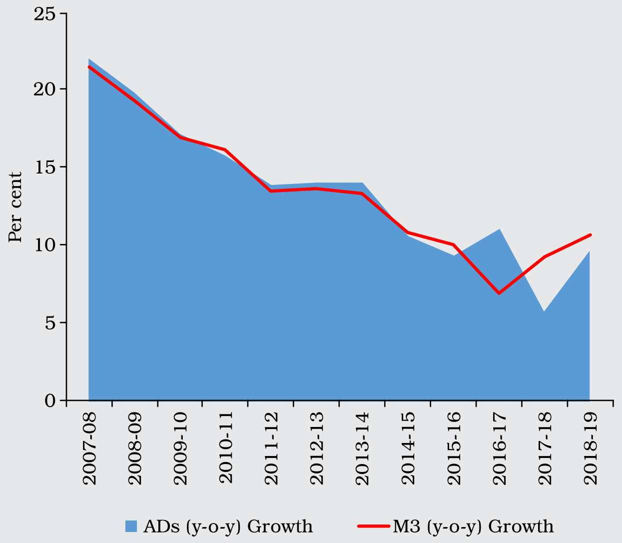
II.3.8 By contrast, NFA was impacted by the Reserve Bank's intervention in the foreign exchange market, with net sales of foreign currency to authorised dealers of ₹1.12 trillion (purchases of ₹2.23 trillion a year ago). This depletion was, however, counter balanced by increase in aid receipts, net interest/discount earned, gold and valuation gains. During the year, the Reserve Bank augmented its liquidity management toolkit by injecting rupee liquidity for longer duration through long-term foreign exchange buy/sell swap. In March 2019, the Reserve Bank undertook USD/INR swaps of US$5 billion with a maturity of three years to inject rupee liquidity, which also recouped some of NFA losses during the year.

3. Money Supply

II.3.9 Money supply, measured by the broad monetary aggregate or M3, expanded at steady pace, its growth rate averaging 10.2 per cent during the year, after having fallen to a historic low of 5.6 per cent in September 2017. M3 growth stood at 10.1 per cent as on June 21, 2019.

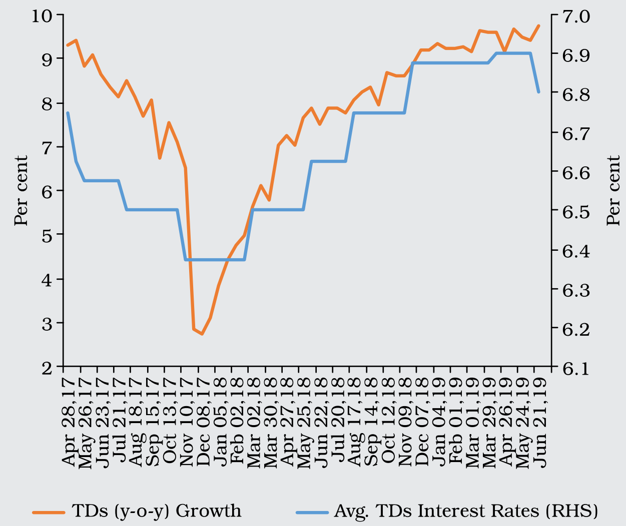
II.3.10 Among the components, aggregate deposits (ADs) grew by 9.6 per cent (5.8 per cent in the previous year) and accounted for 80 per cent of the increase in M3 during the year (Chart II.3.5). An upturn in the momentum of time deposits (TDs), the major constituent of ADs, started in Q4 of 2017-18 and was strong enough to overcome unfavourable base effects so as to persist through 2018-19, co-moving with interest rates on these deposits (Chart II.3.6). Decomposition of aggregate deposits into trend and cyclical components reveals the predominance of the latter. As usual, demand deposits remained volatile and moved in lateral inversions of variations in currency with

Chart II.3.5: Aggregate Deposits and M3 (y-o-y) Growth



Source: RBI.

Chart II.3.6: Y-o-Y Growth and Interest Rate

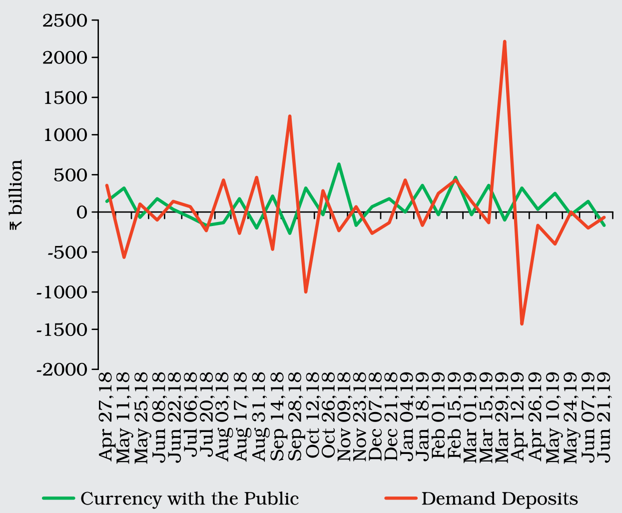


Source: RBI.

the public (Chart II.3.7). In the event, demand deposits expanded faster than in the preceding year. The growth of currency with the public stabilised at 16.6 per cent during the year after the post-demonetisation surge of 39.2 per cent in the previous year.

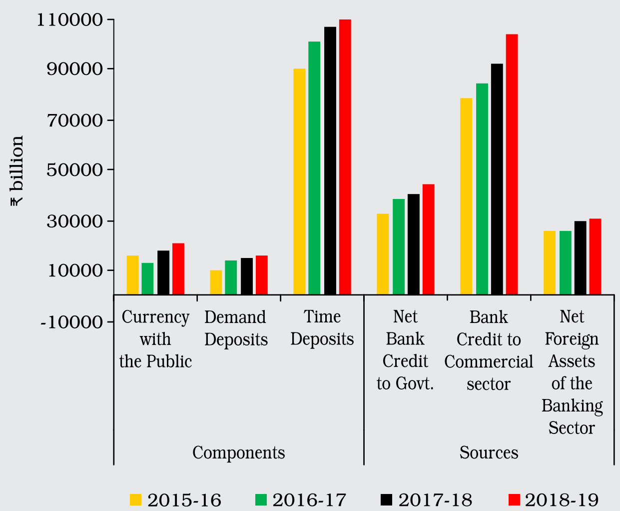
II.3.11 From the sources side, bank credit to the commercial sector accounted for 79 per cent of the expansion in M3 during 2018-19 (Chart II.3.8 and Table II.3.1). After its prolonged deceleration, the recovery in credit growth started during the later part of 2017-18 and got entrenched on the back of robust lending to services sector and in the form of personal loans. Net bank credit to government increased during 2018-19 essentially due to higher net credit from the Reserve Bank,

Chart II.3.7: Currency with the Public and Demand Deposits: Fortnightly Variation



Source: RBI.

Chart II.3.8: Broad Money (M3): Components and Sources



Source: RBI.

Table II.3.1: Monetary Aggregates

Item	Outstanding as on March 31, 2019 (₹ billion)	Year-on-year Growth (per cent)		
		2017-18	2018-19	2019-20 (as on June 21)
1	2	3	4	5
I. Reserve Money	27,705	27.3	14.5	13.5
II. Broad Money (M3)	154,309	9.2	10.5	10.1
III. Major Components of M3				
1. Currency with the Public	20,522	39.2	16.6	12.8
2. Aggregate Deposits	133,469	5.8	9.6	9.6
IV. Major Sources of M3				
1. Net Bank Credit to Government	43,878	3.8	9.7	8.7
2. Bank credit to Commercial Sector	103,802	9.5	12.7	11.5
3. Net Foreign Exchange Assets of the Banking Sector	30,708	14.2	5.1	10.4
V. M3 net of FCNR(B)	152,706	9.2	10.5	10.1
VI. M3 Multiplier	5.6			

Note: 1. Data are provisional.
2. The latest data for RM pertains to June 28, 2019.

Source: RBI.

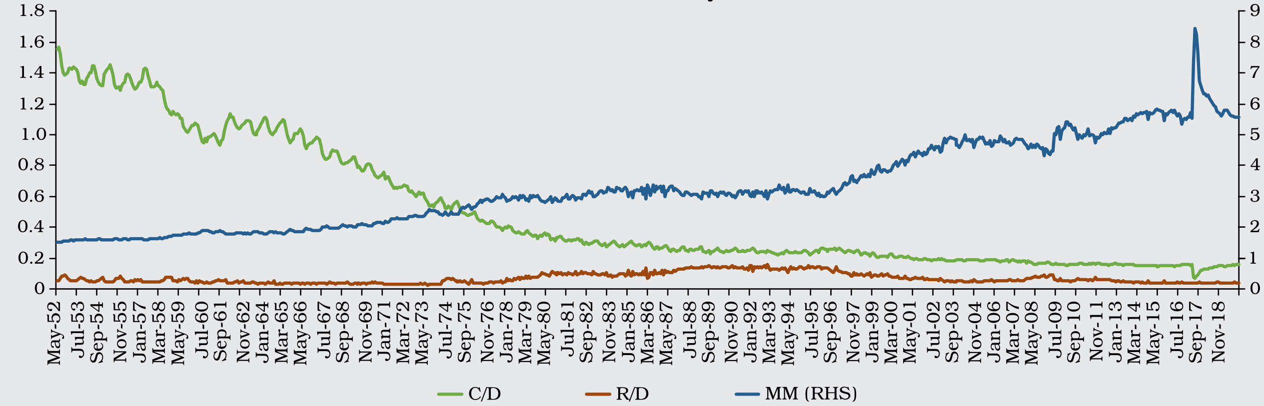
as alluded to earlier, even as commercial banks' investment in government securities grew modestly. Net foreign exchange assets of the banking sector decelerated, reflecting sales of foreign exchange by the Reserve Bank as explained in the preceding sub-section.

Key Monetary Ratios

II.3.12 The key behavioural parameters that drove the formation of monetary aggregates converged gradually towards their pre-demonetisation (2008-16) trends during 2018-19. With the pace of expansion in currency running above trend on a combination of factors (addressed in sub section 2) and significantly ahead of deposit growth, the currency-deposit (C/D) ratio rose in 2018-19 to levels last recorded during the pre-demonetisation (2008-16) phase indicative of persisting structural liquidity tightness. The money multiplier (MM), which measures the expansionary/contractionary effects of the Reserve Banks' balance sheet on money supply in the economy, underwent three distinct phases in a historical perspective. A rising trend during 1950-75 (from 1.5 to 3.0) characterised the period, reflecting monetary accommodation as money demand for investment driven growth in the economy was amplified by nationalisation of banks and establishment of all India financial institutions (Chart II.3.9). This was followed by a stable period till 1995 as a result of the weakening pace of deposit mobilisation due to near stagnancy in per capita income growth. Thereafter an increasing phase set in that has extended till date propelled, *inter alia,* by the step-up in the demand for money associated with a higher growth trajectory, visitations of capital flows and a reduction in reserve ratios – in fact, structural break in the path of the MM is detected in June 1999. As on June 21, 2019, MM stood at 5.6 same as in the previous year.

II.3.13 The reserve-deposit (R/D) ratio is shaped by regulatory norms – an increase in R/D restrains money supply and *vice versa,* and conveys the stance of monetary policy. Not surprisingly, therefore, it is a stable ratio, hovering between 0.04-0.06 except during 1975-2000 when monetary policy essentially relied on reserve

Chart II.3.9: Monetary Ratios



Source: RBI.

requirements in its counter cyclical role of reining in the expansionary effects of fiscal activism. The C/D ratio which captures the public's preference for cash *vis-à-vis* banking habits, is inversely related to MM. Over the years, the C/D ratio has been consistently declining, pointing to the expanding reach of banking services consequent upon nationalisation in 1969 and in 1980, financial inclusion and literacy, emphasising rural/unbanked areas and innovations in payment and settlement which have reduced cash dependence.

4. Credit

II.3.14 SCBs' credit to the commercial sector steadied during the year and rose by 13.3 per cent on March 31, 2019 (10.0 per cent a year ago) from a historic low of 3.7 per cent in March 2017. Double digit credit growth was recorded from December 2017, with a recent peak of 15.1 per cent in November 2018. Several supply side developments provided a congenial environment for credit growth to firm up and sustain - some reduction in balance sheet stress; recapitalisation of public sector banks (PSBs); calibrated reduction in SLR morphed into the liquidity coverage ratio (LCR); growing traction in the IBC process; and aggressive efforts towards asset recoveries/write-off/sales as well as provisioning. These developments underscore the critical role of availability of sufficient capital in enhancing credit growth (Box II.3.1). SCBs' credit growth stood at 12.0 per cent as on June 21, 2019 (12.8 per cent a year ago).

II.3.15 Credit growth was mainly driven by momentum, despite unfavourable base effects during 2018-19 (Chart II.3.10), and was supported by higher mobilisation of deposits during the year. This eventually resulted in a reduction in the incremental credit-deposit ratio from unusually high levels a year ago (Chart II.3.11). The credit-to-GDP gap has been narrowing from its recent peak in June 2017 though it remains negative, implying scope for further increase in credit growth without overheating (Chart II.3.12).

II.3.16 As on March 31, 2019, non-food credit (NFC) rose 12.3 per cent over 8.4 per cent a year ago, driven mainly by flows to large-scale industry and the services sector. Among bank groups, credit extended by PSBs accelerated to 9.6 per cent in March 2019 from 5.3 per cent a year ago. Credit growth by private sector banks accelerated to 19.9 per cent from 18.7 per cent a year ago, benefiting from their niche orientation towards personal loans which are also stress-lite (Chart II.3.13).

Box II.3.1
Role of Capital in Bank's Lending Behaviour

India's banking sector has been beset by a large overhang of balance sheet stress which, in turn, contributed to a slowdown in credit growth. In addition, the phased implementation of Basel III and higher provisioning requirements significantly expanded capital requirements. Typically, information asymmetries in the credit market and especially, imperfect information availability pushes up the cost of borrowings of capital starved banks in view of poor substitutability between retail deposits and wholesale funding (Kashyap and Stein, 1995). These constraints tend to ease for sufficiently capital endowed banks. A well-capitalised bank may also face lower risk premium while borrowing from the capital market (Gambacorta and Shin, 2018).

A panel Generalised Method of Moments (GMM) model estimated on annual data for 30 banks[16] from 2008-09 to 2017-18 reveals that an increase in leverage leads to a rise in cost of funds. On the other hand, higher CRAR is found to reduce the cost of funds for banks. Credit growth decreases with an increase in cost of funds and NPAs. On the other hand, it increases as CRAR rises - one percentage point increase in the CRAR results in loan growth rising by 3 percentage points.

Dynamic Panel Regression Results:

$$\text{Cost of funds} = \underset{(0.01)^{**}}{-0.02} + \underset{(0.03)^{***}}{0.40}\,\text{Cost of funds}_{t-1} + \underset{(0.01)^{***}}{0.03}\,\text{Leverage}_{t-1} - \underset{(0.00004)}{0.00006}\,\text{GNPA ratio}_{t-1} + \underset{(0.0002)^{***}}{0.004}\text{MP}_{t-1} - \underset{(0.0002)^{***}}{0.005}\text{CRAR}_{t-1}$$

AR (1) test p-value=0.00, AR (2) test p-value=0.20, Hansen test p-value=1.00.

$$\text{Loan growth} = \underset{(2.13)^{***}}{15.47} + \underset{(0.02)^{***}}{0.18}\,\text{Loan growth}_{t-1} - \underset{(0.26)^{***}}{1.55}\,\text{Cost of funds} - \underset{(0.0004)^{***}}{0.004}\,\text{GNPA ratio}_{t-1} + \underset{(0.003)^{***}}{0.03}\,\text{CRAR}_{t-1}$$

AR (1) test p-value=0.00, AR (2) test p-value=0.23, Hansen test p-value=0.71

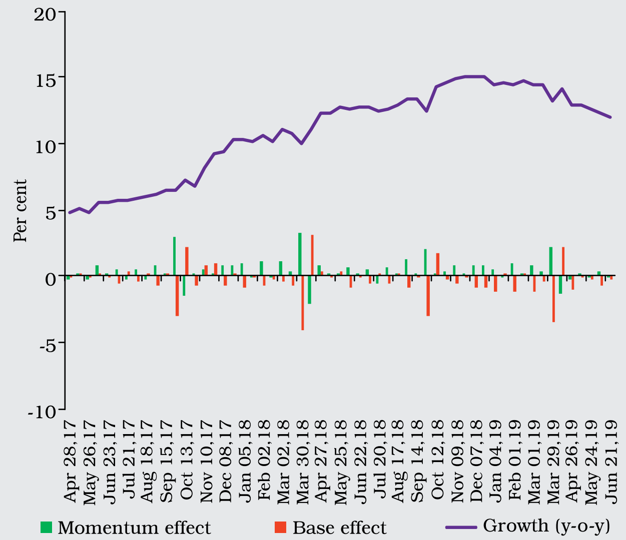
MP: Monetary Policy Rate

**p-value < 0.1,* ***p-value < 0.05,* *** *p-value < 0.01. Standard errors are in parentheses.*

References:

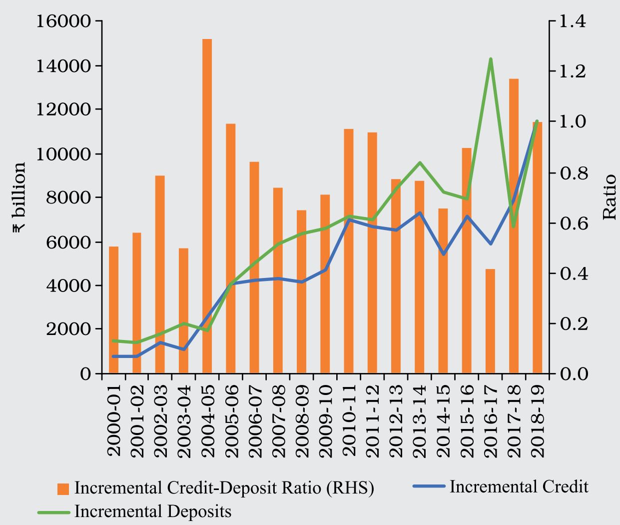
1. Gambacorta, L., and Shin, H. S. (2018). Why Bank Capital Matters for Monetary Policy. *Journal of Financial Intermediation*, 35, 17-29.
2. Kashyap, A. K., and Stein, J. C. (1995). The Impact of Monetary Policy on Bank Balance Sheets. *Carnegie-Rochester Conference Series on Public Policy (Vol. 42, pp. 151-195)*. North-Holland.

Chart II.3.10: SCBs' Credit Growth: Momentum and Base Effect



Source: RBI.

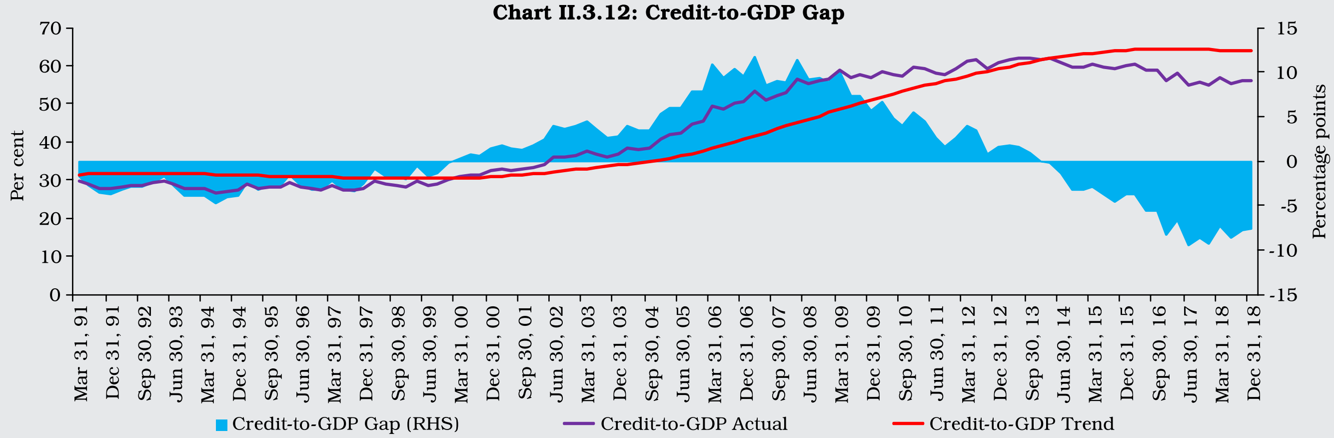
Chart II.3.11: Incremental Credit-Deposit ratio



Source: RBI.

16 Banks are chosen by taking their share in overall SCBs' loans and advances in 2017-18, which is about 91 per cent.

Chart II.3.12: Credit-to-GDP Gap



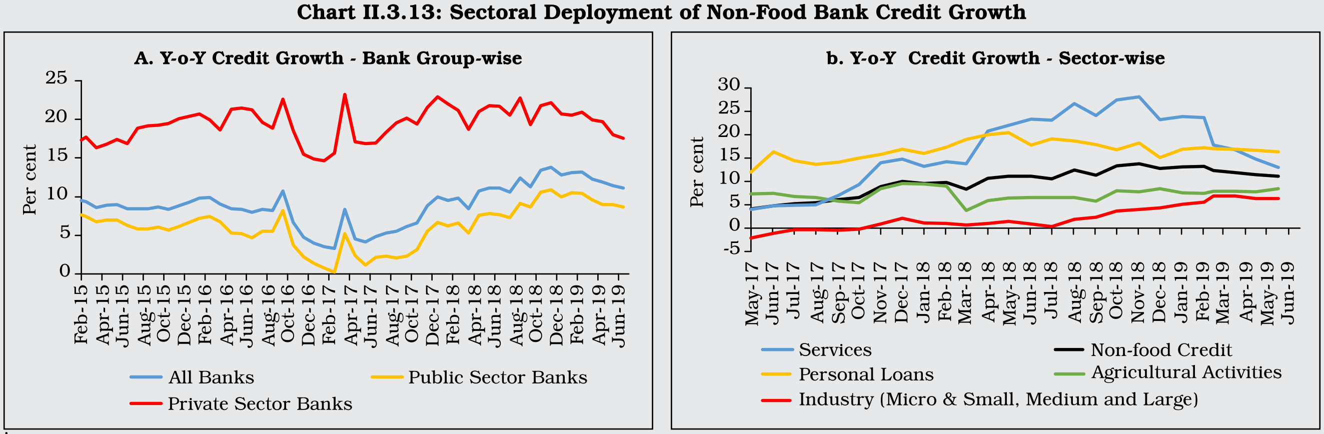
Source: Bank for International Settlements (BIS).

Sectoral Credit Deployment by Banks

II.3.17 Credit growth to agriculture accelerated to 7.9 per cent in March 2019 from 3.8 per cent a year ago, driven by foodgrains and horticulture production (Table II.3.2). Credit to industry accelerated to 6.9 per cent in March 2019 from 0.7 per cent in March 2018. Within industry, a pick-up in credit was reasonably broad-based but accentuated towards infrastructure; engineering; cement and cement products; glass and glassware; construction; and chemical and chemical products. Credit to infrastructure, in particular, accelerated to 18.5 per cent in March 2019 as against a contraction of 1.7 per cent last year, driven largely by higher credit offtake by roads and power segments, urban transport, affordable housing and renewable energy. On the other hand, credit to some segments, *viz*., basic metal and metal products; and textiles decelerated/contracted reflecting persisting stress.

II.3.18 Credit to the services sector maintained double-digit growth and expanded by 17.8 per cent by end-March 2019 as compared with 13.8 per cent a year ago, pulled up mainly by non-banking financial companies (NBFCs). Credit growth to other segments, *viz*., wholesale trade, commercial real estate and transport operators also accelerated. Personal loans growth remained healthy, although it moderated to 16.4

Chart II.3.13: Sectoral Deployment of Non-Food Bank Credit Growth



Source: RBI.

Table II.3.2: Credit Deployment to Select Sectors

Sectors	Outstanding as on March 29, 2019	Year-on-Year Growth (per cent)		
	(₹ billion)	2017-18*	2018-19#	2019-20##
1	2	3	4	5
Non-food Credit (1 to 4)	**86,334**	**8.4**	**12.3**	**11.1 (11.1)**
1. Agriculture & Allied Activities	**11,113**	**3.8**	**7.9**	**8.7 (6.5)**
2. Industry (Micro & Small, Medium and Large)	**28,858**	**0.7**	**6.9**	**6.4 (0.9)**
2.1. Micro & Small	3,755	0.9	0.7	0.6 (0.7)
2.2. Medium	1,064	-1.1	2.6	2.2 (2.7)
2.3. Large	24,039	0.8	8.2	7.6 (0.8)
(i) Infrastructure	10,559	-1.7	18.5	15.2 (0.0)
of which:				
(a) Power	5,690	-1.1	9.5	9.7 (-1.2)
(b) Telecommunications	1,156	-0.6	36.7	20.9 (6.8)
(c) Roads	1,869	-7.5	12.2	14.6 (-5.7)
(ii) Chemicals & Chemical Products	1,915	-5.5	17.5	11.1 (2.3)
(iii) Basic Metal & Metal Product	3,716	-1.2	-10.7	-10.3 (-5.5)
(iv) Food Processing	1,571	6.8	1.1	1.2 (3.3)
3. Services	**24,156**	**13.8**	**17.8**	**13.0 (23.3)**
4. Personal Loans	**22,207**	**17.8**	**16.4**	**16.6 (17.9)**
5. Priority Sector	**27,390**	**4.8**	**7.3**	**10.2 (6.3)**

*: March 2018 over March 2017. #: March 2019 over March 2018. ##: June 2019 over June 2018.

Figures in brackets indicate growth rates in June 2018 over June 2017.

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

Source: RBI.

per cent by end-March 2019 from 17.8 per cent a year ago, pulled down by deceleration in vehicle and education loans.

II.3.19 During Q1:2019-20, non-food credit maintained double digit growth on a y-o-y basis as in the previous year. Sector-wise, credit to both ‘agriculture & allied activities’ and ‘industry’ accelerated to 8.7 per cent (6.5 per cent last year) and 6.4 per cent (0.9 per cent last year) respectively, while credit to the services sector moderated to 13.0 per cent (23.3 per cent last year) in June 2019. It is noteworthy that credit growth to infrastructure sector recovered sharply to 15.2 per cent in June 2019 mainly due to strong credit flow to power, telecommunications and roads sectors.

Flow of Financial Resources to Commercial Sector

II.3.20 During 2018-19, there has been an improvement in the total flow of financial resources to the commercial sector, which increased by 4.2 per cent on a year-on-year basis (Table II.3.3). While flows from non-banks declined, flows from banking sources, *i.e.*, non-food bank credit recorded an increase and met the financing requirements of the commercial sector.

II.3.21 The decline in flows from non-banks was mainly on account of lower flows from non-deposit taking systemically important NBFCs (net of bank credit to NBFCs) and housing finance companies, particularly in the aftermath of IL&FS event. Moreover, lower issuances of debt and equity instruments by non-financial entities

Table II.3.3: Flow of Financial Resources to Commercial Sector

(₹ Billion)

Source	April - March			April - June	
	2016-17	2017-18	2018-19	2018-19	2019-20
1	2	3	4	5	6
A. Adjusted non-food Bank Credit	**4,952**	**9,161**	**12,300**	**-182**	**-1,764**
i) Non-Food Credit	3,882	7,959	11,467	-316	-1,530*
of which: petroleum and fertiliser credit	133	27	75	-46	-143
ii) Non-SLR Investment by SCBs	1,070	1,202	833	133	-235*
B. Flow from Non-banks (B1+B2)	**9,547**	**11,603**	**9,342**	**2,837**	**2,441**
B1. Domestic Sources	**6,789**	**8,219**	**5,474**	**2,266**	**1,429**
1. Public issues by non-financial entities	155	438	106	39	533
2. Gross private placements by non-financial entities	2,002	1,462	1,505	268	351
3. Net issuance of CPs subscribed to by non-banks	1,002	-254	1,361	1,233	191
4. Net Credit by housing finance companies	1,374	2,198	1,465	412	143@
5. Total accommodation by 4 RBI - regulated AIFIs - NABARD, NHB, SIDBI & EXIM Bank	469	950	1,136	274	115
6. Systemically important non-deposit taking NBFCs (net of bank credit to NBFCs)	1,510	3,046	-397		
7. LIC's net investment in corporate debt, infrastructure and social sector	277	378	300	40	96
B2. Foreign Sources	**2,758**	**3,385**	**3,867**	**571**	**1,012**
1. External Commercial Borrowings / FCCB	-509	-51	696	-101	396
2. ADR/GDR Issues excluding banks and financial institutions	-	-	-	-	-
3. Short-term Credit from abroad	435	896	152		
4. Foreign Direct Investment to India	2,833	2,540	3,019	672	616@
C. Total Flow of Resources (A+B)	**14,500**	**20,764**	**21,642**	**2,655**	**677**
Memo: Net resource mobilisation by Mutual Funds through Debt (non-Gilt) Schemes	1,206	-59	-1,211	-383	-148

@: Up to May 2019. *: Data pertain to the period April-June 21, 2019.

Note: (i) Due to change in categorisation of mutual fund schemes by SEBI, data on net resource mobilisation by mutual funds through debt (non-gilt) schemes from April 1, 2019 onwards may not be comparable with previous years' data.

and lower investment by LIC in corporate debt, infrastructure and social sector also resulted in lowering financial flows in 2018-19 from their levels a year ago. In contrast, there was a sharp increase in commercial paper issuances, coupled with higher accommodation by four All India Financial Institutions (AIFIs) regulated by the Reserve Bank. Among foreign sources, external commercial borrowings (ECB)/foreign currency convertible bonds (FCCB) recorded net inflows for the first time in the last four years. FDI flows, which account for a major share of non-bank finance to the commercial sector, increased by 18.9 per cent. On the other hand, short-term credit from abroad declined during the year as import growth decelerated.

II.3.22 To sum up, the monetary aggregates and the behavioural ratios pointed to underlying economic activity gaining resilience although it is important to note that this improvement is set against the backdrop of a slowdown that began since 2010-11. Credit conditions improved through both demand and supply side factors. Progress in capitalisation and initiatives to resolve stressed assets facilitated higher credit offtake from PSBs. Sector-wise, sustained growth of credit to services along with restarting of industrial credit flows was the notable feature of the steady improvement in the appetite of banks to lend during 2018-19. The total flow of resources to the commercial sector, led by banks, recorded an increase.

II.4 FINANCIAL MARKETS

II.4.1 Global financial markets turned volatile for most part of 2018-19 as global spillovers in the form of monetary policy normalisation in the US, trade frictions and elevated crude oil prices triggered risk aversion towards emerging market economies (EMEs) as an asset class, sparking sell-off in financial assets and currency depreciations in these economies, as investors scrambled to safe havens. Towards the later part of the year, however, signs of slowdown in global growth and trade prompted accommodative monetary policy stances by major central banks. With receding trade war fears and easing of crude oil prices providing tailwinds, risk appetite returned during the last quarter of the year allowing financial markets to regain poise and post sporadic rallies, especially in EMEs. Currencies that had suffered losses due to the general strengthening of the US dollar also managed to recoup some losses and traded with an appreciating bias, barring those impacted by country-specific idiosyncratic factors.

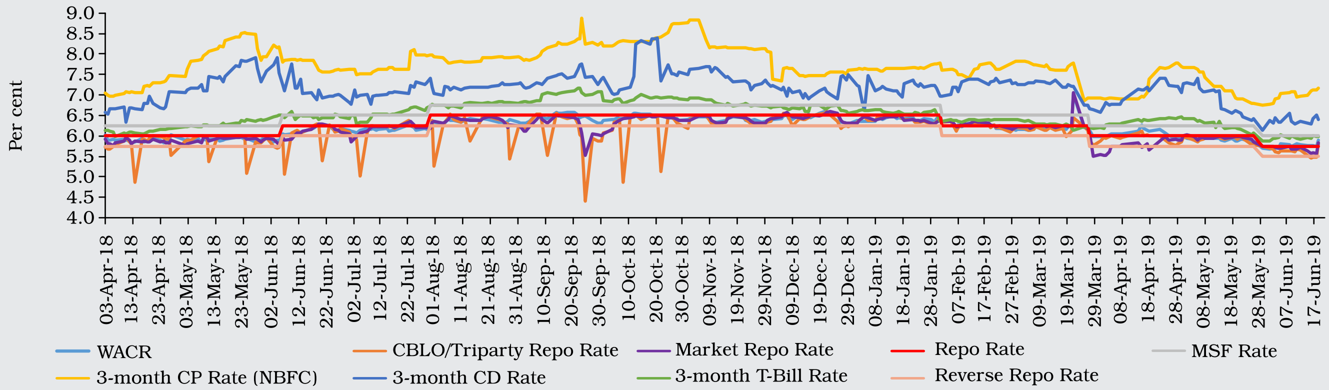
II.4.2 Indian equity markets exhibited resilience in the face of the EME-wide sell-off until August 2018 before plummeting in September 2018 with the unfolding of the credit event pertaining to Infrastructure Leasing & Financial Services Limited (IL&FS), a systemically important non-deposit accepting core investment company (CIC-ND-SI) registered with the Reserve Bank. Sentiment was adversely impacted by a series of defaults by IL&FS in repayments of commercial papers (CPs), non-convertible debentures (NCDs) and bank loans and the subsequent rating downgrades of IL&FS and a few other NBFCs. In the currency market, the Indian rupee depreciated tracking other EME currencies but the ebbing of global risks brought back portfolio flows in H2:2018-19. In the money market, as discussed in sub-section 2, overnight money market rates remained aligned with the policy repo rate, with active liquidity management by the Reserve Bank providing buffers in the context of adverse global developments. In the domestic bond market, G-sec yields hardened during H1:2018-19 on the back of increase in crude oil prices, rise in the US Treasury yields and sustained foreign portfolio outflows. In H2:2018-19, the trend reversed on account of easing of crude oil prices, enhanced open market operation (OMO) purchase auctions by the Reserve Bank and decline in US Treasury yields, as discussed in sub-section 3. Sub-section 4 presents developments in the corporate bond market. Sub-section 5 discusses developments in domestic equity market. Sub-section 6 profiles the rupee's recovery in the foreign exchange market in H2:2018-19 after bouts of downward pressures in the first half of the year.

2. Money Market

II.4.3 The money market remained generally stable during 2018-19 barring episodes of volatility in the commercial paper (CP) and certificates of deposit (CD) markets in the first and third quarter. Liquidity conditions altered gradually from surplus during Q1:2018-19 to deficit during rest of the year. The Reserve Bank proactively managed frictional liquidity conditions through both variable and fixed rate repos and reverse repos of various tenors, along with 14-day variable rate repos and recourse to the marginal standing facility (MSF). In order to address durable liquidity shortages caused by the Reserve Bank's forex interventions and the expansion in currency in circulation, the Reserve Bank conducted outright purchase of government securities through OMOs. Furthermore, the Reserve Bank augmented its liquidity management toolkit towards the close of the year by adding long-term foreign exchange buy/sell swaps as an instrument to inject rupee liquidity for longer durations.

II.4.4 The weighted average call rate (WACR) in the unsecured inter-bank call money market

Chart II.4.1: Key Policy and Money Market Rates



Source: RBI, FBIL and Bloomberg.

remained aligned with the policy repo rate through the year, *albeit* with a downward bias (Chart II.4.1). The negative spread of the WACR over the policy rate averaged 8 basis points (bps) but narrowed as liquidity conditions gradually tightened in the H2:2018-19.

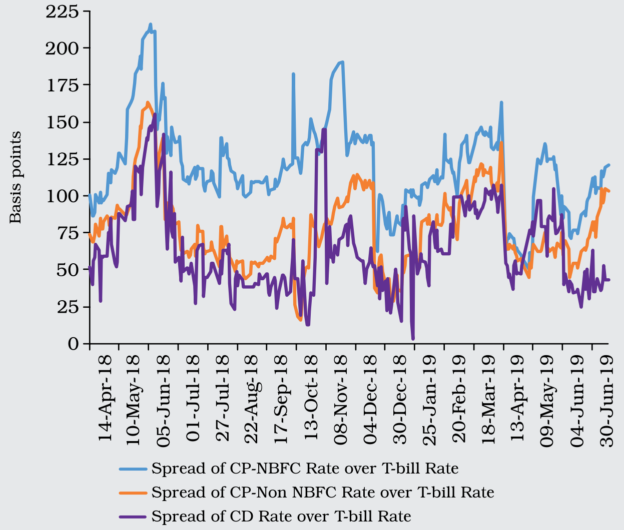
II.4.5 Even as spreads narrowed, volatility in the call money segment, measured by the standard deviation[17] of the WACR, increased moderately over its level a year ago, especially in the H1:2018-19, reflecting the swings in liquidity conditions. In the overnight segment of the money market, the share of call money and triparty repo increased whereas the share of market repo declined, especially after the introduction of triparty repo on November 5, 2018 in place of the Collateralised Borrowing and Lending Obligation (CBLO). Borrowings in triparty repo have been exempted from maintenance of the cash reserve ratio (CRR), like borrowings in the market repo segment. During 2018-19, the CBLO/triparty repo and market repo rates remained below the WACR, on average, by 9 bps and 2 bps, respectively.

II.4.6 Average daily volume in the money market (call money, CBLO/triparty repo and market repo taken together) increased by 12 per cent to ₹1,895 billion during 2018-19 from ₹1,687 billion in 2017-18. Volumes in the CBLO/triparty repo and market repo segments increased by 14 per cent and 5 per cent, respectively, to account for 64 per cent and 27 per cent, respectively, of the total overnight money market volume during 2018-19 as compared with 63 per cent and 29 per cent, respectively, in 2017-18. In the call money segment too, volumes increased by 29 per cent during the year, raising its market share to 9 per cent from 8 per cent a year ago.

II.4.7 Interest rates on longer tenor money market instruments, *viz.,* 3-month Treasury Bills (T-Bills), CDs and CPs generally moved in sync during 2018-19. However, the spread of CP and CD rates over T-Bill rate widened during the Q1:2018-19 until the first week of June 2018 (Chart II.4.2) on account of higher fund raising to meet the liquidity coverage ratio (LCR) requirement. Spreads subsided after LCR carve-out from the statutory liquidity ratio (SLR) was increased in June 2018 monetary policy review which reduced the demand for bulk deposits. Consequent to the IL&FS episode, CP spreads

[17] Calculated based on 30 days rolling methodology.

Chart II.4.2: Spread of 3-Month CP and CD Rate Over 3-Month T-Bill Rate



Source: Bloomberg and FBIL.

widened again in September until mid-November and were also impacted by the tightening of liquidity conditions.

II.4.8 In the primary market, fresh issuance of CDs increased to ₹5,653 billion during 2018-19 as compared with ₹4,403 billion a year ago. Issuance of CPs also increased to ₹25,964 billion in 2018-19 from ₹22,925 billion in 2017-18, mainly by private corporates and non-bank financial companies (NBFCs). The weighted average discount rates in the primary CP market, which hardened from September until mid-November on account of increased risk perception resulting from the IL&FS episode, softened thereafter till the end of March 2019 as risks subsided.

II.4.9 During Q1:2019-20, money market remained stable with WACR being aligned with the policy repo rate. Liquidity condition, as reflected by the daily net LAF positions, turned into surplus mode in June 2019 mainly on the back of surge in the Government spending and injection of durable liquidity by the Reserve Bank. The Government also resorted to the Ways and Means Advances (WMA).

3. G-sec Market

II.4.10 The aggregate volume of transactions in central government and state governments dated securities (G-secs and SDLs) and T-Bills (outright as well as repo) declined by 5.7 per cent during 2018-19. In Q1, the G-sec yields hardened by 51 bps on the back of a sharp rise in crude oil prices, firming up of the US treasury yields to 3.0 per cent – first time since January 2014 – concerns regarding the pace of rate hikes by the US Fed and upside risks to domestic inflation as flagged in the minutes of the monetary policy committee (MPC) meeting of April 2018.

II.4.11 During Q2, gilt yields softened up to end-July 2018, reflecting the easing of crude oil prices on expectation of increased supplies, lower than expected June inflation print and the announcement of OMO purchases. Yields, however, hardened thereafter, tracking the rebound in crude oil prices and depreciation of the rupee, touching a peak of 8.2 per cent on September 11, 2018. Yields softened towards the month-end and closed at 8.0 per cent on September 28, 2018, reflecting expectations of lower market borrowings by the central government in H2:2018-19.

II.4.12 In Q3, G-sec yields generally softened and fell by 65 bps amidst a decline in international crude oil prices, lower inflation in India and OMO purchase auctions. There was some intermittent hardening due to fiscal deficit concerns on account of the farm relief package.

II.4.13 During the last quarter, yields initially traded with an upside bias amidst deteriorating market sentiment on account of the rise in crude oil prices following production cuts by the OPEC and others. The 10-year benchmark yield rose by 11 bps during January 2019. Subsequently, it softened on the back of reduction in the policy repo rate by the Reserve Bank, downward revision of the projected inflation trajectory for

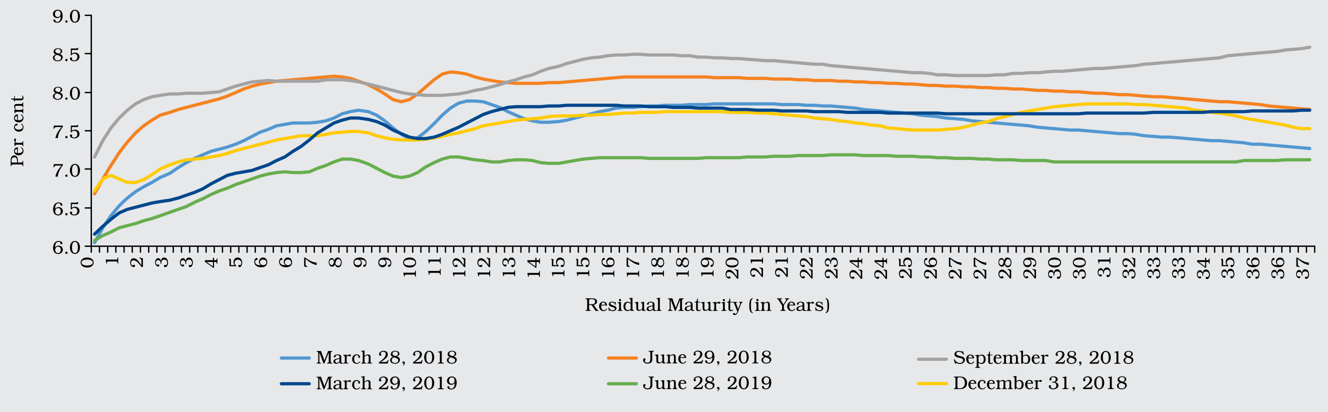
April to September 2019 and expectations of another rate cut in April 2019 triggered by the CPI falling to 19-month low of 2.0 per cent in January 2019. Additionally, provision of durable liquidity by the Reserve Bank and further softening of global yields, tracking dovish statement by the US Fed and the ECB boosted the sentiment. The yield of 10-year benchmark G-sec (7.17% GS 2028) closed marginally higher at 7.49 per cent as compared to 7.40 per cent a year ago (Chart II.4.3). During Q1:2019-20, G-sec yields softened on the back of policy easing by the MPC accompanied by a dovish guidance, softening of crude oil prices and fall in global yields on dovish outlook by the US Fed and the ECB.

II.4.14 With the objective of having a more predictable regime for investment by foreign portfolio investors (FPI), the FPI limits are now being revised on a half yearly basis under the medium-term framework (MTF)[18]. Accordingly, the investment limits for FPI in G-secs (including SDLs) was increased in a phased manner from ₹3,279 billion as on April 6, 2018 to ₹3,952 billion as on April 1, 2019, an increase of 21 per cent. FPI utilisation of the total available limit (inclusive of investments in SDLs), which stood at 74 per cent in April 2018, declined to 49 per cent in April 2019 due to outflows of ₹225 billion owing to disinvestments of G-sec in Q1:2018-19. This phenomenon was also observed in other EMEs. During Q2 and Q3, flows were moderate with little change in outstanding investments. In Q4, they were positive in corporate debt and equity, but outflows continued in the G-sec market.

4. Corporate Debt Market

II.4.15 Corporate bond yields largely tracked G-sec yields. The yield on 5-year AAA-rated corporate bonds hardened in H1:2018-19 on concerns over higher inflation, rising crude oil prices, increase in the US Treasury yields and 25 bps policy repo rate hike by the Reserve Bank in June 2018 and again in August 2018. However, the trend reversed during H2:2018-19 with softening of corporate bond yields, *albeit* at a slower pace than G-sec yields as the factors

Chart II.4.3: G-sec Yield Curve based on Zero Coupon



Source: FBIL.

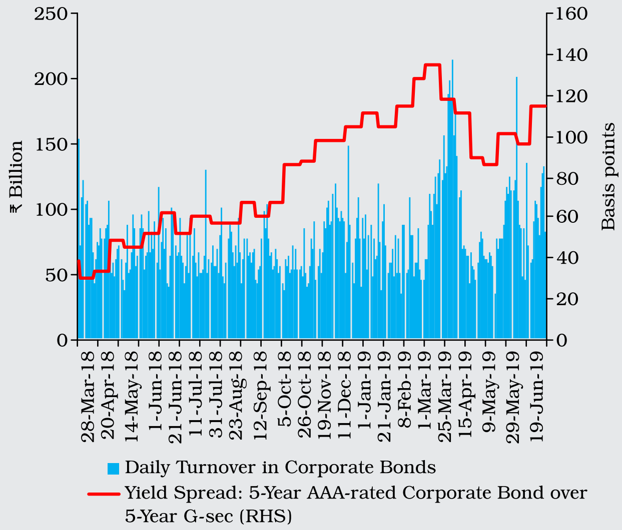
[18] The MTF for FPI limits in debt securities were worked out in October 2015 to have more predictable regime for FPI investment. Under the MTF, the limits for FPI investment in the central G-secs were increased in phases to reach 5 per cent of the outstanding stock by March 2018. In case of SDLs, this limit was fixed at 2.0 per cent of the outstanding stock by March 2018 in a phased manner. In April 2018, this limit was reviewed and the limit for FPI investment in G-secs were increased by 0.5 per cent each year to 5.5 per cent of outstanding stock of securities in 2018-19 and 6.0 per cent of outstanding stock of securities in 2019-20. The limit for FPI investment in SDLs were kept unchanged at 2.0 per cent of outstanding stock of securities. The actual revised limits for G-secs, SDLs and corporate bonds are now set out for April-September and October-March at the beginning of the year.

at play in the first half ebbed. Overall, the 5-year AAA-rated corporate bond yield increased by 14 bps to 8.10 per cent during 2018-19.

II.4.16 The spread of 5-year AAA-rated corporate bond yield over the corresponding G-sec yield widened by 79 bps, especially in H2, reflecting increased credit risk premia in the aftermath of the IL&FS event and liquidity squeeze faced by some NBFCs. Consequent to the Reserve Bank's announcement in March 2019 of injecting rupee liquidity through long-term foreign exchange buy/sell swap auction, both the yield and the spread declined significantly as the move was expected to reduce hedging cost. The average daily turnover in the corporate bond market increased to ₹75.9 billion during 2018-19 from ₹74.6 billion a year ago (Chart II.4.4)

II.4.17 Primary corporate bond issuances increased by 7.1 per cent to ₹6,470 billion during 2018-19. While bond issuances declined by 30.3 per cent in H1:2018-19, they increased sharply by 51.4 per cent in H2:2018-19 as softening of corporate bond yields encouraged corporates to resort to increased bond issuances, particularly

Chart II.4.4: Turnover in Corporate Bond Market and Yield Spread



Source: SEBI and Bloomberg.

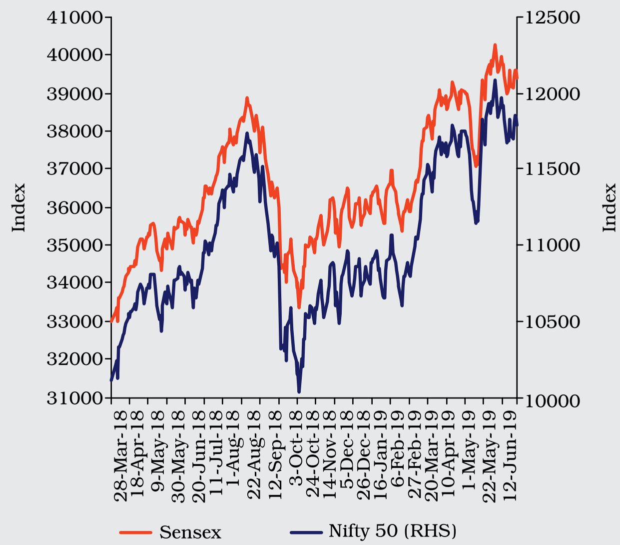
from December 2018 onwards. Public debt issuances at ₹366.8 billion during 2018-19 registered an increase of more than seven times on a year-on-year (y-o-y) basis. Private placements remained the preferred choice for corporates, accounting for 94.3 per cent of total resources mobilised through bond issuances. Outstanding corporate bonds increased by 11.9 per cent y-o-y to ₹30,672 billion — 16.1 per cent of GDP at end-March 2019. Consequently, FPIs' utilisation of the approved limit declined to 75.9 per cent from 91.9 per cent at end-March 2018.

II.4.18 Continuation of softening of G-sec yields and decrease in credit default risk, as reflected in lower credit default swap (CDS) spread, resulted in yield on 5-year AAA-rated corporate bond easing by 14 bps to 7.96 per cent during Q1:2019-20. The yield spread of 5-year AAA-rated corporate bond over 5-year G-sec narrowed by 4 bps. Primary issuances in corporate bond market increased by 43.7 per cent to ₹1,668 billion in Q1:2019-20 as compared with the corresponding period of the preceding year. The average daily turnover in the corporate bond market has increased to ₹86.6 billion in Q1:2019-20 as compared with ₹75.0 billion in Q1:2018-19.

5. Equity Market

II.4.19 The equity market registered strong gains in 2018-19, with the benchmark indices touching new peaks interspersed with intermittent corrections. The BSE Sensex and Nifty 50 increased by 17.3 per cent and 14.9 per cent, respectively, on the back of favourable domestic factors and rallies in global markets. The uptrend in the domestic equity market was interrupted by the IL&FS episode but an impressive recovery occurred in H2:2018-19, particularly in the month of March 2019. Positive global cues on account of the Fed's dovish outlook, favourable developments around the US-China trade talks,

Chart II.4.5: Movement in BSE Sensex and Nifty 50



Source: BSE and NSE.

the return of FPIs and increasing optimism about the general election outcome helped markets to recover lost ground. The buoyancy in the equity market was largely supported by mutual funds' purchases, *albeit*, at a slower pace than a year ago (Chart II.4.5). FPIs were net buyers during the year.

II.4.20 Indian equity indices surged during the first five months of 2018-19, with the BSE Sensex touching a record high of 38897 at close on August 28, 2018. Market sentiment was buoyed by a combination of factors, including lower than expected market borrowing programme of the Centre for H1:2018-19, better than expected corporate earnings performance in Q4:2017-18 and Q1:2018-19, the Government's approval of capital infusion in public sector banks, reduction in GST rates on several items, better than expected GDP growth in Q1:2018-19 and decline in inflation in July and August. Sporadic bouts of selling were also witnessed during this period on continuing trade related frictions between the US and China, surges in crude oil prices and concerns about potential market contagion from the crisis in Turkey.

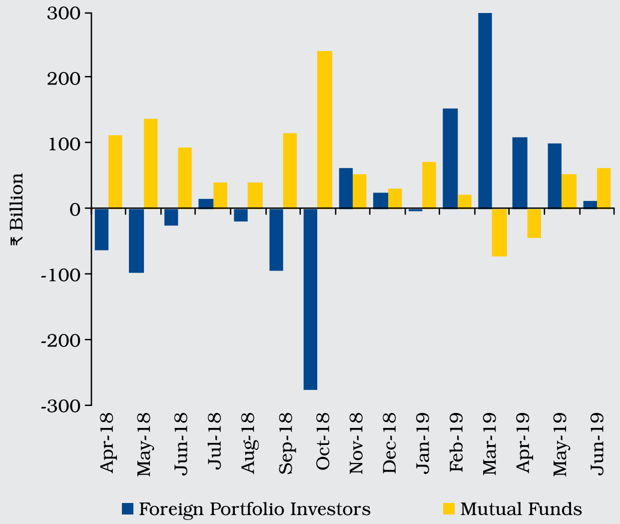
II.4.21 Market sentiment was severely impacted during September and October 2018 by the IL&FS event and the follow-on liquidity squeeze in the NBFC space, concerns relating to trade war between the US and China, a sharp depreciation of the rupee *vis-à-vis* the US dollar against the backdrop of higher crude oil prices and widening of India's current account deficit (CAD) in Q1:2018-19. Markets staged a short-lived turnaround in November 2018, supported by easing of concerns over liquidity tightness, expectations of a breakthrough in the US-China trade relations at the G-20 summit, dovish statements by the US Fed, improvement in India's ranking in the World Bank's Ease of Doing Business Index and a sharp appreciation of the rupee against the US dollar. Subsequently, in December 2018, the equity market declined moderately on weaker than expected Q2:2018-19 GDP growth, uncertainty regarding the outcome of state assembly elections and the fourth rate hike in a year by the US Fed. After declining for most part of January 2019, equity markets turned around and the BSE Sensex increased by 1.9 per cent on January 31, 2019 mainly because of the Fed's decision to hold rates along with the indication that it would adopt a patient approach to further rate hikes. Additionally, positive expectations from the Interim Budget, 2019-20 also contributed to the rally.

II.4.22 The equity market commenced on a bullish note in February 2019 on expectations of a dovish monetary policy stance by the Reserve Bank, which was followed by a 25 bps policy repo rate cut coupled with a change in stance to neutral from calibrated tightening. However, sentiment reversed on account of possibility of another partial US Government shutdown due to continuing impasse over funding of the US-Mexico border wall, concerns over the US-China trade talks, India-Pakistan tensions following the terror attack in Kashmir and subsequent escalation of the conflict. However, the Indian equity market rebounded sharply in March 2019, with the BSE Sensex registering gains of 7.8 per cent on the back of positive global cues, easing of cross-border tensions, large investments by FPIs and increasing optimism about general election outcome.

II.4.23 The Indian equity market registered modest gains with the BSE Sensex and Nifty 50 increasing by 1.9 per cent and 1.4 per cent, respectively, during Q1:2019-20. The market commenced the year on a positive note, but subdued earning results for Q4:2018-19 coupled with re-escalation of trade tensions dragged markets lower during early May 2019. Subsequently, formation of stable government at the Centre helped markets to resume uptrend with the BSE Sensex recording all-time high of 40268 on June 3, 2019. However, some of the gains were wiped out mainly due to re-emergence of liquidity concerns in NBFC sector especially after delay in servicing of non-convertible debentures by a housing finance company, intensification of trade conflict between the US and China and retaliatory imposition of tariffs on US goods by India with effect from June 16, 2019.

II.4.24 Net investment by institutional investors, particularly mutual funds (MFs), during 2018-19 provided support to equity market. FPIs remained net sellers for most part of the year before making heavy investments in February and March 2019. Net purchases by MFs in equities during the year amounted to ₹879 billion, which was sharply lower than purchases of ₹1,418 billion in the previous year. Overall, FPIs made net purchases of ₹97 billion during the year (Chart II.4.6). During Q1:2019-20, MFs made net purchases of ₹68 billion. FPIs made net purchases of ₹216 billion in contrast to net sales of ₹184 billion during Q1:2018-19.

Chart II.4.6: Net Investments in Equities by Institutional Investors



Source: NSDL and SEBI.

Primary Market Resource Mobilisation

II.4.25 The primary segment of the equity market exhibited lacklustre activity during 2018-19. Resource mobilisation through public and rights issues was higher in the first five months of 2018-19 on a y-o-y basis; however, it moderated substantially from September 2018 onwards on account of heightened uncertainty and volatile secondary market conditions. Resource mobilisation through initial public offers (IPOs) and rights issues declined by 82.7 per cent to ₹182.4 billion during 2018-19. Companies mobilised a total of ₹160.9 billion through 123 IPO issues, out of which 110 issues amounting to ₹18.4 billion were listed on the small and medium enterprises (SME) platform of the BSE and the NSE. Resource mobilisation through qualified institutional placement (QIP) declined sharply to ₹102.9 billion in 2018-19 from ₹672.4 billion in 2017-18 (Appendix Table 5).

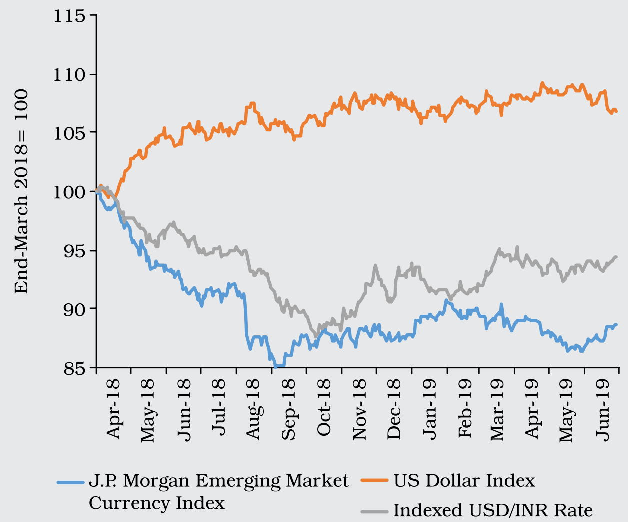
II.4.26 Net resource mobilisation by MFs declined by 59.6 per cent to ₹1,097 billion in 2018-19. Resource mobilisation through equity-oriented schemes declined to ₹1,080 billion in 2018-19 from ₹1,711 billion in 2017-18, mainly on account of lower investments by individuals and corporates during 2018-19 than a year ago. Assets under management (AUM) of equity-oriented MFs increased by 19.0 per cent to ₹8,921 billion at end-March 2019 from ₹7,498 billion at end-March 2018.

II.4.27 Primary market resource mobilisation through public and rights issues of equity increased significantly by more than eight times (y-o-y) during Q1:2019-20 on account of higher resource mobilisation by telecom companies through rights issues. QIP issues declined by 16.3 per cent during Q1:2019-20. The net resources mobilised by MFs declined significantly by 86.8 per cent during Q1:2019-20 primarily due to decline in net inflows in money market MFs.

6. Foreign Exchange Market

II.4.28 In the foreign exchange market, turnover picked up strongly in the inter-bank segment during 2018-19. The Indian rupee remained weak *vis-à-vis* the US dollar during H1:2018-19 following portfolio rebalancing away from EMEs, including India, strengthening of the US dollar and widening of India's CAD on account of rising crude oil prices. The rupee continued to weaken till mid-October 2018; however, it started recovering thereafter on account of net purchases by FPIs, a softer monetary policy stance across major central banks, and easing of crude oil prices. The rupee touched an all-time intra-day low of ₹74.49 per US dollar on October 11, 2018 with a depreciation of 12.5 per cent over end-March 2018 level. Overall, the rupee depreciated by 6.0 per cent against the US dollar during 2018-19 (Chart II.4.7). However, on average during 2018-19, the rupee fared better than several other EME currencies. During Q1:2019-20, rupee initially traded with a mild depreciating bias as crude oil prices hovered around their highest levels in 2019. However, rupee witnessed appreciation from mid-May on the back of formation of stable government post general elections, decline in crude oil prices, sustained FPI inflows and a dovish outlook by the US Fed.

Chart II.4.7: Movement in Rupee, US Dollar and EM Currency Index



Source: Bloomberg and RBI Staff calculations.

II.4.29 In tandem with movements in the exchange rate of the rupee, the 36-currency nominal/real effective exchange rate (NEER/REER) recorded persistent depreciation till October 2018, however, it appreciated thereafter. In terms of the 36-currency NEER and REER, the rupee depreciated by 5.6 per cent and 4.8 per cent, respectively, during 2018-19.

II.4.30 Forward premia, for most part of the year, remained at levels similar to those in the previous year and were at elevated levels towards the close of the financial year on account of higher forex inflows and year end phenomenon. Turnover in both merchant and the inter-bank segments of the spot and forward market remained largely at levels reached in the previous year, while the swap segment exhibited an increase in activity during the latter part of the year.

II.4.31 Going forward, global factors like trade related developments between the US and China and concerns about a slowdown in global growth could weigh upon financial markets. However, strong domestic macroeconomic fundamentals should act as a buffer against volatility.

II.5 GOVERNMENT FINANCES

II.5.1 In 2018-19, public finances recorded modest deviations from budgetary deficit targets across the general government. For the central government, the overshoot of 0.1 per cent in its gross fiscal deficit (GFD) from the budgeted 3.3 per cent of GDP was mainly due to lower than budgeted collections under income tax and Goods and Services Tax (GST). Consequently, the central government had to take recourse to the Escape Clause as specified under Section 4 (2) of the FRBM Act, 2003. For the states[19], there was a deviation of 0.3 per cent of GDP in their consolidated GFD from the budgeted level mainly on account of higher revenue expenditure.

II.5.2 There are some noteworthy features of budget outcomes of both centre and states in 2018-19 which mark a break from the past. First, fiscal management *vis-à-vis* previous year was based on revenue augmentation rather than expenditure rationalisation. Simultaneously, governments committed to enhancing the quality of expenditure by preserving budgeted capital outlays and lowering outlays on the revenue account. Second, a notable development going forward is the establishment of dual targets – in terms of debt and the fiscal deficit – as necessary and sufficient conditions for fiscal prudence, as recommended by the FRBM Review Committee (Chairman: Shri N. K. Singh). The government also committed to bring in some element of counter cyclicality in its fiscal policy by suitably adopting explicit escape and buoyancy clauses.

II.5.3 For 2019-20, the centre's GFD is budgeted at 3.3 per cent of GDP, a consolidation over that achieved in 2018-19 (PA), even with a high revenue expenditure growth. On the other hand, state governments are expecting to firm up their fiscal positions in 2019-20, with their consolidated GFD budgeted at 2.4 per cent of GDP. Accordingly, the general government's GFD is expected to come down further in 2019-20.

II.5.4 Against this backdrop, Sub-sections 2 and 3 present the position of central government finances in 2018-19 and 2019-20, respectively. Sub-sections 4 and 5 depict the developments in state government finances during 2018-19 and 2019-20, respectively. General government finances are discussed in Sub-section 6.

2. Central Government Finances in 2018-19

II.5.5 In 2018-19, the central government's GFD turned out to be 3.4 per cent of GDP, a deviation of 0.1 per cent of GDP from the target set in the Union Budget, 2018-19. Despite shortfall in income tax and GST collections and additional expenditure for income support scheme under the *Pradhan Mantri Kisan Samman Nidhi* (PM-KISAN), higher collections under corporation tax, customs and disinvestment receipts, coupled with lower transfer to states helped to compensate for the shortfall while enabling higher capital expenditure.

II.5.6 Gross tax collections fell short of the budgeted target in 2018-19 (PA) by ₹1,910 billion largely due to a shortfall in GST collections by ₹1,623 billion and income tax collections by ₹563 billion. On the other hand, corporation tax and customs duty collections surpassed the budget targets by ₹426 billion and ₹54 billion, respectively. Consequently, gross tax collection in 2018-19 (PA) fell to 10.9 per cent of GDP from 11.2 per cent a year ago. In terms of y-o-y growth rates, indirect taxes slowed to 2.9 per cent in 2018-19 from 5.9 per cent in 2017-18, and direct tax growth moderated to 13.5 per cent from 17.9 per cent a year ago.

[19] Pertains to revised estimates for 27 states

II.5.7 The shortfall in GST collection in 2018-19 can be attributed to the rationalisation of GST rates twice during the year, *viz.,* July 21 and December 22, across sectors and items by the GST council. As a result, the weighted average GST rate came down from 12.2 per cent to 11.6 per cent. On the basis of investigations conducted to detect GST evasion/violations, it is observed that the amount of tax revenue involved in 3626 evasion/violation cases is estimated at ₹152.8 billion (up to December 2018), of which ₹99.6 billion has been recovered so far.

II.5.8 As per the provisional accounts (PA) for 2018-19, dividend transfers and profits from public sector enterprises declined from their level in the previous year, however, surplus transfer from the RBI/banks/financial institutions (FIs) were higher than that in the previous year. Disinvestment proceeds in 2018-19 also exceeded the budgeted target by ₹50 billion.

II.5.9 Despite shortfall in tax collection, the government was able to contain GFD to 3.4 per cent of GDP by trimming revenue expenditure by ₹1,333 billion, which includes rollover of food subsidy by ₹674 billion. This allowed the government to maintain the budgeted capital expenditure, which recorded an y-o-y growth of 15.1 per cent in 2018-19 as against a contraction of 7.5 per cent in 2017-18.

3. Central Government Finances in 2019-20

II.5.10 The Union Budget 2019-20 has laid emphasis on boosting the economy *via* investments mainly in infrastructure, while simultaneously focusing on rural economy, micro, small and medium enterprises (MSMEs) and start-ups. Encouraging research and development and making India healthy, green and clean have also been given importance. Furthermore, the Budget also announced several measures to reform the financial sector that will boost corporate activity, some of which pertain to the Reserve Bank. Higher budgeted revenue expenditure is expected to be met by higher receipts, both direct and indirect, as well as a moderation in capital expenditure. In ensuing years, the government intends to improve expenditure efficiency and improve tax collections to ensure alignment with the fiscal deficit path as prescribed under the FRBM Act.

II.5.11 The GFD for 2019-20 is budgeted at 3.3 per cent of GDP as against the projected GFD of 3.1 per cent in the Medium Term Fiscal Policy (MTFP) 2018-19 (Table II.5.1). This fiscal consolidation is expected to be met by higher budgeted direct and indirect tax collection, non-tax revenue and disinvestment receipts. Underpinning the projections of gross tax revenue is an implicit tax buoyancy of 1.67 in 2019-20 (BE), which is much higher than the realised buoyancy of 0.75 in 2018-19 (PA). The budgeted buoyancy of 1.86 for personal income tax for 2019-20 is higher than 1.17 in 2018-19 (PA), which is also the average during 2008-18. Receipts from non-tax revenues are budgeted to increase by 27.2 per cent in 2019-20, with major contributions from dividends and profits of PSUs. Encouraged by the disinvestment outcomes in 2018-19 (PA), the target for disinvestment has been set at ₹1,050 billion in 2019-20 (BE).

II.5.12 Total expenditure is budgeted to grow at 20.5 per cent in 2019-20 as against 7.9 per cent in 2018-19 (PA) (Chart II.5.1), attributable to a sharp increase in growth of revenue expenditure from 6.9 per cent in 2018-19 (PA) to 21.9 per cent in 2019-20 (BE). Expenditure on major subsidies, *viz.*, food, fuel and fertilizers, is budgeted to rise to 1.4 per cent of GDP in 2019-20 from 1.0 per cent in 2018-19 (PA).

Table II.5.1: Central Government's Fiscal Performance**

(Per cent to GDP)

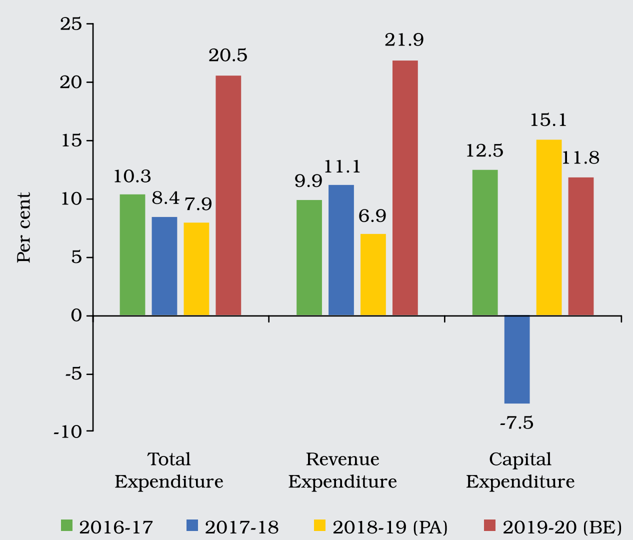
Item	2004-08	2008-10	2010-15	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (RE)	2018-19 (PA)	2019-20 (BE)
1	2	3	4	5	6	7	8	9	10	11	12
Non Debt Receipts	11.0	9.7	9.5	9.4	9.2	9.1	9.4	9.1	9.6	8.8	9.9
Tax Revenue (Gross) (a+b)	10.7	10.4	10.2	10.1	10.0	10.6	11.2	11.2	11.8	10.9	11.7
Tax Revenue (Net)*	7.9	7.6	7.3	7.3	7.2	6.9	7.2	7.3	7.8	6.9	7.8
a) Direct Tax	5.1	6.0	5.7	5.7	5.6	5.4	5.5	5.9	6.3	6.0	6.3
b) Indirect Tax	5.6	4.4	4.5	4.4	4.4	5.2	5.6	5.3	5.5	5.0	5.3
Non-tax Revenue	2.2	1.8	1.8	1.8	1.6	1.8	1.8	1.1	1.3	1.3	1.5
Non Debt Capital Receipts	0.9	0.3	0.4	0.4	0.4	0.5	0.4	0.7	0.5	0.5	0.6
Total Expenditure	14.5	16.1	14.4	13.9	13.3	13.0	12.9	12.5	12.9	12.2	13.2
Revenue Expenditure	12.1	14.4	12.6	12.2	11.8	11.2	11.0	11.0	11.3	10.6	11.6
Capital Expenditure	2.4	1.7	1.8	1.7	1.6	1.8	1.9	1.5	1.7	1.6	1.6
Revenue Deficit	2.0	5.0	3.5	3.2	2.9	2.5	2.1	2.6	2.2	2.3	2.3
Gross Fiscal Deficit	3.5	6.3	4.9	4.5	4.1	3.9	3.5	3.5	3.3	3.4	3.3

BE: Budget Estimates; RE: Revised Estimates; PA: Provisional Accounts.
* Net tax revenue represents gross tax revenue net of devolution to state governments.
** GDP figures used in this table are on 2011-12 base, which are the latest available estimates. Going by the principle of using latest available GDP data for any year, GDP used for 2018-19 (RE) is the latest available Provisional Estimate (released on May 31, 2019). In view of this, the fiscal indicators as per cent to GDP given in this Table may at times marginally vary from those reported in the Union Budget Documents
Source: Union Budget Documents.

4. State Finances in 2018-19

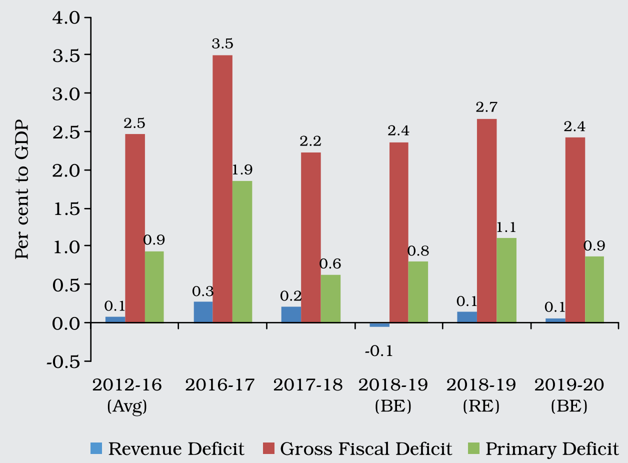
II.5.13 As per the information available for 27 state governments, the consolidated fiscal position of states deteriorated in 2018-19 (RE) *vis-à-vis* their budget estimates (Chart II.5.2), with their GFD at 2.7 per cent *vis-à-vis* 2.4 per cent in BE. The revenue account turned into deficit in 2018-19 (RE) from surplus budgeted for the same year because of continued upward pressure emanating from farm loan waivers, income

Chart II.5.1: Growth Rate of Expenditure



Source: Union Budget Documents.

Chart II.5.2: Key Deficit Indicators of the State Governments



Note: Data from 2017-18 to 2019-20 are based on budget documents pertaining to 27 states. Data before 2017-18 are for all 29 states. For all states, ratio of GFD to GDP was budgeted at 2.6 per cent for 2018-19.
Source: State Budget Documents.

support schemes and hike in minimum support prices by certain states[20]. This erosion was partly compensated by higher revenue receipts in the form of grants, particularly compensation cess.

5. State Finances in 2019-20

II.5.14 State governments are expecting to consolidate their fiscal position in 2019-20. The combined GFD of states is budgeted at 2.4 per cent, with consolidation mainly through expenditure compression—both revenue and capital, thus, compromising the quality of fiscal consolidation. Notwithstanding the fiscal consolidation, risks continue to persist with 11 states budgeting their fiscal deficits higher than the 3.0 per cent FRBM threshold[21].

6. General Government Finances[22]

II.5.15 The general government GFD has moderated from 6.9 per cent of GDP in 2016-17 to 5.9 per cent in 2018-19. For the first time from 2017-18, the combined GFD has been ruling below 6.0 per cent after remaining above 6 per cent between 2008-09 to 2016-17. Both centre and states have made concerted efforts for fiscal consolidation during the period despite revenue pressures on account of implementation of GST. While centre has done so with the help of extra budgetary resources, the states, on the other hand, have cut capital expenditure so as to bring down the combined GFD-GDP ratio. The general government GFD is budgeted to be 5.7 per cent of GDP in 2019-20 as against 5.9 per cent in the revised estimates for 2018-19 (Appendix Tables 6 & 7). Outstanding liabilities of the general government are budgeted to decline to 67.7 per cent of GDP at end-March 2020 from 68.1 per cent at end-March 2019 (RE). This is in line with the aim of attaining a central government debt to GDP ratio of 40 per cent and a general government debt to GDP ratio of 60 per cent by 2024-25. Though the current debt levels are above the FRBM target, the debt servicing capacity of the general government has improved in 2018-19 with the interest payments as per cent to revenue receipts exhibiting a decline.

II.5.16 To sum up, the Union Budget, 2018-19 had to undertake a recalibration in the path of fiscal consolidation in view of the implementation of a major structural reform embodied in the GST in 2017-18. Nonetheless, it is envisaged that the GFD-GDP target of 3.0 per cent will be achieved by 2020-21 in pursuance of the FRBM Act. Consequently, the Union Budget for 2019-20 has pegged the central government's GFD-GDP ratio at 3.3 per cent as an intermediate step towards converging to a GFD-GDP ratio of 3.0 per cent. Analogously, states have also committed to improve their finances in 2019-20 to contain their combined GFD to 2.4 per cent of GDP. Accordingly, the central government and general government debt are slated to be brought down to 40 per cent and 60 per cent of GDP, respectively, by 2024-25. Going forward, broadening the tax base through structural reforms, coupled with enhanced GST compliance and increased tax efficiency, could help both the centre and states in managing these pressures and in getting back to the path of fiscal consolidation over the medium-term.

[20] Although Food Corporation of India (FCI) is the nodal agency for procurement and distribution of foodgrains, many state governments have also been actively involved in procurement and distribution of foodgrains since the introduction of the decentralised procurement scheme (DCP) by the central government in 1997-98. Also, under public distribution system (PDS), some states offer foodgrains at prices lower than the cost at which they are acquired, *i.e.*, the central issue price (CIP), entailing higher fiscal pressure on the state governments.

[21] The threshold of 3.0 per cent for GFD-GSDP ratio was first recommended by the Twelfth Finance Commission (FC-XII) and later endorsed by Thirteenth Finance Commission (FC-XIII) as well as the Fourteenth Finance Commission (FC-XIV). It has also been acknowledged by state governments in their respective Fiscal Responsibility and Budget Management (FRBM) Acts.

[22] Data from 2017-18 onwards is provisional and pertains to budgets of 27 states. As per Union Budget 2019-20, the liabilities exclude extra budgetary resources which were ₹885 billion at the end of 2018-19 (RE). In 2019-20 (BE), additional liabilities on this account are estimated to be ₹570 billion.

II.6 EXTERNAL SECTOR

II.6.1 Over the greater part of the year 2018-19, financial conditions tightened as global financial markets re-priced risks on a combination of global spillovers alluded to earlier, country-specific factors, spark off scrambles for safe havens, and sell-offs and capital outflows across emerging market economies (EMEs). Downside risks became accentuated as several major economies reported deceleration in growth. The loss of momentum progressively broadened and global growth slowed in 2018 after registering a six year high in 2017. Growth in world trade volume moderated to 3.7 per cent in 2018 from 5.5 per cent a year ago, continuing to trail global output (Chart II.6.1), with the income elasticity[23] of world trade declining to 1.0 in 2018 from 1.4 in the previous year. Owing to tight supply conditions and sustained economic activity in H1:2018, global oil inventories fell rapidly and pushed up price to over US$ 80 per barrel in early October ahead of US sanctions against Iran that took effect in November 2018. However, waivers granted by the US to major oil importers from Iran and higher production in Saudi Arabia and Russia eased oil prices in the subsequent period and augured well for oil importing countries like India.

Chart II.6.1: Growth in Global Output and Trade Volume

Source: IMF.

II.6.2 These tumultuous global developments impinged on India's external sector as manifested in subdued export growth, elevated imports of petroleum products and a higher current account deficit (CAD) than a year ago, notwithstanding resilient services exports and remittances. In conjunction with portfolio outflows, this necessitated a drawdown of foreign exchange reserves. Global risks ebbed in Q4:2018-19 and improved market sentiment rejuvenated the appetite for risk, bringing back portfolio flows to EMEs, including India, and this allowed a recouping of international reserves.

II.6.3 Against this backdrop, the following sub-section discusses developments in merchandise exports and imports. Sub-section 3 analyses the behaviour of invisibles and the widening of the CAD. Sub-section 4 dwells on net capital flows and movements in reserves. External vulnerability indicators are evaluated in sub-section 5, followed by concluding observations.

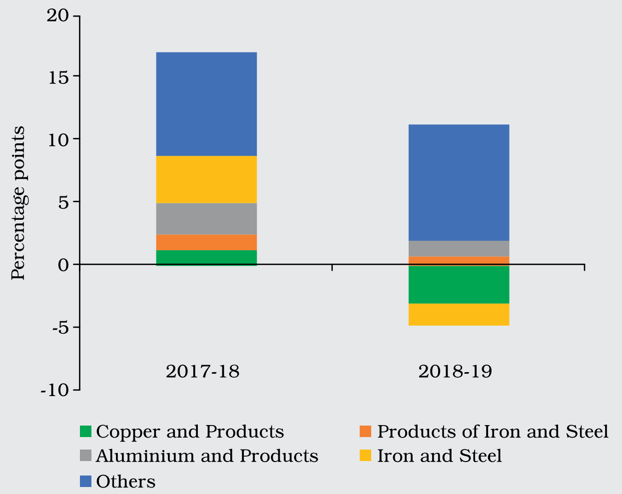
2. Merchandise Trade

II.6.4 In an environment of slowing global demand, India's merchandise export growth decelerated to 8.7 per cent in US dollar terms in 2018-19 from 10.0 per cent in the previous year. Volume growth moderated to 4.3 per cent from 5.6 per cent last year and unit value realisation growth remained at 4.4 per cent; same as in the previous year.

II.6.5 Over sixty per cent of the export basket either decelerated or declined during the year. The drag emanated from sectors such as engineering

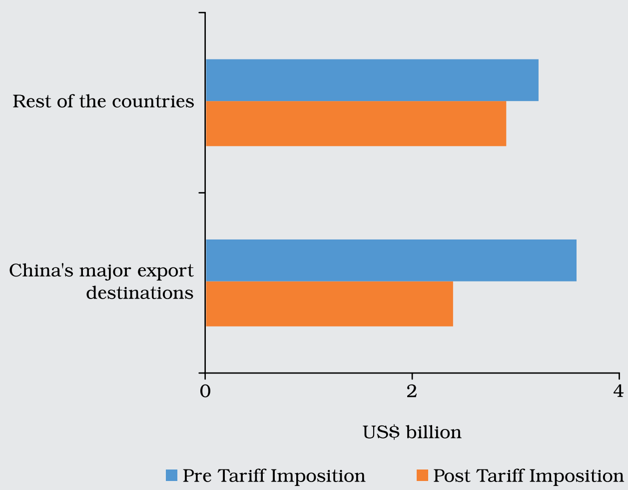
[23] Gross income elasticity of global trade is measured as the ratio of the average growth rate of world trade volume of goods and services to average world GDP growth.

Chart II.6.2: Engineering Goods Exports: Relative Contribution



Source: DGCI&S.

Chart II.6.3: Indirect Impact: Competitive Pressures on India's Iron and Steel Exports



Source: DGCI&S and WTO.

goods, gems and jewellery, marine products and readymade garments. Within engineering goods, exports of iron and steel, and aluminium were affected by higher tariffs imposed by the US in May 2018, while domestic supply constraints led to a sharp decline in copper exports (Chart II.6.2). Iron and steel exports had to also contend with heightened competition in third-country markets. (Chart II.6.3 and Box II.6.1).

II.6.6 Among the major export items, gems and jewellery exports declined during 2018-19, largely driven by the fall in gold exports as the ban on export of gold articles over 22 carat purity took hold. The revelations of fraud in some domestic banks and subsequent ban on Letter of Undertakings had a transient impact. Unusually hostile weather conditions, low prices and breakout of multiple diseases adversely affected domestic production and exports of marine products, particularly shrimps. In addition, the seafood import monitoring programme in the US led to a contraction in Indian shrimp exports to the US by 6.6 per cent during 2018-19. The decline in exports of readymade garments was conditioned by issues related to delays in reversal of input tax credit, particularly on man-made fabrics, and the imposition of a value added tax (VAT) by the UAE, which is the second largest export destination for Indian readymade garments. Despite a moderation in export growth, India was able to maintain its share in global exports at 1.7 per cent in 2018 and the exports at US$ 330.1 billion reached their highest ever level (the previous high of US$ 314.4 billion in 2013-14). The sectors which witnessed robust export growth in 2018-19 included organic chemicals and electronic goods.

II.6.7 Merchandise imports which had been growing in double digits during H1:2018-19 slowed down during H2 and grew at 10.6 per cent for the year as a whole during 2018-19, a marked deceleration from 20.9 per cent growth in the previous year (Table II.6.1). The moderation in imports occurred despite petroleum imports rising by 29.7 per cent on the back of a 23.5 per cent (y-o-y) increase in international crude oil prices and a modest increase in import volume. With major oil producers (OPEC and major non-OPEC) recommitting to production cuts of about 1.8 million barrels per day through 2017

Box II.6.1
India's Third-market Export Competition in Manufacturing Goods

International competitiveness is influenced, *inter alia,* by price/cost differentials between home and trading partner countries and in third-country markets as well.

Effective exchange rates (EER), both nominal and real, are widely used indicators of international price and cost competitiveness. Double weights schemes are employed to take into account both direct and third-market export competition (Turner and Van't dack, 1993). Algebraically, export weight (w_j) to be assigned to trading partner economy *j* in EER basket of *i* can be expressed as:

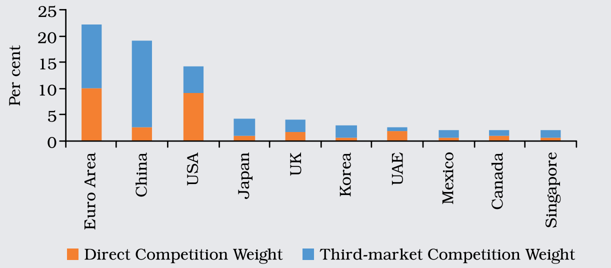
$$w_j = \underbrace{\left(\frac{X_i^j}{X_i}\right)\left(\frac{Y_j}{Y_j + \sum_s X_s^j}\right)}_{\left[\text{Direct export competition}\right]} + \underbrace{\sum_{r \neq j}\left(\frac{X_i^r}{X_i}\right)\left(\frac{X_j^r}{Y_r + \sum_s X_s^r}\right)}_{\left[\text{Third-market export competition}\right]}$$

Where, X_i^j = economy *i*'s exports to economy *j*; X_i = economy *i*'s total exports; Y_j = gross domestic manufacturing output of economy *j*; $\sum_s X_s^j$ = total exports from *s* (excluding *i*) to *j*; X_i^r = economy *i*'s exports to third-market *r* where *i* and *j* compete; X_j^r = economy *j*'s exports to economy *r*; Y_r = gross domestic manufacturing output of economy *r*; and $\sum_s X_s^r$ = total exports from *s* (excluding *i*) to *r*.

The first term on the right-hand side of above equation represents the direct export competition faced by economy *i*'s exports in trading partner *j*'s market. The second term in the equation measures the third-market competition between exports of *i* and *j* in *r*. When *r* is an important market for exports of *i* and *j*, economy *j* should be assigned a higher weight in *i*'s EER basket.

For India, the largest third-market competitor is China (apparel, textile fabrics, footwear and musical instruments), followed by the euro area which is the largest export competitor of India in manufactured goods (Chart 1).

Chart 1: India's Top 10 Export Competitors



Note: Weights are based on average for 2014-18.
Source: UNCTAD and RBI staff calculations.

Table 1: India's Top 10 Competitive Third-markets

Third-market	Weight (Per cent)	Top 3 Competitors
1	2	3
1. UAE	16.4	China, Euro Area, and US
2. US	15.8	China, Euro Area, and Mexico
3. Euro Area	12.5	China, US, and UK
4. UK	7.7	Euro Area, China, and US
5. Hong Kong	6.3	China, Singapore, and Taiwan
6. Singapore	3.4	China, Euro Area, and Mexico
7. Bangladesh	2.6	China, Euro Area, and Singapore
8. Mexico	2.4	US, China, and Euro Area
9. China	2.2	Hong Kong, Euro Area, and Korea
10. Saudi Arabia	2.2	Euro Area, China, and US
Total	**71.4**	

Note: Weights are based on average for 2014-18.
Source: UNCTAD and RBI staff calculations.

The UAE is the largest third-market for India's manufacturing exports, in which highest competition is faced from China, the euro area, and the US. Other major third-markets include the US, the euro area, the UK, and Hong Kong, which together account for 59 per cent of third-market competition for India (Table 1).

The double-weighting methodology has certain limitations. It is based on the assumption of trade of one type of good with constant elasticity of substitution, which is not realised in real life, given the high degree of international product differentiation and vertical specialisation. Consequently, the changes in currencies of trading partners may not have the same impact on relative demand or prices for given weights (Klau and Fung, 2006). Nevertheless, EERs based on double-weighting are more representative of international competitiveness than single-weighting schemes.

References:

1. Klau, M. and S.S. Fung (2006), 'The New BIS Effective Exchange Rate Indices', *BIS Quarterly Review*, Bank for International Settlements, March.

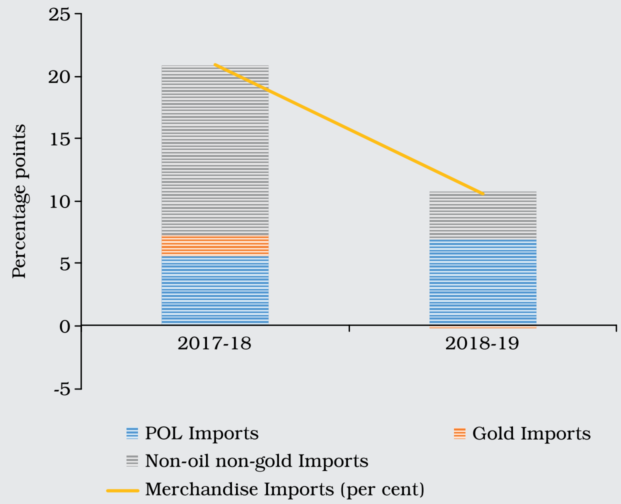
2. Turner, P. and J. Van't dack (1993), 'Measuring International Price and Cost Competitiveness', *BIS Economic Papers*, Bank for International Settlements, No. 39, November.

Table II.6.1: Growth in Merchandise Trade
(y-o-y, per cent)

	2017-18	2018-19
1	2	3
Exports		
Q1	8.5	15.3
Q2	12.3	9.7
Q3	14.1	4.5
Q4	5.5	6.7
Annual	**10.0**	**8.7**
Imports		
Q1	34.5	12.7
Q2	19.7	22.8
Q3	17.9	8.1
Q4	14.0	0.3
Annual	**20.9**	**10.6**

Source: DGCI&S.

Chart II.6.4: Merchandise Import Growth: Relative Contribution



Source: DGCI&S.

and 2018 and with improved compliance, crude oil prices rose sharply from US$ 54.5 per barrel in September 2017 to US$ 80.1 per barrel in October 2018. However, with record US shale oil production and OPEC over-production during the latter part of 2018 combined with a slowdown in global demand, oil prices fell after October 2018 till February 2019 but firmed up in March-April 2019. In addition, a pick-up in demand combined with supply disruptions due to the Iran sanctions and lower production in Venezuela added pressure to oil prices.

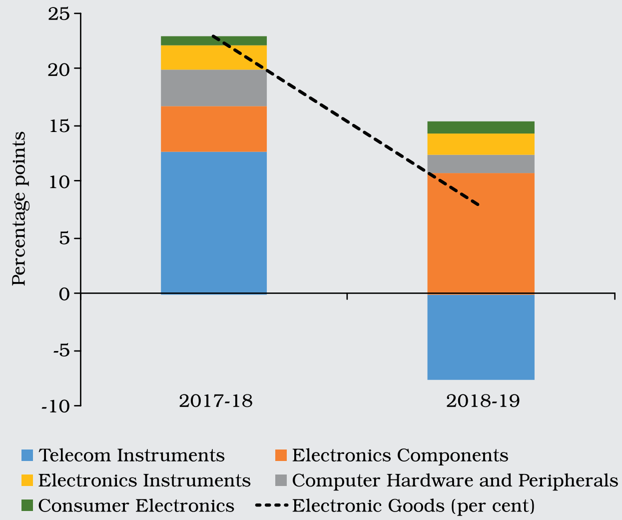
II.6.8 Merchandise import growth was also pulled down by a decline in gold imports brought about by a fall in international gold prices in spite of somewhat higher volume of imports than a year ago. Growth in non-oil non-gold imports slowed considerably during 2018-19, indicative of a weakening domestic demand (Chart II.6.4).

II.6.9 Within non-oil non-gold imports, contraction in imports of vegetable oils, pulses, and pearls and precious stones and pronounced slowdown in electronic goods imports were the main drags.

II.6.10 Tariff escalations and stricter rules of origin policies triggered a decline of 15.0 per cent in vegetable oil imports during 2018-19[24]. While imports of all components of pearls and precious stones shrank, the import of pearls from Hong Kong crashed from exceptionally high imports of US$ 2.1 billion during 2017-18 to US$ 9.8 million during 2018-19. Imports of diamonds were adversely affected by the hike in import tariffs in September 2018. The growth in electronic goods imports, which account for 10.8 per cent of the import basket and are the second largest item in India's import basket, slowed down from 22.9 per cent in 2017-18 to 7.6 per cent during 2018-19. Telecom instruments, comprising mobile phones and parts of mobile phones among other components, recorded a decline during 2018-19 (Chart II.6.5). This coincided with an increase in the domestic production of mobile phones, the impetus to which was provided

[24] Government of India hiked tariff duty on crude palm-oil from 30 per cent to 44 per cent in March 2018 and on the refined variety from 40 per cent to 54 per cent.

Chart II.6.5: Electronic Goods Import Growth: Relative Contribution



Source: DGCI&S.

by the government's Phased Manufacturing Programme, announced in the Union Budget 2015-16 (Box II.6.2).

II.6.11 These developments resulted in a widening of the trade deficit to US$ 184.0 billion in 2018-19 (6.8 per cent of GDP) from US$ 161.3 billion (6.1 per cent of GDP) in the previous year. Terms of trade losses augmented the trade deficit by US$ 7.1 billion. On a bilateral basis, a notable development is the reduction in India's trade deficit with China and Indonesia, even as India's trade surplus with the US shrank as India's imports from the US grew much faster than India's exports to the US (Chart II.6.6). Petroleum products and diamonds accounted for most of the increase in India's imports from the US during 2018-19.

3. Invisibles

II.6.12 Net receipts from invisibles, comprising services, income and transfers, recorded double-digit growth during 2018-19. Net invisibles

Box II.6.2
India: Emerging Electronics Exporter

The electronics industry is among the largest and fastest growing manufacturing industries globally, with production estimated at US$ 2.9 trillion in 2018[25]. Concomitantly, it has emerged as a significant engine of cross-border trade.

In India, domestic production has been able to meet only about one-third of domestic demand, leaving a substantial portion to be met by imports. Currently, India's electronic goods imports account for 2.0 per cent of world's electronic imports. India's demand for electronic goods is estimated to reach US$ 400 billion by 2025. Consequently, the trade balance in this segment has deteriorated during the last two decades to a deficit of US$ 48.0 billion in 2018-19.

Cognizant of these challenges, the government has taken several measures to improve the competitiveness of Indian electronics manufacturers through tariff structure rationalisation, infrastructure upgradation, procedure simplification and provision of incentives. Electronics manufacturing is an important constituent of the 'Make in India' and 'Digital India' programmes. The Union Budget 2015-16 introduced the Phased Manufacturing Programme (PMP) for mobile handsets and related sub-assemblies/ components manufacturing, involving a countervailing duty on mobile phone imports, a differential excise duty structure for domestic mobile phone manufacturing and exemption of parts/components/accessories of mobile phones from basic customs duty to encourage domestic manufacturing of mobile phones (assembly, programming, testing and packaging). In addition, the Electronic Development Fund was created in February 2016 to provide risk capital to firms developing new technologies in the sphere of electronics and information technology (MeitY, 2018).

With Make in India, mobile phone handsets and components manufacturing have emerged as a flagship sector[26].

(Contd...)

[25] Estimates provided by Japan Electronics and Information Technology Industries Association.

[26] Please refer to - https://digitalindia.gov.in/content/electronics-manufacturing

Table 1: Production of Electronic Goods in India

(US$ billion)

Item	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Consumer Electronics	9.1	8.5	9.7	11.4	11.0
Industrial Electronics	6.4	6.9	9.3	10.7	11.6
Computer Hardware	3.1	3.0	3.0	3.3	3.0
Mobile Phones	3.1	8.2	13.4	20.5	24.3
Strategic Electronics	2.6	2.8	3.1	3.7	4.0
Electronics Components	6.5	6.9	7.8	9.2	9.7
Light Emitting Diodes	0.4	0.8	1.1	1.5	1.9
Total	**31.2**	**37.1**	**47.4**	**60.3**	**65.5**

Note: Annual average USD-INR exchange rate is used to express in US dollar terms.

Source: Annual Report 2018-19, Ministry of Electronics & Information Technology (MeitY), Government of India.

Domestic mobile phone production has enabled a decline of mobile phone imports (Table 1).

Econometric evidence indicates the presence of a structural break in the imports of smartphones in September 2015, followed by a consistent decline (Table 2) (Misra and Shankar, 2019).

Domestic production is negatively correlated with the imports of mobile phones but positively correlated with imports of parts of mobile phones (Table 3). This is bolstered by the finding that domestic production is 'granger caused' by increased imports of mobile phone parts (Table 4).

Outward shipments of smartphones have increased from US$ 0.2 billion during 2017-18 to US$ 1.6 billion during 2018-19. The UAE, Russia, South Africa and China are emerging as important export destinations.

Table 2: Testing for Structural Breaks in Smartphone Imports Quandt-Andrew's Unknown Breakpoint Test

Dependent Variable: SMARTYOY			Method: Least Squares with Breaks			
Null Hypothesis: No breakpoints within 15 per cent trimmed data						
Break type: Bai-Perron tests of L+1 vs. L sequentially determined breaks						
Sample (adjusted): 2012M04 2018M12			Test Sample: 2013M05 2017M12			
Number of breaks compared: 56			Break: 2015M09			
Statistic	Value	Prob.	Variable	Coef.	Std. Error	Prob.
Maximum LR F-statistic (2015M09)	125.2	0.00	2012M04 - 2015M08 (41 obs)	10.36	2.83	0.00
Exp LR F-statistic	58.8	0.00	2015M09 - 2018M12 (40 obs)	-45.16	6.40	0.00
Ave LR F-statistic	53.3	0.00	Durbin-Watson statistic	1.35		
			F-statistic	125.18		
			Prob (F-statistic)	0.00		

Notes: 1. SMARTYOY refers to month-wise year-on-year change in volume of smartphone imports.
2. Probabilities calculated using Hansen's (1997) method.

Table 3: Correlations

	Mobile Phone Imports (Volume)	Parts of Mobile Phone Imports (Volume)	IIP Mobile Phone
Mobile Phone Imports (Volume)	1.00	-	-
Parts of Mobile Phone Imports (Volume)	-0.64	1.00	-
IIP Mobile Phone	-0.72	0.65	1.00

Sample period: April 2012 – December 2018.

Note: All correlations are significant at 1 per cent level.

Table 4: Pairwise Granger Causality Test Result

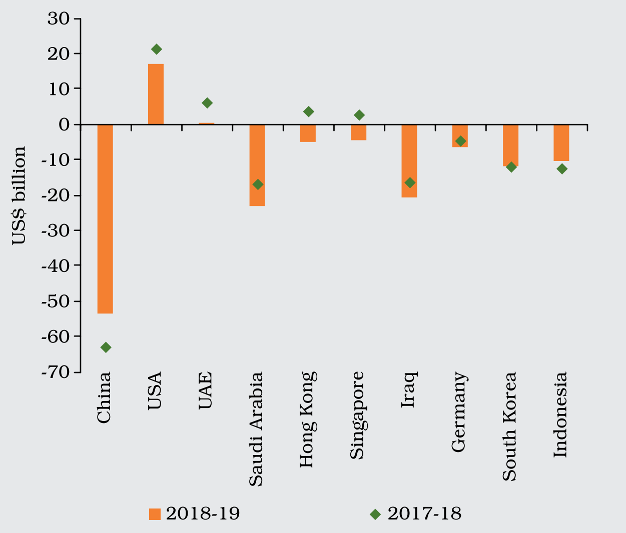
Null Hypothesis:	F-Statistic	Prob.
Mobile phone parts (y-o-y) does not Granger Cause IIP mobile phones (y-o-y)	4.57	0.02
IIP mobile phones (y-o-y) does not Granger Cause mobile phone parts (y-o-y)	0.60	0.55

Observations: 44 (April 2015 – December 2018)
No of lags: 2

References:

1. MeitY (2018), 'Electronics and Information Technology', *Annual Report 2017-18*, Government of India.
2. Misra, R., and A. Shankar (2019), 'India Connected: Transforming India's Import Profile', *RBI Bulletin, April.*

Chart II.6.6: Trade Balance: Top 10 Trade Partners



Source: DGCI&S.

could, however, finance only 68 per cent of the merchandise trade deficit as compared with 70 per cent in the previous year.

II.6.13 Among the major categories of services, export of travel services declined significantly, owing to moderate growth in foreign tourist arrivals during 2018-19, especially from higher per capita income countries such as the US (accounting for 14 per cent of the total) and the UK (accounting for 9 per cent of the total). By contrast, travel payments by outbound Indian tourists increased significantly, resulting in a decline in net travel receipts by 24 per cent.

II.6.14 India's software exports demonstrated resilience, surviving difficult global market conditions during the year. India remained the top exporter of telecommunications, computer and information services in the world with share of around 10 per cent. During 2018-19, Indian software exports grew by around 7.6 per cent on a y-o-y basis on the back of strong performance of banking, financial services and insurance (BFSI) verticals. India's software exports may face a challenging business environment with global economic activity and global IT spending forecast to grow at a modest pace in 2019 and 2020. Apart from these uncertainties, a higher rejection rate among Indian IT companies in getting H-1B visas may increase the cost of delivering on-site services and affect their profit margins. Geographical and product diversification would help in mitigating the associated risks. Furthermore, focusing on larger digital deals, reskilling the local talent in export markets and moving up in the value chain may help IT companies build resilience in their export earnings.

II.6.15 Inbound remittances by Indians employed overseas rebounded during 2018-19. In 2018, India retained its top position followed by China, Mexico, the Philippines and Egypt[27]. With over 50 per cent of remittances from Gulf countries, improved income conditions owing to the sharp increase in international crude oil prices augured well for remittances flows in 2018-19. Furthermore, remittances to Kerala also got a fillip in the aftermath of floods in August 2018 as highlighted by the World Bank (April 2019). However, the World Bank projects global remittances to grow at a slower pace in 2019 and 2020 relative to 2018. In the case of India, a 13 per cent fall in 2018 in the number of low-skilled emigrants seeking mandatory clearance for emigration may impact the outlook for in-bound remittances.

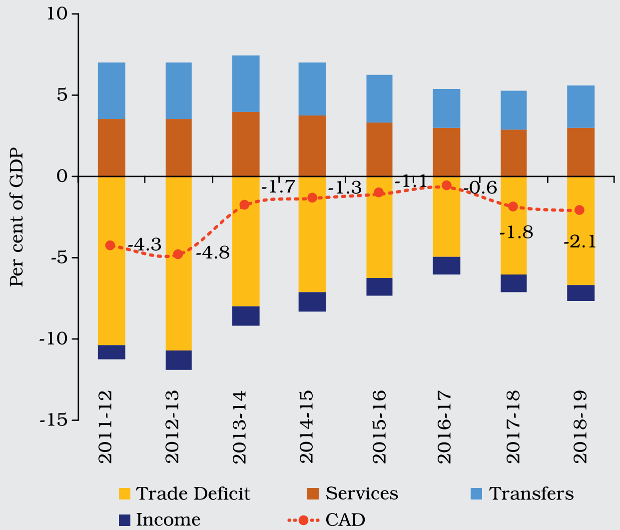
II.6.16 The net outgo in the form of payments of interest and dividend for servicing the stock

[27] According to the World Bank's report 'Migration and Remittances' (April 2019), remittances to developing countries accelerated in 2018 largely due to robust economic growth and employment situation in the US and a rebound in outward flows from the Gulf Cooperation Council (GCC) countries.

of foreign liabilities increased marginally to US$ 28.9 billion in 2018-19 from US$ 28.7 billion a year ago. Debt liabilities in the form of interest payments, which includes payment of interest by foreign direct investment (FDI) enterprises to their parent companies abroad, foreign portfolio investment (FPI) debt holdings, external commercial borrowings (ECBs), trade credits, bank overseas borrowings, non-resident deposits, coupled with non-debt liabilities in the form of dividend pay-outs on investment in equity and investment fund shares accounted for around 70 per cent of total investment income outgoes in 2018-19. A predominant part of dividend payments is, however, deployed back by domestic FDI companies.

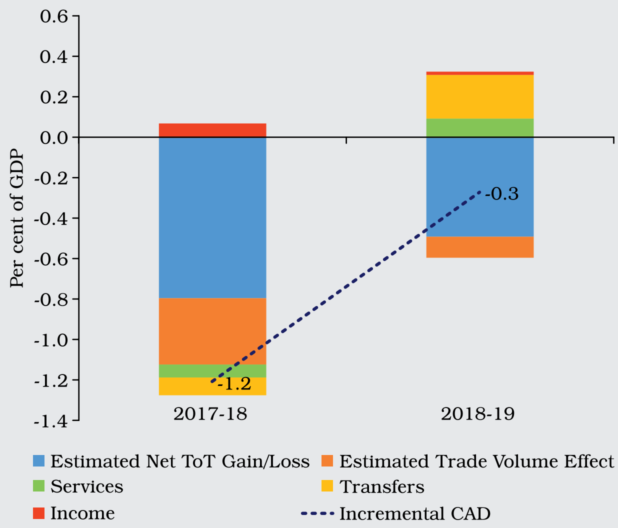
II.6.17 The CAD widened to 2.1 per cent of GDP from 1.8 per cent a year ago, primarily on the back of the higher trade deficit (Chart II.6.7). While the erosion in net terms of trade (ToT) caused by higher commodity prices (*e.g.*, crude oil, coal and fertilisers) added 0.5 percentage points of GDP to the incremental CAD during 2018-19, higher import volumes contributed another 0.1 percentage points (Chart II.6.8).

Chart II.6.7: Composition of India's Current Account Deficit



Source: RBI.

Chart II.6.8: Sources of Incremental CAD in 2018-19



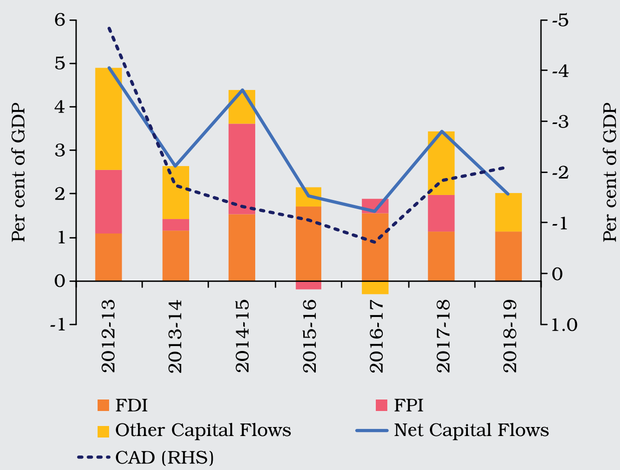
Source: RBI.

4. *External Financing*

II.6.18 Net capital flows were not sufficient to finance the higher CAD, given net outflow of FPI (Chart II.6.9). This led to a depletion of foreign exchange reserves after six consecutive years of accretion on a BoP basis.

II.6.19 Within capital flows, FDI remained predominant as in the preceding year (Table II.6.2),

Chart II.6.9: Composition of Net Capital Flows



Note: Other capital flows include net external commercial borrowings, net banking capital, net short-term trade credit, external assistance and other capital.
Source: RBI.

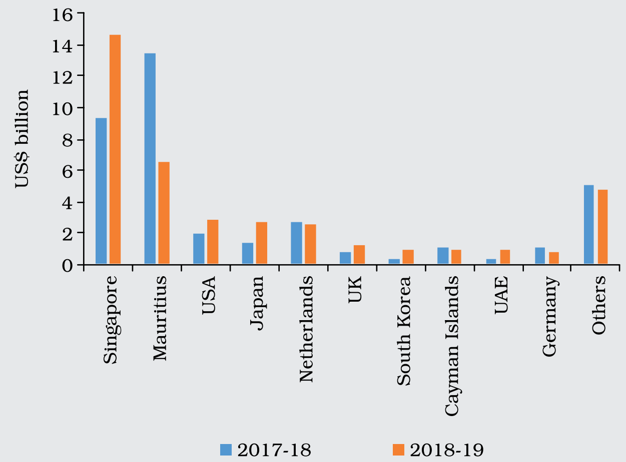
Table II.6.2: Foreign Direct Investment Inflows

(US$ billion)

Item		2016-17	2017-18	2018-19
1		2	3	4
1	Net FDI (1.1 - 1.2)	35.6	30.3	30.7
1.1	Net Inward FDI (1.1.1 - 1.1.2)	42.2	39.4	43.3
1.1.1	Gross Inflows	60.2	61.0	62.0
1.1.2	Repatriation/Disinvestment	18.0	21.5	18.7
1.2	Net Outward FDI	6.6	9.1	12.6

Source: RBI.

Chart II.6.10: Source Country-wise FDI (Equity) Inflows



Note: Country-wise FDI data include equity flows through approval and automatic routes only.
Source: RBI.

though it could finance only 53.6 per cent of the CAD in 2018-19 as compared with 62.2 per cent a year ago. In response to the improvement in the domestic business environment, resilient growth prospects and low inflation, India has attracted a considerable amount of FDI in recent years. With further rationalisation of domestic business procedures (*e.g.*, introduction of the GST) and focus on automatic route with minimal intervention, India gained 23 notches in terms of the World Bank's ease of doing business index (2019)[28] and was ranked 77th among 190 countries. Higher FDI flows went to sectors such as manufacturing, financial services, retail and wholesale trade and computer services. Singapore and Mauritius remained the major source countries, followed by the USA, Japan and the Netherlands. India's amended double taxation avoidance agreement (DTAA) with Mauritius for the prevention of taxes on income and capital gains led to a decline of 51 per cent in FDI routed through Mauritius in 2018-19. Despite similar changes in the DTAA treaty, Singapore remained the most preferred route for foreign companies to invest in India (Chart II.6.10 and Appendix Table 9).

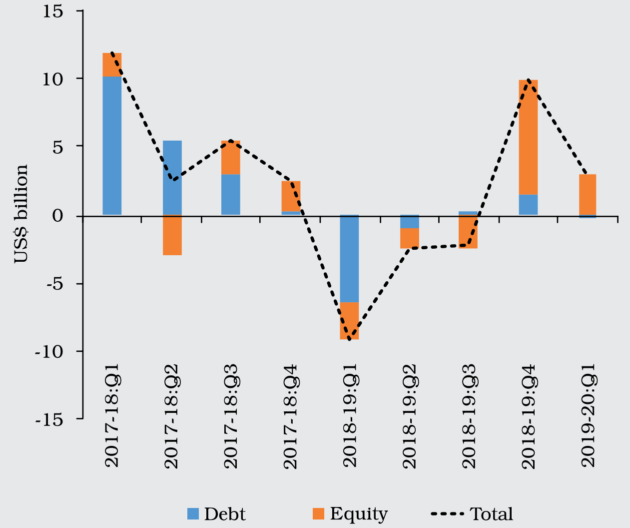
II.6.20 India's FDI performance is also noteworthy in the context of global FDI which fell by 13 per cent in 2018 to an estimated US$ 1.3 trillion from US$ 1.5 trillion in 2017 (UNCTAD, 2019). This was mainly due to large repatriations of retained earnings by the US-based multinational enterprises in the aftermath of corporate tax reforms in the preceding year. India was among the few major EMEs that received higher inward FDI during the period.

II.6.21 Domestic firms continued to expand their overseas business operations by enhancing direct investment stakes abroad. Outward FDI was mainly in the form of equity and loans to subsidiaries/affiliated enterprises by resident firms, 66 per cent went to financial, insurance and business services, and manufacturing. Two-thirds of the outward FDI was directed to the USA, Singapore, the UK, the Netherlands and the UAE.

II.6.22 As regards FPI flows, there was net sale of US$ 2.2 billion in 2018-19 as against a net purchase of US$ 22.2 billion in 2017-18. This essentially reflected global portfolio rebalancing

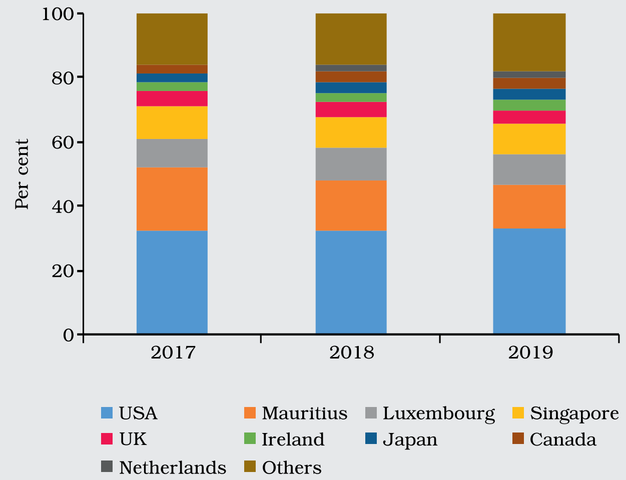
[28] Pertaining to the benchmark period of May 2018.

Chart II.6.11: Net Foreign Portfolio Investment Flows to India



Source: NSDL.

Chart II.6.12: Country-wise Holding of Outstanding FPI Assets (End-March)



Source: NSDL.

as investors turned away from EMEs and shifted to safe haven assets during April-December 2018. In Q4:2018-19, however, FPIs responded to the ebbing of global risks and made net purchases of about US$ 11.5 billion in the domestic capital market, partly recouping the net sales of US$ 13.7 billion in the preceding three quarters (Chart II.6.11). Although investment limits for FPIs in both government securities and corporate bonds were enhanced during the year, the utilisation of these limits fell in both segments. The composition of assets under custody as at end-March 2019 shows that US-based FPIs accounted for one-third of total outstanding FPI holdings while the share of Mauritius-based FPIs declined in the aftermath of India's amended DTAA protocol and stiffer KYC norms for FPIs from 'high risk' jurisdictions (Chart II.6.12). Various policy measures were undertaken to expand investment opportunities for FPIs, which, *inter alia,* included (i) relaxing the minimum residual maturity requirement in government securities (including in Treasury Bills), subject to certain conditions; and (ii) permitting FPIs to invest in corporate bonds with minimum residual maturity of above one year instead of three years. Furthermore, in order to boost long-term FPI investment, the Reserve Bank introduced a 'Voluntary Retention Route' scheme under which investments by FPIs in the debt market are not subject to macro-prudential and other regulatory norms, provided they voluntarily commit to retain a required minimum percentage of their investments in India for a minimum period of three years.

II.6.23 Among other forms of financial flows, ECBs[29] to India recorded net inflows of US$ 9.8 billion in 2018-19 as against an outflow of US$ 0.8 billion a year ago. Various measures were undertaken to rationalise the extant ECB policy framework which included (i) merging of Tracks I and II into foreign currency denominated ECBs and rupee denominated ECBs; (ii) allowing a borrowing limit of US$ 750 million a year under the automatic route; (iii) expansion of the list of eligible borrowers to include all entities eligible to

[29] Excluding inter-corporate borrowings of FDI companies.

receive FDI, registered entities engaged in micro-finance activities, registered societies/trusts/cooperatives and non-government organisations; (iv) reduction of tenure for exemption of mandatory hedging for eligible borrowers from 10 years to 5 years; (v) easing of end-use restrictions; (vi) reduction in the minimum average maturity requirement for borrowings in the infrastructure sector to three years; and (vii) permitting public sector oil marketing companies to raise ECBs for working capital purposes. Besides, a rule-based dynamic limit was introduced by capping the outstanding ECBs at 6.5 per cent of GDP at current market prices. The top five sectors that accounted for more than 80 per cent of the value of ECB agreements were financial services, petroleum, iron and steel, telecommunication, and power transmission and distribution. Of the total ECB agreement amount (other than rupee denominated bonds/loans), 45.6 per cent was intended to be hedged during 2018-19 as compared with 32.5 per cent a year ago. While 21 per cent of total ECB agreement amount was intended to be raised through rupee denominated loans/bonds (RDBs), actual inflows of RDBs were US$ 0.5 billion as compared with US$ 2.6 billion a year ago.

II.6.24 In the aftermath of the discontinuation of Letters of Undertaking (LoUs)/Letters of Comfort (LoCs) in March 2018, importers' recourse to buyers' credit declined sharply, partly substituted by an increase in suppliers' credit. Trade credit was primarily availed by domestic companies to finance imports of crude oil, coal and copper which together accounted for around 45 per cent of the total short-term trade credit raised during the year. In order to ease trade financing conditions, the trade credit limit under the automatic route was raised to US$ 150 million or equivalent for import transactions of oil/gas refining and marketing, airline and shipping companies, and to US$ 50 million or equivalent per import transaction for other sectors, in March 2019. The spread over LIBOR for all-in-cost ceiling was reduced to 250 bps from 350 bps earlier.

II.6.25 Non-resident deposit flows recorded an increase of 7.4 per cent in 2018-19 on the back of increased inflows under Non-Resident (External) Rupee accounts (NRE) and Non-Resident Ordinary (NRO) accounts. Deposits under the NRE scheme contributed 70 per cent of net flows during the year. The rupee's depreciation and improved income conditions in home countries of non-residents boosted these flows (Table II.6.3).

5. Vulnerability Indicators

II.6.26 At end-March 2019, India's external debt increased by US$ 13.7 billion (*i.e.*, 2.6 per cent) from its level at end-March 2018, primarily on account of an increase in short-term debt, commercial borrowings and non-resident deposits. The appreciation of the US dollar *vis-à-vis* Indian rupee and other major currencies resulted in a valuation gain of US$ 16.7 billion. Excluding the valuation effect, the increase in external debt would have been US$ 30.4 billion instead of US$ 13.7 billion at end-March 2019 over end-March 2018. Commercial borrowings remained the largest component of external debt with a share of 38.0 per cent, followed by non-resident deposits (24.0 per cent) and short-term

Table II.6.3: Flows under Non-Resident Deposit Accounts

(US$ billion)

	2016-17	2017-18	2018-19
1	2	3	4
1. Non-Resident External (Rupee) Account	9.8	7.1	7.3
2. Non-Resident Ordinary Account	2.2	1.5	1.9
3. Foreign Currency Non-Resident (B) Account	-24.3	1.0	1.1
Non-Resident Deposits (1+2+3)	**-12.4**	**9.7**	**10.4**

Source: RBI.

Table II.6.4: External Vulnerability Indicators (End-March)

(Per cent, unless indicated otherwise)

Indicator	2013	2017	2018	2019
1	2	3	4	5
1. External Debt to GDP ratio	22.4	19.9	20.1	19.7
2. Ratio of Short-term Debt (original maturity) to Total Debt	23.6	18.7	19.3	20.0
3. Ratio of Short-term Debt (residual maturity) to Total Debt	42.1	41.6	42.0	43.4
4. Ratio of Concessional Debt to Total Debt	11.1	9.4	9.1	8.7
5. Ratio of Reserves to Total Debt	71.3	78.5	80.2	76.0
6. Ratio of Short-term Debt to Reserves	33.1	23.8	24.1	26.3
7. Ratio of Short-term Debt (residual maturity) to Reserves	59.0	53.0	52.3	57.0
8. Reserves Cover of Imports (in months)	7.0	11.3	10.9	9.6
9. Debt Service Ratio (debt service to current receipts)	5.9	8.3	7.5	6.4
10. External Debt (US$ billion)	409.4	471.0	529.3	543.0
11. Net International Investment Position (NIIP) (US$ billion)	-326.7	-388.1	-418.5	-436.4
12. NIIP/GDP ratio	-17.8	-16.4	-15.9	-15.9
13. CAD/GDP ratio	4.8	0.6	1.8	2.1

Source: RBI and Ministry of Finance, Government of India.

trade credit (18.9 per cent). As a ratio to GDP, external debt declined from 20.1 per cent at end-March 2018 to 19.7 per cent at end-March 2019. Notwithstanding this favourable development, some external vulnerability indicators worsened during the year. The share of short-term debt (on both original and residual maturity basis) in total external debt increased, while the reserves cover of imports and short-term debt (on both original and residual maturity basis) declined partly reflecting depletion of reserves during the year. Consequently, India's net international investment position (NIIP) deteriorated by US$ 17.9 billion. Taken together, however, external sector indicators at end-March 2019 were stronger than their levels during the pre-taper talk period (Table II.6.4, and Appendix Table 1 and 8).

II.6.27 The resumption of capital inflows in Q4:2018-19 along with the Reserve Bank's buy/sell swap auctions of US$ 5 billion, for a tenor of 3 years in March 2019, to inject rupee liquidity enabled an accretion to the foreign exchange reserves during the quarter. India's forex reserves at US$ 412.9 billion on March 31, 2019 were equivalent to 9.6 months of imports. A similar swap auction in April 2019 led to further increase in forex reserves in 2019-20 so far. India's foreign exchange reserves were at US$ 430.5 billion on August 16, 2019 — an increase of US$ 17.6 billion over end-March 2019.

II.6.28 To sum up, India's external sector came under pressure during 2018-19 as the CAD widened, external financing conditions tightened, and the foreign exchange reserves were depleted. External demand conditions have been impacted by the slowdown in global trade, investment, and output even as trade tensions have heightened. Although risks around crude oil prices are balanced, geopolitical risks have increased with sanctions against Iran and Venezuela. While external financing conditions have eased since the beginning of 2019, investor sentiment remains cautious and sensitive to global spillovers. In this milieu, building resilience by entrenching sound macroeconomic fundamentals, carrying forward growth-friendly structural reforms and maintaining reserve buffers assume priority.

PART TWO: THE WORKING AND OPERATIONS OF THE RESERVE BANK OF INDIA

III MONETARY POLICY OPERATIONS

Inflationary pressures emanating from volatile international crude oil prices, and currency depreciation in the first half of the year, cooled down markedly in the second half, driven down by moderation in crude oil prices and a collapse in food prices. The monetary policy committee cut the policy repo rate by 75 basis points during February-June 2019. Forex operations by the Reserve Bank and large currency expansion exacerbated the pressure on system level liquidity, warranting active liquidity management. Banks' deposit and lending rates reflected the movements in the policy repo rate, though transmission remained uneven across sectors.

III.1 The conduct of monetary policy in 2018-19 was guided by the objective of achieving the medium-term target for consumer price index (CPI) inflation of 4 per cent with a tolerance band of +/- 2 per cent, while supporting growth. Inflationary pressures emanating from volatile international crude oil prices, and currency depreciation in the first half of the year, cooled down markedly in the second half, driven down by moderation in crude oil prices and a collapse in food prices. CPI inflation averaged 3.4 per cent in 2018-19; 4.3 per cent in the first half and 2.5 per cent in the second half. These diverse movements were reflected in the voting pattern of the monetary policy committee (MPC).

III.2 Forex operations by the Reserve Bank and large currency expansion exacerbated the pressure on system level liquidity during 2018-19, warranting active liquidity management through a variety of instruments: regular repos and reverse repos under the liquidity adjustment facility (LAF); fine-tuning variable rate auctions of both repos and reverse repos; outright open market operations (OMOs); and foreign exchange swaps. Banks' deposit and lending rates reflected the movements in the policy repo rate during the year, though transmission remained uneven across sectors, reflecting varied credit demand conditions and credit risk.

III.3 Against the above backdrop, section 2 presents implementation status of the agenda set for 2018-19 while priorities of the Monetary Policy Department in 2019-20 have been discussed in section 3.

2. Agenda for 2018-19: Implementation Status

Monetary Policy

III.4 In the first bi-monthly monetary policy statement for 2018-19 (April 5, 2018), the MPC kept the policy repo rate under the LAF unchanged at 6.0 per cent, with five members voting in favour of the decision and one member voting to increase the repo rate by 25 basis points (bps). The stance of monetary policy was retained as neutral. Headline CPI inflation was projected at 4.7-5.1 per cent in H1:2018-19 and 4.4 per cent in H2, with risks tilted to the upside. The decision to keep the policy rate on hold was shaped by several uncertainties surrounding the inflation trajectory such as the revised formula for minimum support prices (MSP) for *kharif* crops, the risks from fiscal deviations at centre and states' levels, rising input and output price pressures, and volatility in crude prices. The MPC indicated that it would look through the statistical impact of revisions in house rent allowances (HRAs), while remaining watchful about any second-round effects.

III.5 By the second bi-monthly statement of the MPC in June 2018, inflation had edged up, driven by an abrupt acceleration in inflation excluding food and fuel, even as vegetable prices turned out to be weaker than the usual summers' upturn. A major upside risk to the baseline inflation path cited in the April resolution - higher crude oil prices - had, however, materialised. These developments, together with rise in other global commodity prices and input cost pressures, led to an upward revision in the CPI inflation projection to 4.7 per cent in H2:2018-19. Developments in global financial markets, a significant rise in household inflation expectations and the uncertainty about the impact of the revisions in the MSP formula for *kharif* crops were seen as key upside risks. Taking these into consideration, the MPC unanimously voted to increase the policy repo rate by 25 bps but retained a neutral stance. The MPC also noted that there had been a sustained revival in domestic economic activity, and that the output gap had nearly closed.

III.6 In the run-up to the third bi-monthly statement in August 2018, actual inflation outcomes in May and June 2018 turned out to be a little below the trajectory projected earlier, as the seasonal summer surge in vegetables prices remained muted and fruits prices declined. The inflation projection for Q2:2018-19 was revised marginally downwards to 4.6 per cent, marginally upwards to 4.8 per cent for H2:2018-19; and at 5.0 per cent in Q1:2019-20. Volatile crude oil and financial asset prices and hardening of input price pressure in the manufacturing sector were seen as risks to the baseline inflation path besides those cited in June. Against this backdrop, the MPC decided to increase the policy repo rate by 25 bps with five members voting in favour of the resolution and one member voting for a pause.

III.7 By the time of the fourth bi-monthly policy for 2018-19 in October 2018, CPI headline inflation fell from 4.9 per cent in June to 3.7 per cent in August, dragged down by a sharp decline in food inflation. Inflation projections were revised downwards to 3.9-4.5 per cent in H2:2018-19 and 4.8 per cent in Q1:2019-20, with risks somewhat to the upside. However, the inflation outlook was clouded by several uncertainties such as still elevated and volatile international crude oil prices and the risk of higher pass-through from the sharp rise in input prices to retail prices. Against this backdrop, the MPC decided to keep the policy repo rate unchanged but changed the stance to calibrated tightening. Five members voted in favour of keeping the policy rate unchanged and one member voted for an increase in the policy rate by 25 bps. Furthermore, five members voted in favour of changing the stance to calibrated tightening and one member voted to continue with a neutral stance.

III.8 In the run-up to the fifth bi-monthly monetary policy statement of December 2018, inflation eased more than anticipated in September-October 2018, primarily due to the unexpected slipping of food prices into deflation in October, even as inflation in non-food prices registered a broad-based increase. International crude prices fell sharply in November 2018. Accordingly, inflation projections were revised downwards to 2.7-3.2 per cent for H2:2018-19 and to 3.8-4.2 per cent for H1:2019-20, but with risks tilted to the upside. The inflation outlook remained clouded by several factors referred to earlier, apart from the risk of a sudden reversal in prices of perishable food items, volatile financial markets, and elevated households' inflation expectations. Inflation excluding food remained sticky and elevated. Considering these dynamics, the MPC decided to keep the policy repo rate on hold and maintain the stance of calibrated tightening. While the decision to keep the policy rate unchanged was unanimous, one member voted to change the stance to neutral.

III.9 By the time the MPC met for the sixth bi-monthly policy in February 2019, food prices sank further into deflation for the third consecutive month in December 2018, inflation in the fuel group moderated considerably and inflation excluding food and fuel eased. Inflation projections were revised downwards to 2.8 per cent for Q4:2018-19, 3.2-3.4 per cent for H1:2019-20 and 3.9 per cent for Q3:2019-20 with risks broadly balanced around the central trajectory. On the growth front, keeping in mind the tentative pick-up in domestic credit, the uncertainties on global demand and the likely headwinds for domestic growth, GDP growth for 2019-20 was projected at 7.4 per cent – in the range of 7.2-7.4 per cent in H1, and 7.5 per cent in Q3 – with risks evenly balanced. The output gap had opened up again modestly. Against this backdrop, the MPC reduced the policy repo rate by 25 bps to 6.25 per cent by a majority of 4-2 votes, with two members voting to keep the repo rate unchanged. All the members, however, voted to change the stance from calibrated tightening to neutral.

III.10 The first bi-monthly monetary policy statement for 2019-20 in April 2019 took place in an environment of a slowing down of the growth momentum across advanced economies (AEs) and emerging market economies (EMEs). On the domestic front, food inflation remained in deflation for the fifth consecutive month in February 2019 and the fall in fuel inflation deepened. CPI inflation excluding food and fuel remained below the December print. Taking these developments, and assuming a normal monsoon in 2019, the path of inflation was revised downwards to 2.4 per cent in Q4:2018-19, 2.9-3.0 per cent in H1:2019-20 and 3.5-3.8 per cent in H2:2019-20, with risks broadly balanced. Several factors, however, imparted uncertainties to the inflation outlook: early reports of some probability of *El Nino*; the risk of an abrupt reversal in food prices; the risk of sustainability of soft fuel inflation; the hazy outlook for crude oil prices; and volatility in financial markets. The MPC noted that the output gap remained negative and the domestic economy was facing headwinds, especially on the global front. Against this backdrop, the MPC decided by a vote of 4-2 to reduce the policy rate by 25 bps to 6.0 per cent, with two members voting for a pause. The MPC maintained the neutral stance of monetary policy by a majority of 5-1, with one MPC member voting in favour of changing the stance to accommodation.

III.11 In the second bi-monthly monetary policy meeting of June 2019, the MPC unanimously decided to reduce the policy repo rate by 25 bps to 5.75 per cent and change the stance of monetary policy from neutral to accommodative. This decision was based on an assessment of a weakening of growth impulses since the April 2019 policy, driven by a sharp slowdown in investment activity along with continuing moderation in private consumption growth, and a widening of the output gap. Headline inflation was projected at 3.0-3.1 per cent for H1:2019-20 and 3.4-3.7 per cent for H2, remaining below the target, even after considering the expected transmission of the past two policy rate cuts. Given this scenario, the MPC saw scope to ease policy rate further to boost aggregate demand while remaining consistent with its flexible inflation targeting mandate.

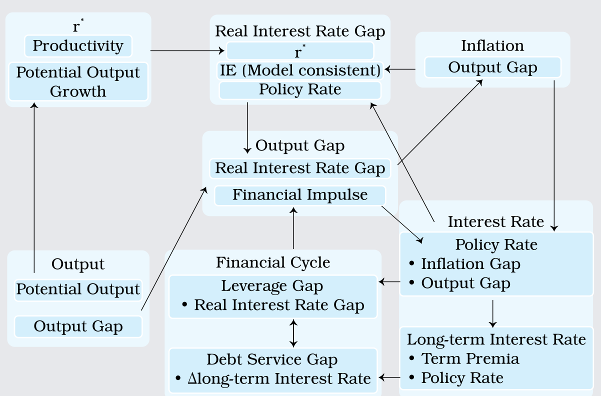
III.12 The output gap – the deviation of the actual output level from its potential level – is a proxy for demand-supply mismatches and plays an important role in medium-term inflation dynamics. Recent research has highlighted that a macro-financial model allowing for inter-linkages between economic and financial cycles could provide a more comprehensive view of demand conditions, potential output and natural rate of interest (Box III.1).

Box III.1
Interlinkage between Financial and Economic Cycles

There is a growing body of literature which suggests that the estimation of economic cycle/output gap can be substantially improved by including information on the financial cycle, especially during boom/bust phases. A macro-financial model estimated by augmenting the Monetary Policy Model (MPMOD)[1] (Alichi *et al.*, 2018), with a financial block (Juselius *et al.*, 2017), helps to understand the interlinkage between financial and economic cycles in India (Chart 1).

In this framework, the financial cycle - measured by two indicators *viz.*, the leverage gap and the debt service gap[2] - impacts real economic activity with a lag. The interest rate feeds into the leverage gap - firming up of the real interest rate gap brings down asset prices. The debt service gap depends on the long-term interest rate - an increase in the nominal lending rate increases the interest payment burden and, in turn, the debt service gap. The leverage and debt service gaps have bi-directional linkages running from new debt to debt service to asset prices and then back to the leverage gap. The debt service gap feeds negatively into asset price growth and, hence, boosts the leverage gap. Apart from cyclical variables, long-term trend variables are also interlinked in the model. The natural rate of interest (r*) is related positively to the growth rate of potential output.

Chart 1: Model Structure - Schematic Representation



Source: RBI staff estimates.

Quarterly data from Q2:2008-09 to Q2:2018-19 are used for the exercise, and the system of equations is estimated in a Bayesian framework. The empirical estimates suggest that (i) an increase in the debt burden has a negative impact on asset price growth, pushing up the leverage gap, tightening financial conditions and the output gap (Chart 2a), which leads to reduction in interest rates and brings the debt burden back to steady state; (ii) an increase in leverage leads to decline in credit expansion and a fall in the credit-GDP ratio, which tightens financial conditions and leads to a fall in the output gap (Chart 2b); and (iii) an increase in the policy interest rate increases long-term interest rates with some negative impact on asset prices; the resulting tightening of financial conditions lead to the widening of a negative output gap (Chart 2c).

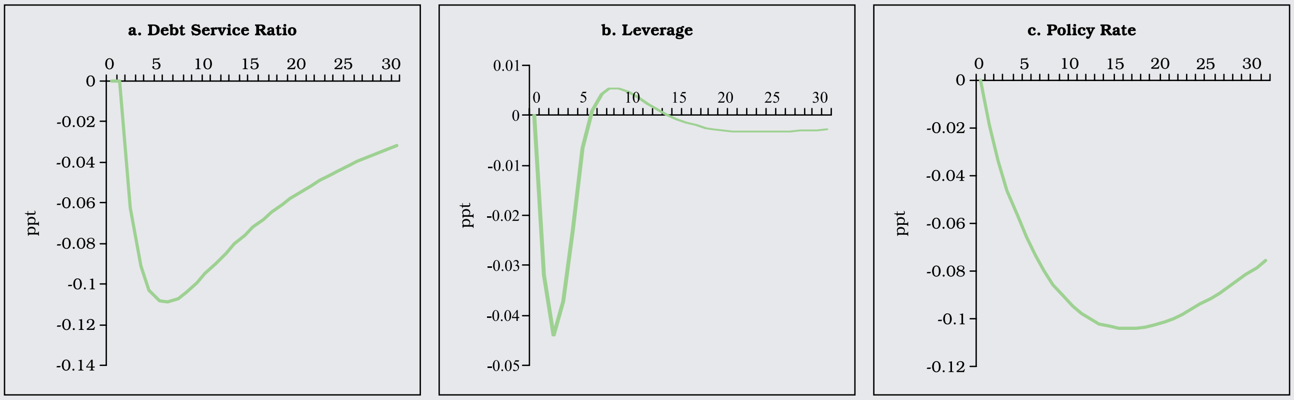
A comparison of the output gap estimates filtered out from the macro-financial model *vis-à-vis* the MPMOD indicates that during 2012 to 2017, high non-performing asset ratios, coupled with a sharp fall in credit growth contributed to tighter financial conditions, which in turn

(Contd...)

1 MPMOD applies the multivariate filter methodology to estimate the output gap and potential output.

2 The characterisation of the financial cycle is based on two long run relationships that together determine the long run sustainability of the credit-GDP ratio. The first relationship is between the credit-GDP ratio and real asset prices, which is a proxy for collateral constraints. The deviation of this relationship from its long-term trend is defined as the leverage gap. The second relationship is between the credit-GDP ratio and the nominal lending rate, which captures the effect of cash flow constraints due to interest payments faced by the households. The deviation of this relationship from its long-term trend is defined as debt service gap (Juselius *et al.*, 2017).

Chart 2: Response of Output Gap to One Standard Deviation Shocks

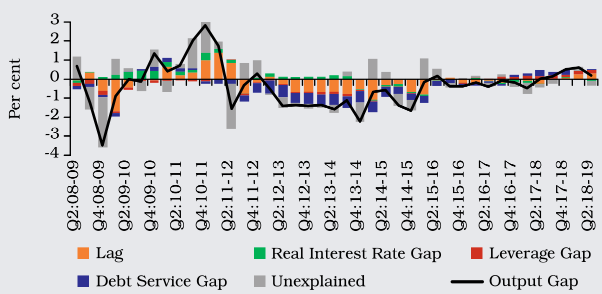


Note: ppt - Percentage points.
Source: RBI staff estimates.

strained demand conditions (Chart 3). Subsequently, as the impact of this configuration diminished over time, it spurred some recovery in credit markets and a revival in asset markets, leading to a faster closing of the output gap from 2017.

During 2012 to 2017, the output gap estimates obtained by incorporating the financial cycle were lower than estimates without it. Thus, with a given level of the overall output, estimates of the potential output are found to be higher than the ones estimated without the financial information. Consequently, the estimates of the natural rate of interest were also higher during that period. On the other hand, the output gap estimates were found to be higher since 2017; the potential output and natural rate of interest were lower in comparison with the estimates without including the financial cycles.

Chart 3: Output Gap Decomposition



Source: RBI staff estimates.

References:

1. Alichi, A., Al-Mashat, R. A., Avetisyan, H., Benes, J., Bizimana, O., Butavyan, A., and Others (2018). 'Estimates of Potential Output and the Neutral Rate for the US Economy', *International Monetary Fund Working Paper No. WP/18/152*.

2. Juselius, M., Borio, C., Disyatat, P., & Drehmann, M. (2017). 'Monetary Policy, the Financial Cycle, and Ultra-Low Interest Rates', *International Journal of Central Banking, 13(3), 55-89.*

3. Rath, D. P., Mitra, P., & John, J. (2019). 'Interlinkage between Financial and Economic Cycles - Some Evidence using a Macro-Financial Model for India', Mimeo.

The Operating Framework: Liquidity Management

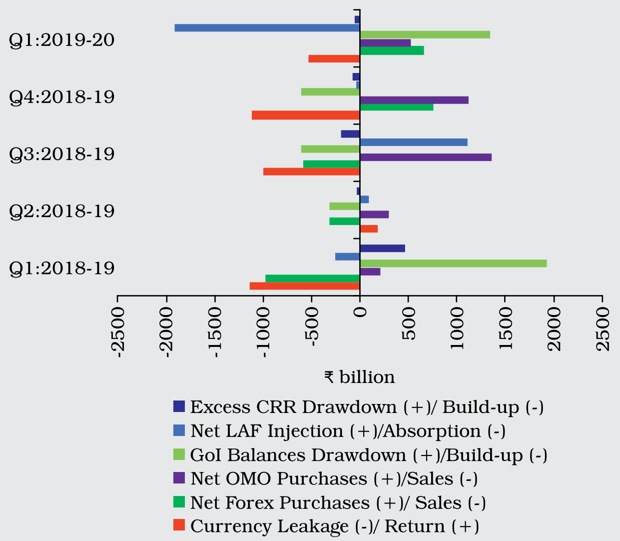
III.13 The operating framework of monetary policy aims at aligning the operating target – the weighted average call rate (WACR) – with the policy repo rate through proactive liquidity management, consistent with the stance of monetary policy. During 2018-19, the Reserve Bank applied multiple tools to manage both frictional and durable liquidity. While liquidity amounting to ₹6.4 trillion was injected through variable rate repos of maturities ranging from overnight to 56 days in addition to the regular 14-day repos, liquidity of ₹42.8 trillion was absorbed through reverse repos of maturities ranging from overnight to 14 days. The Reserve Bank also conducted 27 open market purchase operations aggregating about ₹3.0 trillion during the year. Based on an assessment of financial market conditions, the Reserve Bank increased the Facility to Avail Liquidity for Liquidity Coverage Ratio (FALLCR)[3] twice in 2018-19 by 2 percentage points of NDTL on each occasion, to reach a total of 13 per cent of NDTL, which supplemented the ability of individual banks to avail liquidity from the repo market against high-quality collateral. Furthermore, it was decided to reduce the statutory liquidity ratio (SLR) by 25 bps every calendar quarter beginning January 2019, until it reached 18 per cent of NDTL, in order to align the SLR with the liquidity coverage ratio (LCR) requirement. To further harmonise the liquidity requirements of banks with the LCR, a roadmap was given in April 2019 to increase the FALLCR by 50 bps in four steps to reach 15 per cent of NDTL by April 2020.

Drivers and Management of Liquidity

III.14 Reflecting domestic and global financial market conditions, systemic liquidity underwent significant shifts during 2018-19. Capital outflows triggered by global trade tensions and faster than anticipated normalisation of the US monetary policy exerted downward pressure on the domestic currency. Consequently, forex operations by the Reserve Bank sucked out domestic liquidity. Large currency expansion was another feature throughout the year, exacerbating the pressure on system level liquidity.

III.15 In Q1:2018-19, liquidity conditions generally remained in surplus in the wake of large government spending. The resulting flow of liquidity into the system (₹1.4 trillion in April) more than offset the liquidity drained by two autonomous factors – currency expansion by ₹743 billion and forex sales of ₹160 billion – during the month (Chart III.1). The scale of forex sales picked up in May and June, and higher than usual currency expansion continued, resulting in a liquidity deficit in the system for a brief period from mid-June to July 2018, further exacerbated by advance tax outflows. Accordingly, in addition to the regular 14-day repos, the Reserve Bank injected liquidity through overnight variable rate repos on a few occasions to tide over the transitory liquidity tightness. In addition, the Reserve Bank also conducted OMO purchases of ₹100 billion each in May and June 2018 to infuse durable liquidity into the system. Overall, net liquidity absorption under the LAF moderated progressively during the quarter from an average daily net position of ₹496 billion in April to ₹140 billion in June.

Chart III.1: Drivers and Management of Liquidity



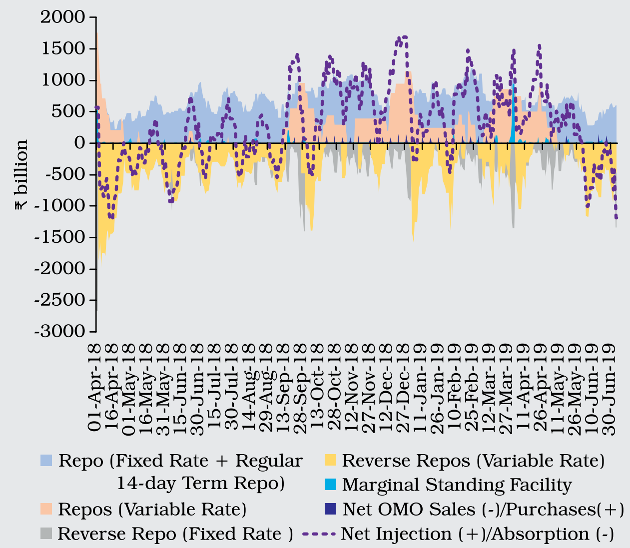
Source: RBI.

[3] The assets allowed as Level 1 High Quality Liquid Assets (HQLAs) for the purpose of computing LCR of banks include, *inter alia*, government securities in excess of the minimum SLR requirement and, within the mandatory SLR requirement, government securities to the extent allowed by the Reserve Bank under Marginal Standing Facility (MSF) [presently 2 per cent of the bank's NDTL] and under the FALLCR.

III.16 During Q2:2018-19, liquidity conditions gyrated between deficit and surplus. In July, moderation in government spending (especially in the second half) and the Reserve Bank's forex sales necessitated average daily net injection of ₹107 billion under the LAF. OMO purchases amounting to ₹100 billion were also conducted during the month. The system moved back into absorption mode in August (up to August 19) due to increased spending by the centre which even warranted recourse to ways and means advances (WMA) from the Reserve Bank, although indirect tax payments whittled down excess liquidity for a brief period. The Reserve Bank absorbed ₹30 billion on an average daily net basis during the month, even as systemic liquidity turned into deficit between August 20 and 30, necessitating liquidity injection. The system moved back into surplus during August 31 - September 10, as government spending increased in the first half of September; however, system liquidity swung back into deficit due to advance tax outflows. The Reserve Bank undertook daily net injection of liquidity through the LAF of ₹406 billion along with two OMO purchases amounting to ₹200 billion in the second half of September to meet durable liquidity requirements (Chart III.2).

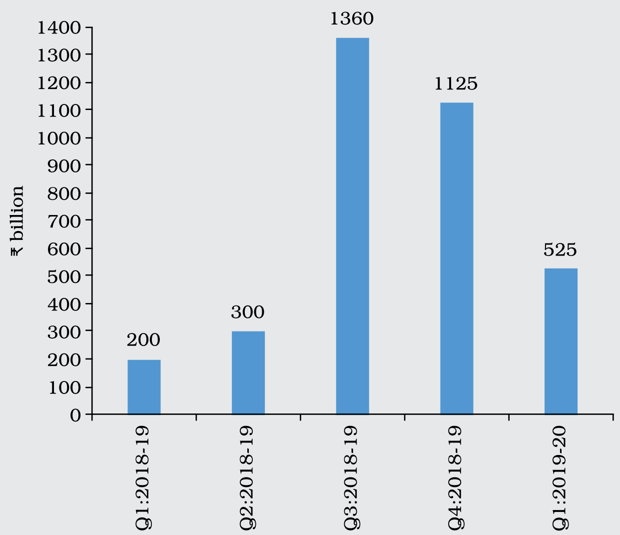
III.17 Liquidity conditions generally remained in deficit during Q3:2018-19. A combination of increased festival related currency demand and the Reserve Bank's forex sales resulted in a deficit in the second week of October 2019, which continued for the rest of the month. With the centre resorting to WMA, the deficit moderated at the beginning of November, but increased subsequently as currency expansion was sustained during the festival season. The deficit increased further in the second half of December, mainly on the back of advance tax outflows. The Reserve Bank conducted variable rate repo auctions of various tenors, including longer term (28 days and 56 days) in addition to regular 14-day term repos. Additionally, durable liquidity of ₹360 billion was injected through OMOs in October, which was subsequently scaled up to ₹500 billion each in November and December, taking the total durable liquidity injection through OMOs to about ₹1.4 trillion during the quarter (Chart III.3). Variable rate reverse repo auctions were conducted to mop up excess liquidity.

Chart III.2: Liquidity Management



Source: RBI.

Chart III.3: Open Market Purchase Operations



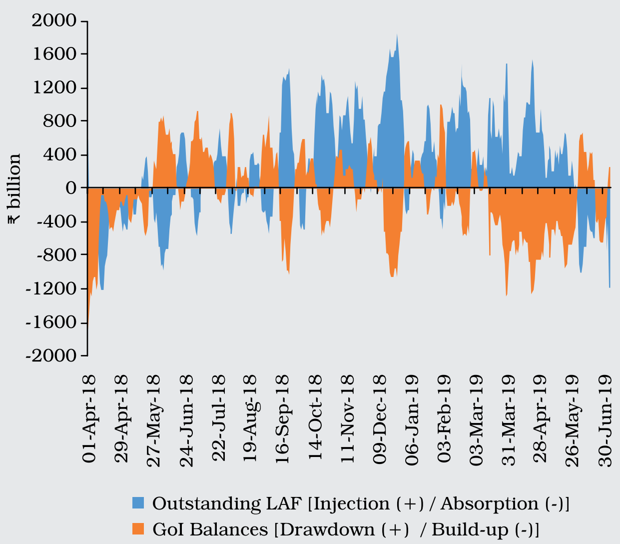
Source: RBI.

III.18 Deficit liquidity conditions persisted in Q4:2018-19 in the wake of sustained currency expansion and build-up of government cash balances, barring a few days at the beginning of both January and February, when liquidity conditions turned surplus as the government resorted to overdraft (OD)/WMA. In order to meet durable liquidity needs, the Reserve Bank conducted OMO purchases of ₹500 billion in January, ₹375 billion in February and ₹250 billion in March. Simultaneously, transient liquidity needs were met through variable rate repos of various tenors in addition to the regular 14-day term repos.

III.19 With the Reserve Bank meeting durable liquidity needs on a regular basis through OMOs, LAF positions on most occasions reflected movements in government spending (Chart III.4).

III.20 To sum up, the Reserve Bank's forex operations and currency expansion were the primary drivers of durable liquidity in the banking system in 2018-19, while government spending was the key driver of frictional liquidity movements. Fine-tuning operations through variable rate auctions were the key instrument through which frictional liquidity was managed. Repo/reverse repo auctions of various maturities were frequently used for managing liquidity (Table III.1).

Chart III.4: Net LAF and GoI Cash Balances



Source: RBI.

Table III.1: Fine-tuning Operations through Variable Rate Auctions during 2018-19

Items	Frequency (Number of times)	Average volume (₹ billion)
1	2	3
Repo (Maturity in Days)		
1-3	11	199.9
7	5	219.3
8	1	250.0
14	2	126.9
21	2	325.0
28	4	250.0
55-56	4	237.5
Reverse repo (Maturity in Days)		
1	44	390.6
2	6	382.0
3	16	371.3
4	6	248.0
6	2	186.4
7	110	135.5
11	1	40.8
13	1	26.3
14	13	44.0

Source: RBI.

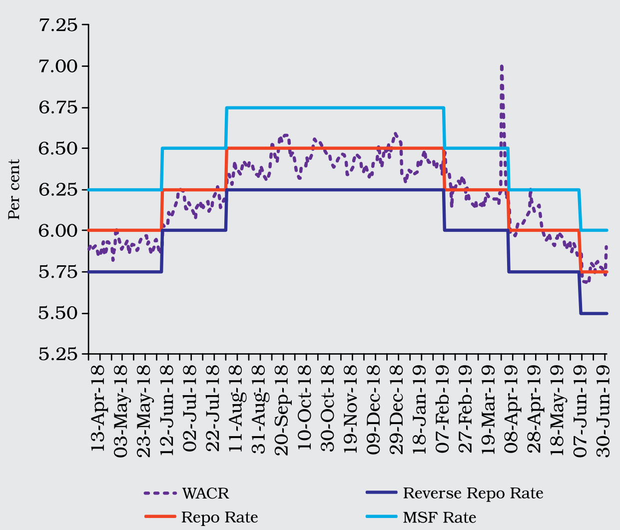
III.21 In view of increased liquidity demand every year in March due to year-end factors, the Reserve Bank conducted four longer term variable rate repo auctions (tenor ranging between 14-day and 56-day) in March 2019 in addition to the regular 14-day variable rate term repo auctions. Furthermore, the Reserve Bank decided to augment its liquidity management toolkit and injected rupee liquidity for longer duration through long-term foreign exchange buy/sell swaps. Accordingly, it conducted USD/INR buy/sell swap auction of US$ 5 billion for a tenor of 3 years on March 26, 2019 to inject durable liquidity of ₹345.6 billion.

III.22 After remaining in deficit during April and most of May, systemic liquidity turned into surplus in June driven by large government spending after the general elections. The Reserve Bank absorbed liquidity of ₹517 billion in June, as against an injection of ₹700 billion in April and ₹334 billion in May on a daily net average basis under the LAF. During Q1: 2019-20, the Reserve Bank conducted four OMO purchase auctions – two each in May and June amounting to ₹250 billion and ₹275 billion, respectively. It also conducted a US$ 5 billion buy/sell swap auction amounting to ₹348.7 billion for a tenor of 3 years on April 23 to inject durable liquidity into the system.

Operating Target and Policy Rate

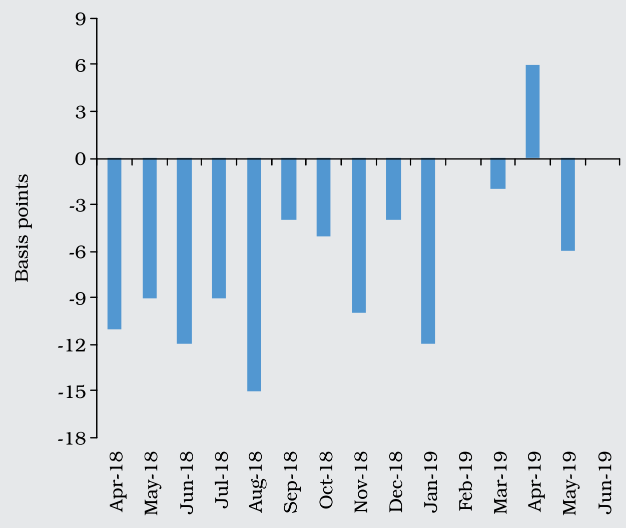
III.23 As alluded to earlier, the objective of liquidity management is to align the WACR – the operating target – with the policy repo rate. During 2018-19, the WACR generally traded below the policy repo rate till January 2019, but hardened intermittently thereafter and spiked at the year-end (Chart III.5). During Q1:2019-20, the WACR showed two-way movements around the policy repo rate.

Chart III.5: Policy Rate Corridor and WACR



Source: RBI.

Chart III.6: Average Spread of WACR over the Repo Rate



Source: RBI.

III.24 The negative spread of the WACR over the repo rate moderated from 11 bps in April to 5 bps in October 2018 but increased thereafter to 12 bps in January (Chart III.6). Post announcement of reduction in the repo rate by 25 bps on February 7, 2019, the WACR broadly aligned with the repo rate in February and March 2019. Overall, the WACR remained 8 bps below the policy rate in 2018-19 (10 bps in H1 and 6 bps in H2). During Q1:2019-20, the WACR averaged close to the repo rate.

Monetary Policy Transmission

III.25 Following the 50 bps increase in the policy repo rate during June-August 2018 (25 bps each in June and August 2018), banks raised their deposit and lending interest rates (Table III.2). Banks had started raising their term deposit rates even earlier - from December 2017 - as surplus liquidity in the system waned. The rise in term deposit rates exerted upward pressure on the cost of funding of banks, which fed into their marginal cost of funds-based lending rates (MCLRs). Consequently, the weighted average

Table III.2: Transmission to Deposit and Lending Rates

(Basis Points)

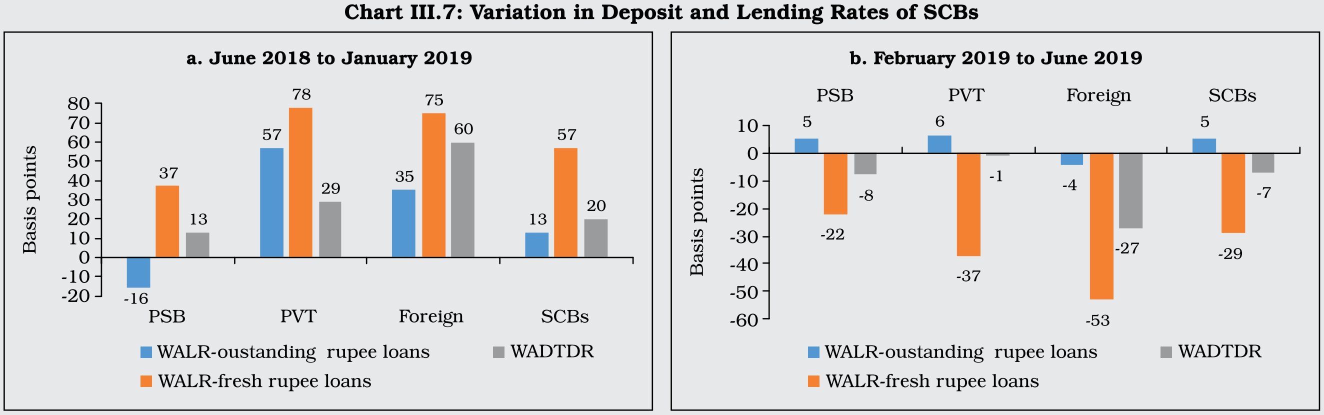
Period	Repo Rate	Term Deposit Rates		Lending Rates		
		Median Term Deposit Rate	WADTDR	1 - Year Median MCLR	WALR - Outstanding Rupee Loans	WALR - Fresh Rupee Loans
1	2	3	4	5	6	7
April 2017 to March 2018	-25	-25	-30	-20	-55	-40
April 2018 to March 2019	25	19	22	35	10	39
January 2018 to January 2019	50	27	38	50	2	56
Tightening Cycle:						
June 2018 to January 2019	50	16	20	32	13	57
Easing Cycle:						
February 2019 to June 2019	-75	-7	-7	-10	5	-29

WADTDR: Weighted Average Domestic Term Deposit Rate. WALR: Weighted Average Lending Rate.
MCLR: Marginal Cost of Funds-based Lending Rate.
Source: Special Monthly Return VIAB, RBI and banks' websites.

lending rate (WALR) on fresh rupee loans sanctioned by banks increased by 57 bps during the tightening phase of the monetary policy cycle (June 2018 – January 2019). The rise in the WALR on outstanding rupee loans was, however, muted (Chart III.7a).

III.26 In response to the reduction in the policy repo rate by 75 bps during February - June 2019, the WALR on fresh rupee loans declined by 29 bps over the same period (Chart III.7b). However, the WALR on outstanding rupee loans increased by 5 bps mainly due to two reasons. First, lending interest rates are typically linked to 1-year MCLR; consequently, interest rates on such loans are reset annually on the due dates. Second, a portion of the loans contracted during July 2010 – March 2016 and still outstanding continues to be linked to the base rate, which remained practically unchanged during both the tightening and easing phases.

Chart III.7: Variation in Deposit and Lending Rates of SCBs



PSB: Public Sector Banks; PVT: Private Sector Banks; Foreign: Foreign Banks; SCBs: Scheduled Commercial Banks.
Source: RBI.

Sectoral Lending Rates

III.27 Monetary transmission remained uneven across sectors, reflecting varied credit demand and credit risk. During the tightening phase (June 2018-January 2019), interest rates on outstanding loans increased in respect of sectors such as agriculture, housing and education, while they declined in the case of industry, trade and professional services sectors (Table III.3). During the easing phase beginning from February 2019, lending rates declined for most sectors.

III.28 The Reserve Bank had proposed in December 2018 that all new floating rate personal/retail loans (housing, auto, *etc*.) and floating rate loans to micro and small enterprises extended by banks beginning April 1, 2019 would be benchmarked to external benchmarks, *viz.*, (i) the policy repo rate; or (ii) any benchmark market interest rate produced by the Financial Benchmarks India Private Ltd. (FBIL), including Treasury bill rates. Taking into account the feedback received during discussions held with stakeholders on issues such as (i) management of interest rate risk by banks from fixed interest rate linked liabilities against floating interest rate linked assets; and (ii) the lead time required for IT system upgradation, it was decided in April 2019 to hold further consultations with stakeholders and work

Table III.3: Sector-wise WALR of SCBs (Excluding RRBs) - Outstanding Rupee Loans

(at which 60 per cent or more business is contracted)

(Per cent)

End-Month	Agric-ulture	Industry (Large)	MSMEs	Infrast-ructure	Trade	Professional Services	Personal Loans					Rupee Export Credit
							Housing	Vehicle	Education	Credit Card	Other$	
1	2	3	4	5	6	7	8	9	10	11	12	13
Dec-14	10.93	12.95	13.05	13.05	13.09	12.39	10.76	11.83	12.90	37.86	14.24	12.16
Mar-18	10.71	11.03	11.41	11.40	11.08	10.87	9.38	10.74	11.29	37.79	12.48	10.08
May-18	10.65	11.17	11.36	11.30	11.57	10.80	9.40	10.64	11.30	38.23	12.71	9.99
Jun-18	10.67	11.23	11.30	11.28	11.00	10.73	9.43	10.66	11.29	38.55	12.66	10.07
Sep-18	10.73	10.42	11.55	10.88	11.17	10.50	9.58	10.62	11.61	38.79	12.05	9.76
Dec-18	10.69	10.70	11.23	10.90	10.97	10.65	9.48	10.64	11.36	38.74	11.56	10.04
Jan-19	10.70	10.57	11.02	10.98	10.59	10.59	9.54	10.60	11.40	37.97	11.59	9.92
Mar-19	10.56	10.41	11.42	10.70	10.86	10.72	9.41	10.48	11.35	38.91	12.20	9.51
Jun-19	10.48	10.20	11.26	10.68	9.98	10.42	9.44	10.45	11.34	38.63	12.39	9.73
Variation (Percentage Points)												
2018-19	-0.15	-0.62	0.01	-0.70	-0.22	-0.15	0.03	-0.26	0.06	1.12	-0.28	-0.57
Easing Phase (Jan 2015 - May 2018)	-0.28	-1.78	-1.69	-1.75	-1.52	-1.59	-1.36	-1.19	-1.60	0.37	-1.53	-2.17
Tightening Phase (Jun 2018 - Jan 2019)	0.05	-0.60	-0.34	-0.32	-0.98	-0.21	0.14	-0.04	0.10	-0.26	-1.12	-0.07
Easing Phase (Feb 2019 - Jun 2019)	-0.22	-0.37	0.24	-0.30	-0.61	-0.17	-0.10	-0.15	-0.06	0.66	0.80	-0.19

$: Other than housing, vehicle, education and credit card loans.
MSMEs: Micro, Small and Medium Enterprises.
Source: Special Monthly Return VIAB, RBI.

out an effective mechanism for transmission of rates.

III.29 During 2018-19, studies were undertaken on a range of issues to improve the analytical inputs for the conduct of monetary policy: an examination of drivers of the investment cycle to understand the duration of investment cycles and inflexion points/structural breaks; determinants of economic activity, and the role of monetary and fiscal policies; the incorporation of a fiscal block in the quarterly projection model for an enhanced understanding of monetary-fiscal interface; estimates of the finance-neutral output gap which incorporates the role of financial factors (bank credit, equity prices and policy repo rate) in assessing demand conditions; an assessment of the impact of minimum support prices and house rent allowances on inflation; macroeconomics of crude oil prices; and, forex market operations and liquidity management. Research studies were also undertaken on measurement issues relating to housing services in CPI and the role of monetary policy in movement of bond yields.

3. Agenda for 2019-20

III.30 During 2019-20, the focus will be on refining the liquidity forecasting framework, sharpening the estimation of currency in circulation at various frequencies (such as yearly, quarterly, monthly, fortnightly and weekly) and an overall reviewing of operational aspects of the liquidity management framework, including aspects relating to structural liquidity balance and distributional asymmetry in liquidity.

III.31 An analysis of recent food inflation dynamics will be carried out to understand the sources of volatility and to examine the relative role of cyclical and structural factors at play. Furthermore, the nature of spatial dimensions of inflation will be studied to better understand the divergences in inflation rates across major groups/sub-groups and changes in them over time. In order to enhance the understanding of monetary transmission, an analysis of sectoral credit flows would be undertaken. The implications of the asset quality/health of the banking sector and NBFCs on credit flows to the commercial sector would also be examined.

IV CREDIT DELIVERY AND FINANCIAL INCLUSION

The Reserve Bank has made sustained efforts during the year to increase the penetration of formal financial services in unbanked areas, while continuing with its policy of ensuring adequate flow of credit to all productive sectors of the economy. Some of the new initiatives during the year include setting up of an expert committee/working group to examine the issues relating to credit flow to MSMEs and agriculture sectors, and allowing SCBs to co-originate loans with non-deposit taking systemically important NBFCs for credit delivery to the priority sector. Further, the National Strategy for Financial Inclusion 2019-24 was prepared, besides ongoing measures to strengthen financial literacy and inclusion in the country.

IV.1 The Reserve Bank continued its focus on strengthening the credit delivery mechanisms to ensure adequate and timely flow of credit to all productive sectors of the economy, especially agriculture and micro, small and medium enterprises (MSMEs), and also ensuring the availability of banking services to all sections of people in the country. In order to review the credit flow to these sectors, an Expert Committee on MSMEs as well as an Internal Working Group to review agricultural credit were constituted. Further, the Reserve Bank has prepared the National Strategy for Financial Inclusion (NSFI) 2019-24 under the aegis of the Financial Inclusion Advisory Committee (FIAC), to ensure access to financial services to all the citizens in a safe and transparent manner. The primary objective is to enable the financially excluded to have an access to financial services from the financial institutions.

IV.2 Several innovative measures were undertaken to facilitate the creation of a conducive environment and increase the level of penetration of the banking system to serve the unserved and underserved population for achieving the objective of sustainable and inclusive economic growth. The co-origination model was rolled out which enables the scheduled commercial banks (SCBs) to co-originate loans with non-deposit taking systemically important NBFCs (NBFCs-ND-SI) for credit delivery to the priority sector. As financial literacy precedes financial inclusion, a two-tier 'Train the Trainers' programme was designed to build the capacity and skills of business correspondents (BCs) for effectively delivering financial services at the grass-root level. Similarly, to build capacity and skills, and sensitise the Counsellors of Financial Literacy Centres (FLCs) and rural banks' branch managers for delivering basic financial literacy at the ground level, a two-tier programme on financial literacy was designed. Further, the National Centre for Financial Education (NCFE) has been set up under Section 8 of the Companies Act 2013 to focus on promoting financial education across the country for all sections of the population as per the National Strategy for Financial Education (NSFE). In this context, the Financial Inclusion and Development Department (FIDD) of the Reserve Bank is the nodal department for formulating and implementing policies for promoting financial inclusion in the country.

IV.3 Against the above backdrop, implementation status of agenda for 2018-19 is presented in section 2, covering performance of credit flow to priority sectors and developments with respect to financial inclusion and financial literacy. The agenda for 2019-20 is provided in section 3.

2. Agenda for 2018-19 - Implementation Status

IV.4 In order to strengthen the BC model, "Train the Trainers" programme for the capacity building of BCs was rolled out in March 2019 in co-ordination with College of Agricultural Banking (CAB), Pune. The banks' training faculty who participated in Tier-I of this programme have been advised to initiate the Tier-II leg of the programme for rural branch managers in their respective jurisdictions. These branch managers, in turn, are expected to sensitise and handhold the BCs attached to their branches. The baseline survey forming part of the impact assessment of the pilot Centres for Financial Literacy (CFL) project has been completed. Similarly, the desired process to get the Financial Inclusion Plans (FIPs) integrated with Automated Data Extraction Project (ADEPT) has been initiated. The preparation of the framework for credit delivery to tenant farmers has been subsumed in the Internal Working Group set up to review agricultural credit.

CREDIT DELIVERY

Priority Sector

IV.5 The overarching principle of priority sector lending (PSL) is to enhance credit flow to those vulnerable sections of the society which despite being credit worthy may not get timely and adequate credit in the absence of a special dispensation. Priority sector loans include small value loans to farmers for agriculture and allied activities, MSMEs, housing, education, and other low-income groups and weaker sections. Social infrastructure and renewable energy have also been brought under the ambit of PSL. The performance in achievement of priority sector lending targets by SCBs is given in Table IV.1.

Table IV.1: Performance in Achievement of Priority Sector Lending Targets

(₹ Billion)

End-March	Public Sector Banks	Private Sector Banks	Foreign Banks
1	2	3	4
2018	20,723 (39.9)	8,046 (40.8)	1,402 (38.3)
2019	23,060 (42.55)	10,190 (42.49)	1,543 (43.41)

Note: Figures in brackets are percentages to adjusted net bank credit (ANBC) or credit equivalent of Off-Balance Sheet exposures (CEOBE), whichever are higher, in the respective groups.

Source: Priority Sector Returns submitted by SCBs.

IV.6 The Priority Sector Lending Certificates (PSLCs) scheme was introduced in April 2016 as a mechanism to incentivise banks which surpass their targets in lending to different categories under the priority sector. PSLCs allow market mechanism to drive priority sector lending by leveraging the comparative strength of different banks. A platform to enable trading in the certificates has been provided by the Reserve Bank through its Core Banking Solution (CBS) portal (e-Kuber).

IV.7 The PSLC platform saw active participation from all the eligible entities including Urban Co-operative Banks (UCBs) and Small Finance Banks (SFBs) during 2018-19. The total trading volume of PSLCs grew by around 78 per cent to ₹3,274.3 billion as on March 31, 2019 as against ₹1,843.3 billion in the same period of last year. Among the four PSLC categories, highest trading was recorded in the case of PSLC-General and PSLC-small and marginal farmer, with the transaction volumes at ₹1,324.8 billion and ₹1,125.0 billion, respectively.

Review of Priority Sector Guidelines

IV.8 Since 2015-16, SCBs have been directed to ensure that the overall lending to non-corporate farmers does not fall below the system-wide average of the last three years. SCBs were also directed to reach the level of 13.50 per cent direct lending to beneficiaries that constituted the erstwhile direct lending to agriculture. For 2018-19, the applicable system-wide average target was 11.99 per cent.

IV.9 SCBs (excluding regional rural banks and SFBs) were allowed to co-originate loans with non-deposit taking systemically important NBFCs (NBFCs-ND-SI) for the creation of eligible priority sector assets in order to provide a competitive environment for credit delivery to the priority sector. The arrangement entails joint contribution of credit by both lenders at the facility level and sharing of risks and rewards within an appropriate alignment of respective business objectives as per mutually decided agreement between the bank and the NBFC. In this regard, guidelines were issued to banks and NBFCs in September 2018.

Flow of Credit to Agriculture

IV.10 The Government of India has been fixing the target for agricultural credit every year. During 2018-19, the Government of India set the target of ₹11,000 billion for agricultural credit. As on March 31, 2019, commercial banks achieved 119.9 per cent of their target whereas co-operative banks and regional rural banks (RRBs) achieved 93.26 per cent and 105.78 per cent, respectively (Table IV.2). The target for 2019-20 is ₹13,500 billion.

IV.11 The Kisan Credit Card (KCC) has emerged as an innovative credit delivery mechanism to provide adequate and timely bank credit to farmers under a single window for their cultivation and other needs, including consumption, investment and insurance. The KCC Scheme has now been extended to farmers involved in animal husbandry and fishery to enable them to meet their working capital requirements. The performance of the scheme for the last two years is presented in Table IV.3.

Table IV.3 : Kisan Credit Card (KCC) Scheme

(Number in Million, Amount in ₹ Billion)

Year	Number of Operative KCCs	Outstanding Crop Loan	Outstanding Term Loan
1	2	3	4
2017-18	23.52	3,906.02	407.20
2018-19*	23.63	4,136.70	414.09

*: Provisional.

Source: Public Sector Banks and Private Sector Banks.

Table IV.2: Targets and Achievements for Agricultural Credit

(₹ Billion)

Year	Commercial Bank		Co-operative Banks		RRBs		Total	
	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
1	2	3	4	5	6	7	8	9
2017-18	7,040	8,711	1,560	1,503	1,400	1,412	10,000	11,626
2018-19*	7,920	9,496	1,650	1,539	1,430	1,513	11,000	12,548

*: Provisional.

Source: National Bank for Agriculture and Rural Development (NABARD).

Table IV.4: Relief Measures for Natural Calamities

(Number in Million; Amount in ₹ Billion)

Year	Loans restructured/ rescheduled		Fresh finance/ Relending provided	
	No. of accounts	Amount	No. of accounts	Amount
1	2	3	4	5
2017-18	0.36	26.38	1.04	36.01
2018-19*	0.39	103.49	0.55	109.83

*: Provisional.
Source: State Level Bankers Committees (SLBCs).

Table IV.5: Credit Flow to MSEs

Year	Number of Accounts (million)	Amount Outstanding (₹ billion)	MSE Credit as Per Cent of ANBC
1	2	3	4
2017-18	25.9	11,493.5	14.6
2018-19	31.8	13,132.3	15.05

Source: Priority Sector Returns submitted by SCBs.

Relief Measures for Natural Calamities

IV.12 Currently, the National Disaster Management Framework of the Government of India covers 12 types of natural calamities under its ambit, *viz.,* cyclone, drought, earthquake, fire, flood, tsunami, hailstorm, landslide, avalanche, cloud burst, pest attack and cold wave/frost. Accordingly, the Reserve Bank has mandated banks to provide relief measures, where the crop loss assessed was 33 per cent or more, in the areas affected by natural calamities. The relief measures by banks, *inter alia*, include restructuring/ rescheduling existing loans and sanctioning fresh loans as per the emerging requirement of the borrowers. During 2018-19, natural calamity was declared by seven states, *viz.,* Rajasthan, Andhra Pradesh, Kerala, Maharashtra, Karnataka, Tamil Nadu and Gujarat. The extent of relief measures provided by banks at the time of natural calamities during 2018-19 is given in Table IV.4.

Credit Flow to the MSME Sector

IV.13 The measures taken by the Reserve Bank for facilitating flow of credit to MSMEs and other steps taken by the government over the last few years have resulted in an increase in credit flow to MSEs (Table IV.5).

IV.14 The MSME sector plays a crucial role in the economy both in terms of its employment generation and reducing regional social

Box IV.1
Expert Committee on Micro, Small and Medium Enterprises (MSME)

Micro, Small and Medium Enterprises form a vital component of the economy in terms of contribution to employment generation, innovation, exports, and inclusive growth of the economy. The government and the Reserve Bank have, from time to time, taken several steps to support the sector. However, MSMEs continue to face challenges of formalisation, technology adoption, capacity building, backward and forward linkages, lack of access to credit, risk capital and access to latest technology and marketing. Hence, during the Fifth Bi-Monthly Monetary Policy Statement for 2018-19 (December 5, 2018), it was announced that the Reserve Bank will constitute an 'Expert Committee on Micro, Small and Medium Enterprises' to identify causes and propose long-term solutions, for the economic and financial sustainability of the MSME sector. Accordingly, the Committee was constituted (Chairman: Shri U. K. Sinha). The Committee held consultations with the Central Ministries, state governments, multilateral organisations, industry associations, MSME entrepreneurs and various other stakeholders, and looked into areas of capacity building, policy changes and financing needs to unlock the potential of this sector. The Report was submitted to the Reserve Bank on June 18, 2019. The Committee has made various recommendations in areas such as legislative and institutional framework, access to finance, capacity building and new technological interventions for lending to MSME sector. The recommendations are being examined for implementation. The Report is available on the RBI's website for wider dissemination.

economic imbalances (Box IV.1). However, access to finance and cost of credit have been a concern for the sector. To address this issue, the Government of India, on November 2, 2018, announced 2 per cent interest subvention for the MSME sector, applicable for 2018-19 and 2019-20. All fresh or incremental amount of working capital or new term loan to the extent of only ₹10 million in the sector would be eligible for interest subvention during the period of the scheme. All MSMEs which have a valid Udyog Aadhaar Number (UAN) and GSTN Number are eligible under the scheme. Further, the loan accounts of the eligible beneficiaries under the scheme, on the date of filing claim, should not have been declared as NPA as per the extant guidelines in this regard. No interest subvention shall be admissible to the eligible beneficiaries for any period during which their loan accounts remain under NPA category. Small Industries Development Bank of India (SIDBI) is the nodal national level implementing agency for the scheme. Regarding implementation of the scheme, the Reserve Bank has issued the operational guidelines to SCBs in February 2019.

FINANCIAL INCLUSION

IV.15 The Reserve Bank continued its efforts towards fulfilling the financial inclusion agenda during the year to help realise the intended economic and social objectives. In this direction, several new initiatives were undertaken during 2018-19.

Revamping of Lead Bank Scheme (LBS)

IV.16 A Committee of Executive Directors of the Reserve Bank was constituted to study the efficacy of the Lead Bank Scheme (LBS) and suggest measures for its improvement. Based on the Committee's recommendations, on April 6, 2018, guidelines on the revamping of LBS were issued to all State Level Bankers Committee (SLBC) Convenor Banks/Lead Banks, as also separately to all Lead Banks on enhancing the effectiveness of Lead District Managers (LDMs) along with certain action points. As per the action points suggested in the guidelines, a Steering Sub-committee of SLBC / UT Level Bankers Committee (UTLBC) has been constituted in all the states/UTs and a revised agenda has also been adopted for all SLBC/UTLBC meetings. Action points pertaining to alignment of corporate business targets for branches, blocks, districts and states with an Annual Credit Plan (ACP), standardisation of information/data, and management of data flow under the LBS are under various stages of implementation.

Assignment of Lead Bank Responsibility

IV.17 Under the LBS, one bank in each district is assigned the leadership role and acts as a consortium leader to co-ordinate the efforts of the banks in that district, particularly in matters such as branch expansion and credit planning to meet the credit needs of the district. The assignment of lead bank responsibility to a designated bank in every district is done by the Reserve Bank. As of June 2019, 18 public sector banks and one private sector bank have been assigned lead bank responsibility in 717 districts across the country.

Financial Inclusion Plans (FIPs)

IV.18 In order to have a planned and structured approach to financial inclusion, banks have been advised to prepare Board-approved Financial Inclusion Plans (FIPs). These FIPs capture banks' achievements on various parameters such as the number of outlets (branches and BCs), Basic Savings Bank Deposit Accounts (BSBDAs), overdraft facilities, KCCs and General Credit Card (GCC) accounts and transactions in ICT-BC accounts. The progress made by banks on such parameters under FIPs is given in Table IV.6.

Table IV.6: Financial Inclusion Plan: A Progress Report

Particulars	End-March 2010	End- March 2018	End-March 2019*
1	2	3	4
Banking Outlets in Villages - Branches	33,378	50,805	52,489
Banking Outlets in Villages > 2000-BCs	8,390	100,802	130,687
Banking Outlets in Villages < 2000- BCs	25,784	414,515	410,442
Total Banking Outlets in Villages – BCs	34,174	515,317	541,129
Banking Outlets in Villages- Other Modes	142	3,425	3,537
Banking Outlets in Villages - Total	**67,694**	**569,547**	597,155
Urban locations covered through BCs[$]	447	142,959	447,170
BSBDA - Through branches (No. in Million)	**60**	**247**	255
BSBDA - Through branches (Amt. in ₹ Billion)	**44**	**731**	878
BSBDA - Through BCs (No. in Million)	13	289	319
BSBDA - Through BCs (Amt. in ₹ Billion)	11	391	532
BSBDA - Total (No. in Million)	73	536	574
BSBDA - Total (Amt. in ₹ Billion)	55	1,121	1,410
OD facility availed in BSBDAs (No. in million)	0.2	6	6
OD facility availed in BSBDAs (Amt. in ₹ Billion)	0.1	4	4
KCC - Total (No. in Million)	24	46	49
KCC - Total (Amt. in ₹ Billion)	1,240	6,096	6,680
GCC - Total (No. in Million)	1	12	12
GCC - Total (Amt. in ₹ Billion)	35	1,498	1,745
ICT-A/Cs-BC-Total transactions (Number in million)[#]	27	1,489	2,084
ICT-A/Cs-BC-Total Transaction (Amount in ₹ billion)[#]	7	4,292	5,884

*: Provisional.
[$]: Out of 447,170 outlets, It is reported that 388,868 outlets provide limited services like only remittances or sourcing of loans, *etc*.
[#]: Transactions during the financial year.
Source: As reported by banks.

National Strategy for Financial Inclusion

IV.19 In order to systematically accelerate the level of financial inclusion in the country in a sustainable manner, the National Strategy for Financial Inclusion has been prepared under the aegis of the FIAC and is based on the inputs and suggestions from the Government of India and other financial sector regulators (Box IV.2).

Penetration of Banking Services

IV.20 The Reserve Bank has taken several steps to provide banking facilities in the unbanked villages in the country. The use of information technology (IT) and intermediaries has made it possible to increase outreach, scale and depth of banking services at an affordable cost. SLBC convenor banks were advised that while opening new banking outlets in Unbanked Rural Centres (URCs) in tier 5 and 6 centres, banks should give priority to URCs having population above 5,000 (*i.e.,* tier-5 centres). Further, SLBC convenor banks were advised to consider opening of a CBS enabled banking outlet or a part time banking outlet in the villages with population less than 2,000 that still remain unbanked. To facilitate banks (including SFBs) in opening their outlets, SLBCs were also advised to compile and maintain an updated list of all URCs in the state and review the progress in SLBC meetings. As on September 30, 2018, 6,054 (75.51 per cent)

Box IV.2
National Strategy for Financial Inclusion

Financial inclusion is increasingly being recognised world over as a key driver of economic growth and poverty alleviation. Access to formal finance can boost job creation, reduce vulnerability to economic shocks and increase investments in human capital. At a macro level, greater financial inclusion can support sustainable and inclusive socio-economic growth for all.

To achieve the above objectives in a co-ordinated and time-bound manner, formulation of a National Strategy for Financial Inclusion (NSFI) is essential. Globally, the adoption of the National Financial Inclusion Strategy (NFIS) has been accelerated significantly in the past decade. As of mid-2018, more than 35 countries, including Brazil, China, Indonesia, Peru and Nigeria have launched an NFIS and another 25 countries are in the process of formulating a strategy. Further, several countries have also updated their original NFIS (World Bank, 2018).

The National Strategy for Financial Inclusion for India 2019-24 has been prepared by the Reserve Bank under the aegis of the Financial Inclusion Advisory Committee (FIAC) and is based on the inputs and suggestions from the Government of India, other financial sector regulators *viz.,* Securities and Exchange Board of India (SEBI), Insurance Regulatory and Development Authority of India (IRDAI) and Pension Fund Regulatory and Development Authority (PFRDA). This document also reflects various outcomes from wide-ranging consultations held with a range of stakeholders and market players, including National Bank for Agriculture and Rural Development (NABARD), National Payments Corporation of India (NPCI), Commercial Banks, Non-Governmental Organisations (NGOs), and Self-Regulatory Organisations (SROs), *etc*.

The document includes an analysis of the status and constraints in financial inclusion in India, specific financial inclusion goals, action plan to reach the goals and the mechanism to measure progress. The strategy envisages to make formal financial services **available, accessible, and affordable** to all the citizens in a **safe and transparent** manner to support **inclusive and resilient** multi-stakeholder led growth. It proposes forward looking recommendations to help achieve universal access to financial services through a bouquet of basic financial services leveraging on the BC Model, access to livelihood and skills development, financial literacy and education, customer protection and grievance redressal with effective co-ordination. While the various initiatives have helped in extending financial services to the hitherto excluded sections of society, the strategy aims to focus on deepening the reach, usage and sustainability of financial inclusion. The document was approved by the Financial Stability and Development Council Sub-Committee on March 14, 2019.

out of 8,018 identified villages across the country having a population of more than 5,000 were provided with banking services. Also, 481,303 (97.85 per cent) out of 491,879 identified villages across the country having a population of less than 2,000 have been provided with banking services (September 30, 2018).

'Train the Trainers' Programme for Capacity Building of Business Correspondents

IV.21 To build the capacity and skills of Business Correspondents (BCs), for effectively delivering financial services at the grass-root level, a two-tier 'train the trainers' programme, '*Skill Upgradation for Performance of* Resources – *BCs'* (SUPER-B) was designed by the Department, with the following objectives: (a) to train a group of motivated trainers who will take the responsibility of training their field level functionaries who deal with the BCs; (b) to create a professional BC workforce to cater to the needs of the people beyond the traditional financial products; and (c) to provide a forum to share the best practices on BC framework and possible convergence across the banks and apprise them of the potential opportunities and risks with rapid expansion of BC network.

IV.22 During the first tier of the programme, Members of Faculty from the banks' training establishments and officers from the Regional Offices of the Reserve Bank are sensitised at the CAB, Pune. The second tier of the programme involves a one-day sensitisation workshop for bank branch managers (with special focus on rural bank branches) to be driven by the beneficiaries of the first-tier programme. Finally, the bank managers being trained under this programme are expected to sensitise and handhold the BCs attached to their branches.

Setting up of National Centre for Financial Education (NCFE)

IV.23 The NCFE has been set up under Section 8 of the Companies Act, 2013 as per the directions of the Financial Stability and Development Council – Sub Committee (FSDC-SC) with a share capital of ₹1,000 million (shared among RBI, SEBI, IRDAI and PFRDA in the ratio of 30 per cent, 30 per cent, 30 per cent and 10 per cent, respectively). The NCFE continued its focus on promoting financial education across India for all sections of the population under the aegis of the National Strategy for Financial Education for creating financial awareness and empowerment through financial education campaigns across the country in the form of seminars, workshops, conclaves, trainings, programmes, campaigns, *etc.*

FINANCIAL LITERACY

IV.24 Financial literacy is crucial for imparting efficacy to the financial inclusion initiatives of the Reserve Bank. In this direction, a number of new initiatives were undertaken during 2018-19.

Impact Assessment of Pilot Project on Centres of Financial Literacy (CFL)

IV.25 The baseline survey forming part of the impact assessment of the pilot project on CFL has been completed during the year. Some of the observations/ findings of the baseline survey are as under:

a. Many socially and economically marginalised communities have relatively lower exposure to financial literacy initiatives thereby requiring more focused approach to these communities.

b. Out of the various financial education initiatives, one-to-one discussion and group training or awareness generation programme was found to be effective.

c. With regard to the effectiveness of media/channel used for dissemination of messages, television has the highest reach among the targeted rural population owing to its ability to transmit both audio and visual contents and thereby disseminating messages with higher visibility and recall for longer periods.

IV.26 The survey has also suggested that adequate efforts on practical exposure to use of digital financial services and awareness on the grievance redressal mechanism are essential in helping people onboard to use digital financial services. Further, there is a need to periodically review the existing training content and align them with the needs of the community in order to enable better adoption of desirable behaviour.

Financial Literacy Week 2019

IV.27 The Financial Literacy Week is an initiative of the Reserve Bank to promote awareness on key topics every year through a focussed campaign. This year, Financial Literacy Week was observed during June 3-7, 2019 on the theme of ‘Farmers’ and how they benefit by being a part of the formal banking system. To build awareness and disseminate financial literacy messages to the farming community, content in the form of posters/ leaflets and Audio Visuals on *Responsible Borrowing & Agricultural Finance* were prepared. Banks were advised to display the posters and content in their rural bank branches, FLCs, ATMs and websites. Further, the Reserve Bank also undertook a centralised mass media campaign during the month of June 2019 on Doordarshan and All India Radio to disseminate essential financial awareness messages to farmers.

Train the Trainers Programme for Rural Branch Managers and Financial Literacy Counsellors

IV.28 To build capacity and skills and sensitise the Counsellors of FLCs and rural bank branch managers for delivering basic financial literacy at the ground level, a two-tier programme on financial literacy was designed. During the first tier of the program, the Chief Literacy Officers (CLO) and Lead Literacy Officers (LLO) of the banks are sensitised every year at CAB, Pune. The second tier of the programme involves training of FLC Counsellors, rural branch managers of the bank and the sponsored RRBs by the LLOs of the banks. The LLOs have been advised to conduct the Tier II program in co-ordination with the regional/staff training centres of banks.

Financial Literacy Activities Conducted by FLCs

IV.29 As at end-March 2019, 1,483 FLCs were operational in the country. During 2018-19, 145,427 financial literacy related activities were conducted by the FLCs as compared to 129,280 activities during the preceding year.

3. Agenda for 2019-20

IV.30 Going forward, the Reserve Bank would undertake the following measures towards enhancing credit delivery and financial inclusion: (a) the CFL project has been extended to 20 tribal blocks of Rajasthan, Jharkhand and Madhya Pradesh, and will run for a period of two years; (b) the various recommendations made by the Expert Committee on MSME (Chairman: Shri U. K. Sinha) will be examined for implementation; and (c) the Reserve Bank has constituted an Internal Working Group in January 2019 to review agricultural credit (Chairman: Shri M. K. Jain, Deputy Governor). The Working Group is likely to examine the issues of regional disparity in agricultural credit disbursement and arrive at workable solutions and policy initiatives for addressing skewed distribution of credit for agriculture including allied activities and augmentation of capital formation.

V FINANCIAL MARKETS AND FOREIGN EXCHANGE MANAGEMENT

During 2018-19, the Reserve Bank undertook several measures, to broaden participation in financial markets, ease access and transaction norms for participants, widen the range of financial products, improve financial market infrastructure and pursue rigorous surveillance to maintain market integrity. The Reserve Bank conducted liquidity management operations (including FX swap auctions) for maintaining an appropriate level of liquidity in the financial system and intervention operations in the foreign exchange market to contain volatility. In the endeavour to facilitate trade and payments along with orderly development of the foreign exchange market, efforts were made to streamline regulations and align them with the current business and economic environment. The external commercial borrowings regime was also rationalised during the year.

V.1 The Reserve Bank remains engaged in developing financial markets to intermediate the requirements of resources of a fast-growing economy. During the year, the focus of these efforts was on enhancing operational flexibility of market participants and broadening their participation in market activity, while ensuring appropriate liquidity in the financial system and damping excessive volatility in price discovery. Efforts were also made to streamline regulations and to align them with the current business and economic conditions and reducing regulatory costs. A notable development during the year in this direction was the introduction of the Single Master Form (SMF) under Foreign Investment Reporting and Management System (FIRMS) for reporting of foreign investments. The external commercial borrowings (ECBs) regime was also rationalised during the year.

V.2 Against the above backdrop, section 2 covers several measures undertaken by the Financial Markets Regulation Department (FMRD) during the year to broaden participation in financial markets, widen the range of financial products and also improve financial market infrastructure. Section 3 presents liquidity management and foreign exchange market operations of the Financial Markets Operations Department (FMOD). Section 4 covers various initiatives undertaken by the Foreign Exchange Department (FED) during the year to facilitate trade and payments while promoting orderly development of the foreign exchange market. These departments also set out their agenda for 2019-20 in the respective sections.

2. FINANCIAL MARKETS REGULATION DEPARTMENT (FMRD)

V.3 FMRD is entrusted with the development, regulation and surveillance of money, government securities (G-secs), foreign exchange and derivatives markets. During 2018-19, the Department undertook several measures to broaden participation in financial markets, both domestic and foreign - ease access and transaction norms for participants, widen the range of financial products, improve financial market infrastructure and pursue rigorous surveillance to maintain market integrity.

Agenda for 2018-19: Implementation Status

V.4 The 'When Issued' market in the G-sec was introduced in May 2006 to strengthen the debt issuance framework *via* management and distribution of auction risk. With the objective to further deepen the G-sec market, the 'When Issued' directions were revised in July 2018 to liberalise eligible participants' base and to relax entity-wise limits for taking positions.

V.5 Short sale in G-secs was introduced in February 2006 to provide participants with a tool to express two-way views on interest rates and thereby enhance price discovery. In July 2018, the participants' base was liberalised and entity-wise and security category-wise limits for short selling in G-secs were relaxed in order to further develop and deepen the G-sec and repo market.

V.6 In July 2018, comprehensive directions for repo in G-sec and corporate debt were issued to simplify and harmonise the regulations across different types of collateral and also to encourage wider participation, especially for corporate debt repos.

V.7 Payments Banks and Small Finance Banks were permitted to participate in the call money market both as borrowers and lenders, which would expand the participation base in the call money market and provide an avenue for liquidity management for these entities.

V.8 Non-residents have been permitted to access the onshore Over-the-counter (OTC) rupee interest rate derivatives market for hedging and other purposes in order to develop a deep and liquid interest rate derivatives market by broadening the participation base. Non-residents can also trade in any product for hedging and can transact in the Overnight Index Swaps (OIS) market for purposes other than hedging, subject to a regulatory limit.

V.9 The exposure limit of 20 per cent of Foreign Portfolio Investors' (FPI) corporate bond portfolio to a single corporate was removed in February 2019 to provide more flexibility to FPIs for managing their debt investment portfolios. With the objective of having a more predictable regime for investment by FPIs, the FPI limits are now being revised on a half yearly basis under the Medium-Term Framework (MTF) as alluded to earlier in Section II.4 of the chapter on Economic Review. Accordingly, the investment limits for FPIs were revised in March 2019.

V.10 A separate channel called the Voluntary Retention Route (VRR) was introduced with more operational flexibility in terms of both instrument choices as well as exemptions from regulatory limits to encourage FPIs to undertake long-term debt investment in India (Box V.1).

V.11 Draft directions on facilities for hedging foreign exchange risk by residents and non-residents were issued for public feedback in February 2019. These draft directions proposed to merge the facilities for residents and non-residents into a single unified facility for all users and allow them to hedge their exposure by using any available instrument. Users could also hedge their anticipated exposures. Furthermore, it was also proposed to simplify the procedures for authorised dealers to offer foreign exchange derivatives.

V.12 A Task Force on Offshore Rupee Markets was set up in February 2019 with the objective to provide incentives for non-residents to move to domestic markets for their hedging requirements and to improve market liquidity to promote hedging activity onshore. The Task Force would examine the reasons for development of offshore rupee markets and to recommend policy measures to address domestic constraints, if any.

V.13 Market abuse regulations were introduced in March 2019, in line with the best global practices with the objective of putting in place a fair, open and transparent market underpinned by high ethical standards. The regulations cover market manipulation, benchmark manipulation, misuse of information or any other similar practice under its ambit.

Box V.1
Voluntary Retention Route (VRR) for Foreign Portfolio Investment in Debt

The Reserve Bank has been encouraging long-term stable foreign portfolio investments. Towards this end, separate limits have been carved out of the General Investment Limit for FPIs with a long-term view. The Reserve Bank launched the Voluntary Retention Route (VRR) in debt on March 1, 2019 under which FPIs can voluntarily commit to remain invested in a Committed Portfolio Size (CPS) for a committed retention period (minimum period of three years or as decided by the Reserve Bank). Investments can be made in G-secs (including State Development Loans) and Treasury Bills (VRR-Govt) or in corporate bond instruments permitted under FEMA (VRR-Corp) or in all the instruments eligible under both VRR-Govt and VRR-Corp (VRR-Combined).

Participating FPIs are provided special facilities such as permission to carry out repo/reverse repo transactions for cash management and the use of currency/ interest rate derivatives to hedge currency/ interest rate risks. They are also given the flexibility to modulate their investments between 75 - 100 per cent of CPS. Besides, investments through the VRR are exempt from some macro-prudential measures, *viz.,* minimum residual maturity requirement, concentration limit and single/group investor-wise limits. At the end of the retention period, an FPI may (a) liquidate its portfolio and exit, or (b) continue its investment under VRR for an identical retention period, or (c) shift its investment to General Investment Limit subject to availability of limits therein, or (d) hold its investments until its date of maturity or sale whichever is earlier. FPIs can also exit before the committed retention period by selling their investments, fully or partly, to other FPI/FPIs which would need to abide by the same terms and conditions. FPIs can invest the income from their investments through the route at their discretion, and such investments will be permitted even in excess of the CPS.

The first tranche of investment limits (₹400 billion for VRR-Govt and ₹350 billion for VRR-Corp) were made available for allotment 'on tap' between March 11, 2019 and April 30, 2019. Allotments amounting to ₹203.93 billion were made to FPIs under VRR-Corp under the aforesaid tranche. The second tranche of investment limits (₹546.06 billion for VRR-Combined) was opened on May 27, 2019, and will remain open for allotment till December 31, 2019 or till the exhaustion of the limits, whichever is earlier.

V.14 Electronic Trading Platform (ETP) Directions were issued to put in place a framework for authorisation of ETPs for financial market instruments regulated by the Reserve Bank, with the objective to improving transparency, reducing transaction time and costs, facilitating efficient audit trails, improving risk controls and enhancing market monitoring. It also includes detailed eligibility criteria, technology requirements and reporting standards. All new ETPs as well as existing ones are required to obtain authorisation from the Reserve Bank under this framework.

V.15 The Legal Entity Identifier (LEI) system was implemented in June 2017 for non-individual participants in OTC markets for rupee interest rate derivatives, foreign currency derivatives and credit derivatives. The LEI mechanism was expanded to financial market transactions undertaken by non-individuals, including non-resident entities, in money, G-sec and forex markets regulated by the Reserve Bank in November 2018. A phased approach to have smooth implementation has been adopted wherein entities with net worth exceeding ₹2,000 million have to obtain the LEI before December 31, 2019, and those with net worth lower than that are given time till March 31, 2020.

V.16 Draft Directions on Financial Benchmark Administrators were released in February 2019 for public comments to improve the governance of the benchmark processes in markets regulated by the Reserve Bank. The draft directions were based on the report of the Committee on Financial Benchmarks (Chairman: Shri P. Vijaya Bhaskar) set up in February 2014 by the Reserve

Bank and were guided by international best practices such as the Principles for Financial Benchmarks of International Organisation of Securities Commissions (IOSCO) as well as laws/ regulations put in place in other jurisdictions.

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V.17 International settlement of central government securities by International Central Securities Depositories (ICSDs) will be implemented to permit non-resident clients of ICSDs to transact in central government securities offshore. This would open up a new channel for non-residents to undertake transactions in central government securities.

V.18 An Internal Group was set up in August 2018 to comprehensively review timings of various markets and necessary payment infrastructures, and recommend revisions to market timings. Based on its recommendations, steps will be taken to revise the market timings across products and funding markets to avoid any frictions.

V.19 The Department would continue to further develop and deepen the money, G-sec, foreign exchange and especially the interest rate and currency derivative markets in order to promote better risk management by banks and other market players. Steps will also be taken to expand the participation base, introduce new products and simplify procedures. Ensuring the integrity of the financial markets and eradication of market abuse would continue to be the priority of the Department.

V.20 The Department has initiated steps to develop an IT enabled Integrated Market Surveillance System (IMSS) for augmenting its surveillance capacities. The broad objectives of the proposed system are surveillance of markets regulated by the Reserve Bank, trend analysis and compliance monitoring.

3. FINANCIAL MARKETS OPERATIONS DEPARTMENT (FMOD)

V.21 FMOD is entrusted with two primary responsibilities: first, conduct of liquidity management operations for maintaining an appropriate level of liquidity in the financial system; and second, ensuring orderly conditions in the forex market through operations in the spot, forward and futures segments.

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Money Market and Liquidity Management

V.22 System liquidity shifted from surplus to deficit during the year as the overhang of demonetisation waned. Large-scale capital outflows, coupled with above-trend expansion in currency in circulation continued to exert pressure on liquidity conditions, especially during the first half of the year. The Reserve Bank operated the Liquidity Adjustment Facility (LAF) and the Marginal Standing Facility (MSF) to manage transient liquidity mismatches. Consequently, the weighted average call rate (WACR) in the call money market - the operating target of monetary policy - remained broadly anchored to the policy repo rate.

V.23 With regard to durable liquidity, the Reserve Bank responded to market conditions by calibrating the pace of permanent liquidity operations. The frequency and quantum of OMOs was increased during H2:2018-19 to meet the liquidity needs of the system. During 2018-19, the Reserve Bank conducted OMO purchase auctions to the tune of about ₹3.0 trillion, of which ₹2.5 trillion worth of OMO purchases were conducted in H2 alone.

V.24 The Reserve Bank decided to augment its liquidity management toolkit by adding FX swap auctions as an instrument to manage durable liquidity (Box V.2). The first buy/sell swap

Box V.2
The USD/INR Buy/Sell Swap: A New Armour in RBI's Liquidity Management Toolkit

A foreign exchange swap (FX swap) between two parties involves the exchange of one currency for another on an agreed date, price and tenor, with a subsequent re-exchange of these two currencies on the maturity date. The FX swap is the most popular over-the-counter foreign exchange instrument in the global forex market. Nearly 91 per cent of the FX swaps had the US dollar as one of the currencies.[1]

The main reason for the popularity of FX swaps is the elimination of exchange rate risk, as the initial and terminal exchange rates are agreed upon at the time of the contract. FX swaps are usually used by banks/financial institutions and their customers (multinational companies), institutional investors who want to hedge their foreign exchange positions, and/or engage in speculation.

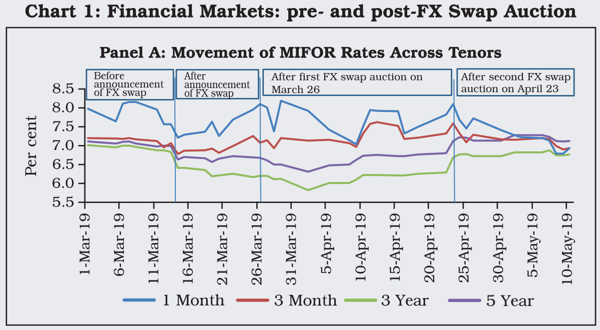
Use of FX Swaps by Central Banks

Central banks in both advanced and emerging economies have used FX swaps under differing circumstances. The Swiss National Bank used them as the main instrument for management of bank reserves, mainly because of the lack of short-term government securities. The Monetary Authority of Singapore (MAS) actively uses FX swaps for liquidity management in addition to direct borrowing/lending, repos on Singapore Government Securities (SGS) and MAS Bills. The Central Bank of the Russian Federation introduced the US$/RUB sell/buy FX swaps in September 2014 for providing dollar liquidity support to Russian credit institutions. Saudi Arabia has used FX swaps to provide emergency liquidity during a regional crisis, while South Africa conducts special currency swaps from time to time with banks. Bahrain has also used US dollar swap facility to provide liquidity in special circumstances. Other countries that have used the FX swap as a tool for managing liquidity include the Netherlands, Austria, Germany, Belgium, Kuwait, the United Arab Emirates, Oman, Malaysia and Thailand.

The Reserve Bank conducted two US$/INR buy/sell swaps with Authorised Dealers (ADs) – Category 1 banks[2], with the notified amount of US$ 5 billion each for tenor of 3 years on March 26 and April 23, 2019. The bids received in the two auctions, at US$ 16.3 billion and US$ 18.7 billion, respectively, amounted to more than three times the notified amount of US$ 5 billion. The Reserve Bank accepted US$ 5 billion in each of the auctions at the cut-off premium of ₹7.76 and ₹8.38, respectively, and simultaneously injected ₹345.6 billion and ₹348.7 billion into the banking system. The US dollar amounts mobilised through the swap auctions are reflected in the Reserve Bank's foreign exchange reserves for the tenor of the swap as well as in the Reserve Bank's forward liabilities.

Post the swap announcement, the INR MIFOR[3] curve trended lower across tenors with the maximum softening observed in the 3-year bucket (Chart 1: Panel A). Some

Chart 1: Financial Markets: pre- and post-FX Swap Auction



Source: Bloomberg.

(Contd...)

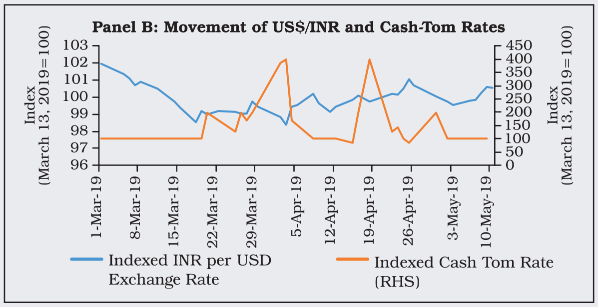
[1] The daily average turnover of FX Swaps was US$ 2.4 trillion in April 2016, on a "net-net basis".

[2] AD Category 1 are banks authorised by the RBI under Section 10 (1) of Foreign Exchange Management Act, 1999 to carry out all permissible current and capital account transactions.

[3] Mumbai Interbank Forward Offer Rate (MIFOR) is an interbank benchmark comprising of two components, namely the dollar borrowing rates and US$/INR forward premium for the respective tenor.

volatility was observed in the long-term Non-Deliverable Forward (NDF) rates at the time of the first auction and Cash-Tom rates around the two auction dates (Chart 1: Panel B).

Chart 1: Financial Markets: pre- and post-FX Swap Auction



Source: Bloomberg, FBIL and RBI staff calculations.

References:

1. Bank for International Settlements (2016), Triennial Survey, April 2016, available at https://www.bis.org/statistics/d11_1.pdf
2. Central Bank of Russian Federation- FX Swap www.cbr.ru/eng/hd_base/swapinfo/swapinfosellusdvol/.
3. Hooyman, C. (1994), 'The Use of Foreign Exchange Swaps by Central Banks', *Staff Papers (International Monetary Fund), 41*(1), pp. 149-162.
4. Monetary Authority of Singapore - Monetary Policy and Economics http://www.mas.gov.sg/Monetary-Policy-and-Economics/Central-Bank-Operations-and-Liquidity-Management.aspx.
5. Swiss National Bank-Financial Markets www.snb.ch/en/ifor/finmkt/operat/id/qas_swaps_1#.

auction was conducted on March 26, 2019 and the Reserve Bank injected ₹345.6 billion into the system for a three-year period. The auction had a cooling effect on money market rates and supplemented the usual year-end funds required by the banking system.

Foreign Exchange Market

V.25 During the year, the rupee witnessed a general depreciating trend up to mid-October mainly due to rising crude oil prices, rising interest rates in the US and international trade and geo-political concerns. However, the rupee recovered subsequently and exhibited an appreciating trend during the rest of the year as oil prices declined. The Reserve Bank intervened in the forex market through operations in the onshore/offshore OTC and Exchange Traded Currency Derivatives (ETCD) segments to contain excessive volatility.

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V.26 The Department aims to carry out liquidity management operations effectively in line with the stance of monetary policy. It will continue to monitor evolving liquidity conditions closely and will modulate operations to ensure alignment of the WACR with the policy repo rate. It will continue to conduct foreign exchange operations in an effective manner to curb undue volatility in the exchange rate. The Department also proposes to continue policy-oriented research on financial markets.

V.27 As part of the Reserve Bank's commitment for adoption of the principles of 'FX Global Code' in the domestic forex market, the Department will coordinate with India Foreign Exchange Committee (IFXC) to launch a "Public Register" for India. The "Public Register" will act as a repository of information to facilitate market participants to publicise their Statements of Commitment to the FX Global Code and also to assist interested parties in identifying market participants which have done so.

4. FOREIGN EXCHANGE DEPARTMENT (FED)

V.28 FED aims at facilitating external trade and payments while enhancing ease of doing business. During 2018-19, the Department continued its efforts to streamline the operating framework of the Foreign Exchange Management Act (FEMA) to align it with the current business and economic environment. It also took steps for improving the ease of doing business and reduce regulatory costs. The introduction of the Single Master Form (SMF) for reporting of foreign investments under the Foreign Investment Reporting and Management System (FIRMS) was a notable development in this regard. The ECB regime was also rationalised during the year.

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V.29 In last year's Annual Report, FED had undertaken salient objectives in pursuit of its mission. Key among them were the rationalisation of cross-border borrowing and lending regulations, improving information management in the context of foreign investment inflows while facilitating outward flows, apart from measures to provide a conducive environment for doing business in India.

Simplifying Cross-Border Borrowing and Lending

V.30 A new soft-coded directive came into force on December 17, 2018 with a view to simplifying and consolidating regulations related to borrowing and lending between residents and non-residents. Its salient features are: (a) bringing all debt instruments under a single notification by consolidating regulations under FEMA 3, 4 and part of 120 (Regulation 21); (b) delineating three schedules of transactions: ECBs; trade credit; and external commercial lending; and (c) making regulations principle-based that obviate the need for frequent amendments.

V.31 Starting with ECBs, a rule-based dynamic limit for outstanding stock at 6.5 per cent of GDP (US$ 160 billion for 2018-19) was adopted in consultation with the Government of India. The framework for ECBs and Rupee Denominated Bonds (RDB) was rationalised to improve the climate for doing business (Box V.3). In addition, the reporting of ECBs was simplified with the objective of reducing the reporting burden. Payment of a late submission fee was introduced in order to encourage prompt reporting.

Foreign Investment Information Management

V.32 With effect from June 2, 2018, the Reserve Bank, in consultation with the SEBI, put in place a system for monitoring foreign investment limits in order to enable listed Indian companies to comply with various foreign investment limits. Infrastructure and systems for operationalising the monitoring mechanism were put in place by the SEBI. Accordingly, the depositories (NSDL and

Box V.3
New Policy Framework for External Commercial Borrowings (ECB)

The main features of the new ECB framework announced on January 16, 2019 are set out below.

- **Instrument neutral borrowing regime:** Two routes of borrowing were delineated, *viz.,* a foreign currency borrowing route and an INR ECB route (INR ECB track and RDBs).
- **Liberalisation of INR denominated ECBs**: Non-applicability of ECB liability to equity ratio; lesser withholding tax on RDBs issued overseas.
- **Expansion of eligible ECB borrowers**: The sectoral preferences for raising ECBs were removed to create a level playing field. All entities eligible to raise FDI are now permitted to raise ECB.
- **Expansion of overseas lenders**: Includes all entities from Financial Action Task Force (FATF) or International Organisation of Securities Commissions (IOSCO) compliant countries; strengthening Anti-Money Laundering and Countering Financing of Terrorism (AML/CFT) framework.
- **Common minimum average maturity for all ECBs**: A single slab of minimum three years prescribed for all ECBs by combining different slabs prevailing in the erstwhile regime.
- **ECB for Oil Marketing Companies (OMCs):** For working capital purposes and for resolution applicants under the Corporate Insolvency Resolution Process.

CDSL) have set up the necessary infrastructure and IT systems for disseminating information on the available investment headroom in respect of listed Indian companies, within the aggregate NRI/FPI limits or the sectoral cap. The breach of the aggregate NRI/FPI investment limits or the sectoral cap for a company would restrict any further purchases by FPI/NRIs. Compulsory disinvestment by FPIs and NRIs in case of excess holding was also introduced.

V.33 A new online reporting system - Foreign Investment Reporting and Management System (FIRMS) came into effect from September 1, 2018. It provides for filing of the prescribed nine returns (*viz.,* FC-GPR, FC-TRS, ESOP, DI, DRR, LLP-I, LLP-II, CN and InVi) through a Single Master Form (SMF) on a single online platform.

V.34 Also, with effect from September 1, 2018, FDI reporting for issue of capital instruments was made a single step reporting in SMF (instead of earlier two-steps reporting). The application has an inbuilt database, reducing manual intervention and involving a novel concept of entity master, which helps in monitoring the extent of total foreign investment in an entity at all times in the context of sectoral limits.

Overseas Investment by Alternative Investment Funds

V.35 As per the SEBI's recommendations, the overall limit for overseas investment by Alternative Investment Funds (AIFs)/Venture Capital Funds (VCFs) was enhanced to US$ 750 million from US$ 500 million with effect from June 2, 2018. The SEBI has put in place suitable reporting and reconciliation mechanisms to monitor the overall outstanding approvals with instructions to all AIFs on reporting guidelines. A regular information exchange mechanism between the Reserve Bank and the SEBI has also been put in place to monitor limits for such overseas investments.

Other Measures for Exchange Liberalisation

V.36 The limit on outward remittances by non-bank entities (through AD Category-I banks in India) involving small value transactions (not exceeding US$ 5,000 per transaction) was enhanced to US$ 10,000 per transaction for overseas education, within the overall ceiling under Liberalised Remittance Scheme (LRS) of US$ 250,000.

V.37 Permission for receiving funds in the Chief Minister's Distress Relief Fund - Kerala through exchange houses was given in the wake of floods in Kerala and representations received from AD Category-I banks, subject to the condition that such remittances are directly credited to the fund by banks who maintain full details of the remitters.

V.38 Post demonetisation of ₹1000 and ₹500 currency notes, currencies permitted to be carried to Nepal or Bhutan have been reviewed. Now, an individual travelling from India to Nepal or Bhutan is permitted to carry the Reserve Bank currency notes in Mahatma Gandhi (New) Series of denominations ₹200 and/or ₹500, subject to a total limit of ₹25,000. Instructions regarding currency notes of the Government of India and the Reserve Bank for any amount in denominations up to ₹100 shall continue.

V.39 With effect from March 28, 2019, no prior approval of the Reserve Bank is required, if government approval or license/permission by the concerned Ministry/Regulator has already been granted for opening of a Branch Office (BO)/ Liaison Office (LO)/ Project Office (PO) or any other place of business in India, where the principal business of the applicant falls in the defence, telecom, private security and information and broadcasting sectors.

V.40 In the case of proposals for opening a PO relating to the defence sector, no separate reference or approval of the Government of India shall be required if the applicant has been awarded a contract by/entered into an agreement with the Ministry of Defence or Service Headquarters or Defence Public Sector Undertakings.

V.41 A Foreign Portfolio Investor/ Foreign Venture Capital Investor (FPI/FVCI) registered with the SEBI was allowed to open and maintain a non-interest bearing foreign currency account for the purpose of making investment in accordance with the Foreign Exchange Management (transfer or issue of security by a person resident outside India) Regulations, 2017.

V.42 A citizen of Bangladesh or Pakistan, who has been granted a long-term visa (LTV) by the central government, may now open one Non-Resident Ordinary (NRO) Account with an AD bank in India. Such account can also be opened by a person who has applied for LTV which is under consideration of the central government, subject to certain conditions.

V.43 With effect from March 28, 2019, Special Non-Resident Rupee (SNRR) accounts opened by any person resident outside India, including those registered with SEBI to make investment in India, can remain operative beyond the stipulated period of seven years, with the approval of the Reserve Bank.

V.44 With effect from March 28, 2019, Escrow Accounts can be opened by residents and non-residents for acquisition/ transfer of capital instruments/convertible notes and can also be funded by guarantee(s).

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V.45 The Department's strategy for 2019-20 will focus on consolidating and carrying forward all these initiatives, with emphasis on continuous synchronisation of the FEMA operating framework with the evolving situation, especially rationalisation of money changing and merchanting activity, comprehensive review and simplification of reporting requirements of regulated entities and enhancing the role of Authorised Persons (AP) to reduce transaction costs. Specific action points in pursuance of this strategy are set out below.

- Review and rationalisation of entry norms for being licensed as full-fledged money changer (FFMC) in alignment with the provisions of the Companies Act, including an online package for FFMC/upgraded FFMCs (AD Category II) licensing, renewal, inspection, reporting and cancellation.
- Consolidation and rationalisation of FEMA to deal with issuance of guarantees, with a focus on permitting *bonafide* transactions; and a coherent and integrated outward direct investment policy.
- A software platform for external commercial borrowings and trade credits reporting and approval (SPECTRA) encompassing the whole lifecycle from receipt of application to communication of decision and reporting of transactions would be implemented.
- Rationalisation of guidelines relating to Merchanting Trade Transactions (MTT) and provision of reporting of MTT in Export Data Processing and Monitoring System (EDPMS)/Import Data Processing and Monitoring System (IDPMS) and guidelines for issue of Letter of Credit (LC) for import leg.
- A comprehensive review of the reporting requirements would be undertaken, keeping in view the diverse needs of various stakeholders (including the government).
- Further delegation of powers to APs to reduce transaction costs for users under a standardised framework through modifications in the IT packages and capacity building at the level of APs.
- Creation of a detailed framework for enhancing FEMA awareness and conducting awareness programs and creation of digital content on an ongoing basis.

VI REGULATION, SUPERVISION AND FINANCIAL STABILITY

Against the backdrop of asset quality concerns in the banking sector, guidelines on loan systems for delivery of bank credit were issued in order to enhance credit discipline among large borrowers. To further the efforts of resolution of stressed assets, and in light of the judgment of the Hon'ble Supreme Court of India declaring the then existing framework as ultra vires, the revised prudential guidelines for resolution of stressed assets were issued. Alignment of the Statutory Liquidity Ratio (SLR) with the Liquidity Coverage Ratio (LCR), new guidelines on implementation of liquidity standards and capital regulation under Basel III, strengthening of data protection and cyber security norms, Ombudsman Scheme for Digital Transactions (OSDT) and harmonisation of regulations of various categories of non-banking financial companies (NBFCs) were carried out during the year. Regulatory and supervisory policies for cooperative banks were harmonised with those of scheduled commercial banks (SCBs).

VI.1 The chapter discusses the regulatory and supervisory measures undertaken during the year to strengthen the banking system, and the priorities for 2019-20. Pursuant to the judgment of the Hon'ble Supreme Court of India, which found the then existing framework for resolution of stressed assets *ultra vires*, the revised framework has been put in place. During the year under review, the focus was on improving transparency in financial statements of banks, enhancing credit discipline among large borrowers, alignment of the SLR with the LCR requirements along with new guidelines on implementation of liquidity standards and capital regulation under Basel III norms and strengthening of data protection and cyber security norms. OSDT was implemented during the year.

VI.2 Turning to other areas, harmonisation of regulations for various categories of NBFCs, revision of the extant guidelines on liquidity risk management by NBFCs, risk weighting of exposures to NBFCs as per the ratings assigned by the rating agencies, bringing all government-owned non-deposit taking systemically important NBFCs (NBFC-ND-SIs) and government-owned deposit taking NBFCs under the Reserve Bank's on-site inspection framework and off-site surveillance, engaged policy attention.

VI.3 In the cooperative banking space, voluntary transition of Primary (Urban) Cooperative Banks (UCBs) into Small Finance Banks (SFBs); and country-wide awareness campaigns through print and electronic media (including Reserve Bank's SMS handle 'RBISAY') on various topics such as fictitious offers, the Basic Savings Bank Deposit Account (BSBDA), banking facilities for senior citizens and differently abled persons and safe digital banking for banking sector as whole, became priorities.

VI.4 The rest of this chapter is further divided into four sections. Section 2 deals with the mandate and functions of Financial Stability Unit. Section 3 provides various regulatory measures undertaken by the Department of Banking Regulation, the Department of Cooperative Bank Regulation and the Department of Non-Banking Regulation during the year. Section 4 covers several supervisory measures undertaken by the Department of Banking Supervision, the Department of Cooperative Bank Supervision and the Department of Non-Banking Supervision and enforcement actions carried out by the Enforcement Department during the year. Section 5 highlights the role played by the Consumer Education and Protection Department and the Deposit Insurance and Credit Guarantee Corporation in protecting consumer interests, spreading awareness and upholding consumer confidence. These departments have also set out their agenda for 2019-20 in their respective sections.

2. FINANCIAL STABILITY UNIT (FSU)

VI.5 The mandate of the Financial Stability Unit (FSU) is to monitor the stability and soundness of the financial system by examining risks to financial stability, undertaking macro-prudential surveillance through systemic stress tests, financial network analysis (Box VI.1) and by disseminating information and analysis through the Financial Stability Report (FSR). It also functions as a secretariat to the Sub-Committee of the Financial Stability and Development Council (FSDC), a co-ordination council of regulators for maintaining financial stability and monitoring macro-prudential regulation in the country.

Box VI.1
Risk Propagation through Financial Networks

In a world of interconnected financial entities, network studies are assuming importance in order to understand the propagation of risks.

A complex interplay of factors is involved: (a) network topology; (b) node characteristics populating the network; and (c) nature of shocks.

a) ***Network Topology***

Network topology refers to the arrangement of the financial entities in a network. Network topology can be undirected or directed. In an undirected network topology, if the nodes i and j are connected, it implies that the node i can be reached from j or *vice versa*. In a directed network the direction of connection matters. Friendship/ partnership are illustrations of undirected network while credit exposure is an illustration of a directed network. Network topology is usually defined as a set of *nodes* {1, … , N} and links that connect pairs of nodes. To keep the analysis tractable, it is usually assumed that the nodes are the same in other respects such as size, leverage and asset quality. *The degree distribution* is the number of links with other nodes, a simple measure of the node's importance; *eigenvalue centrality*[1] of the adjacency and liability matrix are other measures.

b) ***Node Characteristics***

Node characteristics refer to features such as size, leverage, and asset quality (Glasserman and Young, 2015). In the run-up to the global financial crisis, banks that failed had high leverage, low capital buffers, excessive reliance on short-term funding, and exposure to complex derivative products whose risks were not properly understood. These spread contagion irrespective of network topology and, therefore, an independent analysis of their influence is important.

c) ***Nature of Shocks***

Another key factor affecting contagion is what triggers a financial crisis in the first place - *a solvency shock* (*e.g.,* caused by a loss in real assets such as downturn in an industrial sector to which a bank is highly exposed); *a liquidity shock* (*e.g.,* caused by a funding run on the bank by depositors); an *idiosyncratic* shock; or a *macroeconomic* shock. A solvency shock will be transmitted by causing spill-over of losses. A liquidity shock may lead to a fire-sale, thus spreading contagion.

Transmission Models

Data on node characteristics and network topology and information on the nature of shock are fed into a transmission model with feedback mechanisms and accounting for difference in seniority of payments. A discerning interpretation of the results can help in drilling down into the sources of instability to develop an appropriate policy response.

References:

Glasserman, P., and Young, H. P. (2015), "How likely is contagion in financial networks?", *Journal of Banking & Finance*, 50, 383-399.

[1] A node has high eigenvalue centrality if it is connected to other nodes with high centrality.

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VI.6 The FSR was published in December 2018 and June 2019. A contagion analysis for major NBFCs was also undertaken in the FSR of June 2019.

VI.7 The FSDC Sub-Committee held one meeting in 2018-19 and discussed various issues impinging on financial stability including challenges of the quality of credit ratings and inter-linkages between housing finance companies and housing developers. A thematic study on financial inclusion and financial stability, and the National Strategy for Financial Inclusion (NSFI) were also discussed.

VI.8 The Inter-Regulatory Technical Group (IRTG), which is a sub-group of the FSDC Sub-Committee, held two meetings during the year and deliberated on technical standards for account aggregators and issues relating to Credit Rating Agencies (CRAs). Issues relating to the know your customer (KYC) processes consequent upon amendments in the Prevention of Money Laundering (PML) rules, implementation of risk-based supervision in the National Pension Scheme (NPS) Architecture of Pension Fund Regulatory and Development Authority (PFRDA), systemic risk of open-ended debt mutual funds and application of the accredited investor framework of SEBI to peer to peer (P2P) lending platform, also engaged the IRTG.

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VI.9 In the year ahead, FSU will continue to conduct macro-prudential surveillance, publish the FSR and conduct meetings of the FSDC Sub-Committee. In addition, the current stress testing framework/methodology will be strengthened to adopt evolving best practices.

3. REGULATION OF FINANCIAL INTERMEDIARIES

Commercial Banks: Department of Banking Regulation (DBR)

VI.10 The Department of Banking Regulation (DBR) is the nodal department for regulation of commercial banks for ensuring a healthy and competitive banking system dispensing cost effective and inclusive banking services. The regulatory framework is fine-tuned as per the requirements of the Indian economy while adapting to the international best practices.

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Resolution of Stressed Assets–Prudential Framework

VI.11 The Reserve Bank had put in place a framework for resolution of stressed assets *vide* circular dated February 12, 2018, which had the Insolvency and Bankruptcy Code (IBC), 2016 as the lynchpin. Specifically, the framework required banks to cure the default in respect of large borrowers (those to whom the exposure of the banking system was ₹20 billion or above as of then) within 180 days of default, failing which insolvency proceedings had to be initiated against such borrowers. The above framework was found to be *ultra vires* as per the Section 35AA of Banking Regulation (BR) Act, 1949 by the Hon'ble Supreme Court *vide* judgment dated April 2, 2019. Consequently, a revised prudential framework for resolution of stressed assets was put in place on June 7, 2019.

VI.12 In line with the judgment of the Hon'ble Supreme Court, the revised prudential framework replaces the mandatory insolvency proceedings upon failure to implement a resolution plan with a system of disincentives in the form of additional provisioning for delay in implementation of resolution plan or initiation of insolvency proceedings. The prudential framework also incorporates the following fundamental principles underlying the regulatory approach for resolution of stressed assets:

a. Early recognition and reporting of default in respect of large borrowers by banks, FIs and NBFCs;
b. Complete discretion to lenders with regard to design and implementation of resolution plans, in supersession of earlier resolution schemes (S4A, SDR, 5/25 *etc.*), subject to the specified timeline and independent credit evaluation;
c. Withdrawal of asset classification dispensations on restructuring. Future upgrades to be contingent on a meaningful demonstration of satisfactory performance for a reasonable period;
d. For the purpose of restructuring, the definition of 'financial difficulty' to be aligned with the guidelines issued by the Basel Committee on Banking Supervision (BCBS); and,
e. Signing of inter-creditor agreement (ICA) by all lenders to be mandatory, which will provide for a majority decision-making criteria.

VI.13 Notwithstanding anything contained in the above framework, wherever necessary, the Reserve Bank will issue directions to banks for initiation of insolvency proceedings against borrowers for specific defaults so that the momentum towards effective resolution remains uncompromised. It is expected that the current circular will sustain the improvements in credit culture that have been ushered in by the efforts of the Government of India and the Reserve Bank, and that it will go a long way in promoting a strong and resilient financial system in India.

Credit Discipline

VI.14 Guidelines on loan system for delivery of bank credit were issued on December 5, 2018, in order to enhance the credit discipline among large borrowers. For borrowers with aggregate fund-based working capital limit of ₹1,500 million and above from the banking system, a minimum level of 'loan component' of 40 per cent of the sanctioned limit was made effective from April 1, 2019. Further, the undrawn portion of cash credit/ overdraft limits sanctioned to the aforesaid large borrowers, irrespective of whether unconditionally cancellable or not, shall attract a credit conversion factor of 20 per cent, effective April 1, 2019.

One-Time Restructuring of Existing Loans to Micro, Small and Medium Enterprises (MSMEs)

VI.15 A one-time restructuring of existing loans to MSMEs that are in default but with loan quality as 'standard' as on January 1, 2019, was permitted without an asset classification downgrade. The scheme is available to MSMEs qualifying with objective criteria including, *inter alia*, a cap of ₹250 million on the aggregate exposure of banks and NBFCs as on January 1, 2019. The restructuring will have to be implemented by March 31, 2020 and an additional provision of 5 per cent will have to be maintained in respect of accounts restructured under this scheme.

Risk Weights for Exposure to NBFCs

VI.16 Exposures to all NBFCs, excluding Core Investment Companies (CICs), were risk weighted as per the ratings assigned by the rating agencies registered with Securities and Exchange Board of India (SEBI) and accredited by the Reserve Bank, in a manner similar to exposures to corporates under the extant regulations to facilitate flow of credit to high-rated NBFCs and to harmonise risk weights under the standardised approach for credit risk management. Exposures to CICs, rated as well as unrated, will continue to be risk-weighted at 100 per cent.

Banking Operations by Foreign Banks through Wholly Owned Subsidiary (WOS)

VI.17 SBM Bank (India) Limited (subsidiary of SBM Group, Mauritius) and DBS Bank India Limited (subsidiary of DBS Bank Ltd., Singapore) were issued licenses on December 6, 2017 and October 4, 2018, respectively, for carrying on banking business in India through the Wholly Owned Subsidiary (WOS) mode. They have commenced their operations as WOSs from December 1, 2018 and March 1, 2019, respectively.

Compensation Guidelines for Banks

VI.18 The Reserve Bank had issued guidelines for compensation of Whole Time Directors, Chief Executive Officers and control function staff of private sector and foreign banks in 2012. Based on the experience gained as well as evolving international best practices, these guidelines were reviewed and a Discussion Paper was released in February 2019, inviting comments of stakeholders. The comments received are under examination and revised guidelines will be issued shortly.

External Benchmarking of Loans

VI.19 It was announced in the Statement on Developmental and Regulatory Policies of December 5, 2018 that all new floating rate personal or retail loans (housing, auto, *etc.*) and floating rate loans to micro and small enterprises extended by banks from April 1, 2019 shall be benchmarked to one of external benchmarks *viz.,* the Reserve Bank repo rate or any other benchmark market interest rate published by the Financial Benchmark India Private Ltd. (FBIL). As announced in the Statement on Developmental and Regulatory Policies of April 4, 2019, it has been decided to hold further consultations with stakeholders and work out an effective mechanism for transmission of rates.

Bulk Deposits

VI.20 The definition of bulk deposits has been revised as ‘Single Rupee term deposits of Rupees two crore and above’ for SCBs, excluding Regional Rural Banks (RRBs) and SFBs with effect from February 22, 2019, with a view to enhance the operational freedom of banks in raising bulk deposits.

Valuation of State Development Loans (SDLs)

VI.21 On July 27, 2018, banks were advised that SDLs shall be valued objectively, reflecting their value based on observed prices/yields, which would be made available by FBIL. The price/yield of SDLs is now being published by FBIL based on the new methodology with effect from April 15, 2019.

Partial Credit Enhancement to Bonds Issued by NBFCs and Housing Finance Companies (HFCs)

VI.22 On November 2, 2018 banks were permitted to provide partial credit enhancement (PCE) to bonds issued by the NBFC-ND-SIs registered with the Reserve Bank and HFCs registered with National Housing Bank (NHB).

Alignment of SLR with LCR

VI.23 As per the existing roadmap, SCBs under Basel III norms had to reach the minimum LCR of 100 per cent by January 1, 2019. In order to align the SLR with the LCR, it was decided to reduce SLR, which was 19.5 per cent of NDTL, by 25 basis points every calendar quarter starting from January 5, 2019, till it reaches 18 per cent of NDTL.

Filing of Security Interest Relating to Immovable, Movable and Intangible Assets in Central Registry of Securitisation Asset Reconstruction and Security Interest (CERSAI)

VI.24 All SCBs (including RRBs), SFBs, Local Area Banks (LABs), Cooperative Banks, NBFCs and All India Financial Institutions (AIFIs) were advised on December 27, 2018 to complete filing the charges pertaining to subsisting transactions by March 31, 2019 and all current transactions on an ongoing basis with CERSAI.

Basel III Framework on Liquidity Standards – LCR/ Facility to Avail Liquidity for Liquidity Coverage Ratio (FALLCR) against Credit Disbursed to NBFCs and HFCs – Facility till March 31, 2019

VI.25 In October 2018, banks were permitted to reckon government securities (G-secs) as Level 1 High Quality Liquid Assets (HQLAs) under FALLCR, within the mandatory SLR requirement up to 0.5 per cent of the bank's NDTL, in respect of their incremental lending to NBFCs and HFCs after October 19, 2018. This facility, which was available up to December 31, 2018, was extended till March 31, 2019 to enable banks to lend up to an additional amount of ₹600 billion to NBFCs and HFCs. The single borrower limit for NBFCs (not financing infrastructure), which had been increased from 10 per cent to 15 per cent of capital funds till December 31, 2018 was made available till March 31, 2019.

Gold Monetisation Scheme

VI.26 In line with modifications to the Gold Monetisation Scheme (GMS), 2015 by Government of India, the SCBs (excluding RRBs) were advised on January 9, 2019, that 'Charitable Institutions, central government, state government or any other entity owned by central government or state government' were included as persons eligible to make deposits under the Scheme.

Review of Transitional Arrangement under Basel III Capital Regulation

VI.27 The Capital Conservation Buffer (CCB), currently 1.875 per cent, being phased in from March 31, 2016 at the rate of 0.625 per cent every year and was targeted to reach 2.50 per cent by March 31, 2019. Since several banks were going through a period of stress as reflected in their weak financials, it was decided in January 2019 to extend the transition period for implementing the last tranche of 0.625 per cent by one year, *i.e.,* up to March 31, 2020. The increase in the trigger level of Common Equity Tier 1 (CET1) capital for write-down/conversion of Additional Tier 1 (AT1) instruments, from 5.50 per cent to 6.125 per cent effective March 31, 2019, was also postponed to March 31, 2020.

Interest Equalisation Scheme on Pre-Shipment & Post-Shipment Rupee Export Credit to Cover Merchant Exports

VI.28 From November 2, 2018, the Government of India increased the interest equalisation rate from 3 per cent to 5 per cent in respect of exports by manufacturers in the MSME sector under the Interest Equalisation Scheme on Pre and Post Shipment Rupee Export Credit. The same was conveyed to banks for effective implementation.

Implementation of Ind AS

VI.29 As per the Statement on Developmental and Regulatory Policies of April 5, 2018, implementation of Ind AS for SCBs (excluding RRBs) was deferred by one year pending necessary legislative amendments to the BR Act, 1949 as also the level of preparedness of many banks. As the legislative amendments are under consideration with the Government of India, implementation of Ind AS for banks was deferred till further notice.

Disclosure in the 'Notes to Accounts' to the Financial Statements

VI.30 Banks were advised on April 18, 2017 to disclose details of divergence from Income Recognition, Asset Classification and Provisioning (IRACP) norms wherever, either (a) the additional provisioning requirements assessed by the Reserve Bank exceeded 15 per cent of the published net profits after tax for the reference period, or (b) the additional gross non-performing assets (NPAs) identified by the Reserve Bank exceeded 15 percent of the published incremental gross NPAs for the reference period, or both. In terms of circular dated April 1, 2019, the disclosure requirement is linked to the reported profit before provisions and contingencies, instead of reported net profit. Banks were required to make disclosure of divergence when either or both of the following conditions are satisfied: (a) the additional provisioning for NPAs assessed by the Reserve Bank exceeds 10 per cent of the reported profit before provisions and contingencies for the reference period, and (b) the additional gross NPAs identified by the Reserve Bank exceed 15 per cent of the published incremental gross NPAs for the reference period.

Basel III Framework on Liquidity Standards

VI.31 The assets allowed as the Level 1 HQLAs for the purpose of computing the LCR of banks, *inter alia*, include: (a) G-secs in excess of the minimum SLR requirement, and (b) within the mandatory SLR requirement: (i) G-secs to the extent allowed by the Reserve Bank under the Marginal Standing Facility (MSF) (2 per cent of the bank's NDTL), and (ii) under FALLCR (11 per cent of the bank's NDTL). Both these rates are effective from June 25, 2018. The carve out from SLR under FALLCR was subsequently increased by 2 per cent from October 1, 2018. Banks were advised to reckon an additional 2 per cent G-secs held by them under FALLCR within the mandatory SLR requirement as Level 1 HQLA for the purpose of computing LCR, effective from April 4, 2019 till April 1, 2020 (an increase of 50 basis points every four months raising the rate of FALLCR from 13 per cent of NDTL to 15 per cent and the total HQLA carve out from SLR from 15 per cent to 17 per cent of NDTL).

Amendment to Master Direction on KYC

VI.32 Consequent to notification of amendments to PML (Maintenance of Records) Rules, 2005 by Government of India in February 2019 and of "*Aadhaar* and other Laws (Amendment) Ordinance, 2019", amending PML Act, 2002, changes were carried out in the master direction on KYC *vide* circular dated May 29, 2019. Major changes included: (i) allowing banks to carry out *Aadhaar* authentication/offline verification for individuals using their *Aadhaar* number for identification purpose voluntarily; (ii) addition of 'Proof of Possession of *Aadhaar* Number' to the list of Officially Valid Documents (OVD); (iii) obtaining customer's *Aadhaar* number for e-KYC authentication, for those receiving any benefit or subsidy under direct benefit transfer (DBT); and (iv) provision of identification of customers by regulated entities other than banks, through offline verification under *Aadhaar* Act if provided on voluntary basis. Further, additional certifying authorities for certifying the OVDs of Non-Resident Indians (NRI) and Persons of Indian Origin (PIO) customers were specified in the master direction.

Acquisition of IDBI Bank Ltd.

VI.33 In August 2018, the Government of India conveyed to IDBI Bank Ltd. that it had no objection to reduce its shareholding in the bank to below 50 per cent, thereby relinquishing management control. It also approved acquisition of controlling stake by Life Insurance Corporation of India Ltd. (LIC) as promoter in the bank. LIC completed the acquisition on January 21, 2019 with capital infusion of ₹216.24 billion, whereupon IDBI Bank Ltd. was classified as a private sector bank for regulatory purposes by the Reserve Bank.

Amalgamation of Dena Bank and Vijaya Bank with Bank of Baroda

VI.34 With a view to facilitate consolidation among public sector banks (PSBs), Government of India sanctioned a scheme entitled 'The Amalgamation of Vijaya Bank and Dena Bank with Bank of Baroda Scheme, 2019', with Bank of Baroda as the transferee bank and Vijaya Bank and Dena Bank as transferor banks. The Scheme came into force on April 1, 2019.

Disclosure on Exposure to Infrastructure Leasing & Financial Services Limited (IL&FS) and its Group Entities

VI.35 In view of the restraint placed by National Company Law Appellate Tribunal (NCLAT) *vide* order dated February 25, 2019 on Financial Institutions for classifying the accounts of IL&FS or its entities as NPA without its prior permission, banks and AIFIs were advised *vide* circular dated April 24, 2019 to disclose in their notes to accounts, amount which was NPA as per Income Recognition and Asset Classification (IRAC) norms but had not been classified as such, as well as provisions required to be made as per IRAC norms therefor. These instructions were withdrawn subsequent to the NCLAT orders dated May 2, 2019 lifting the previous orders.

Rationalisation of Branch Authorisation Policy-RRBs

VI.36 The revised instructions on Rationalisation of Branch Authorisation Policy dated May 31, 2019 has introduced the concept of Banking Outlet (BO) for RRBs on the lines of instructions issued to SCBs. As per the revised instructions, RRBs can open branches in Tier 1 to 4 centres (as per census 2011) only with the prior approval, subject to the compliance of prescribed eligibility criteria.

Large Exposures Framework (LEF) – Amendments

VI.37 The circular dated June 3, 2019 subsumed and superseded earlier circulars dated December 1, 2016 and April 1, 2019 on LEF. In order to capture exposures and concentration risk more accurately and to align the framework with international norms, the following amendments were incorporated in the circular: (i) Exclusion of entities connected with the sovereign from definition of group of connected counterparties, if not connected otherwise, (ii) Introduction of economic interdependence criteria in definition of connected counterparties with effect from April 1, 2020, for entities where a bank has an exposure greater than 5 per cent of its eligible capital base in respect of each entity, and (iii) Mandatory application of look-through approach (LTA) in determination of relevant counterparties in case of collective investment undertakings, securitisation vehicles and other structures. Further, as a transition measure, non-centrally cleared derivatives have been kept outside the purview of LEF till March 31, 2020. Also, for the purpose of LEF, Indian branches of foreign Global Systemically Important Banks (G-SIBs) shall not be treated as G-SIBs (Box VI.2).

Prudential Norms for Classification, Valuation and Operation of Investment Portfolio by Banks- Sale of Investments held under Held to Maturity (HTM) Category

VI.38 As per the extant master circular on prudential norms for classification, valuation and operation of investment portfolio by banks, shifting of investments to/from HTM is allowed with the approval of the Board of Directors once a year, normally at the beginning of the accounting year and no further shifting to/from HTM is permissible during the remaining part of that accounting year, except when explicitly permitted by the Reserve Bank. Apart from five types of transactions that are already exempted from inclusion in the 5 per cent cap, it was decided that repurchase of State Development Loans (SDLs) by the concerned state government shall also be exempted.

Financial Inclusion-Access to Banking Services – BSBDA

VI.39 The facilities associated with BSBDA have been reviewed and certain improvements have been made *vide* circular dated June 10, 2019. Additional value-added services, over and above the minimum facilities permitted, can be provided

Box VI.2
Implementation of Large Exposures Framework (LEF) with effect from April 1, 2019

Global Financial Crisis has showed that banks did not always consistently measure, aggregate and control exposures to single counterparties or to groups of connected counterparties across their books and operations. Taking proactive forward-looking steps, the Reserve Bank had put in place prudential regulations way back in 1989 by stipulating exposure norms. Under the exposure norms, a bank's exposure to a single borrower and a borrower group was restricted to 15 per cent and 40 per cent of capital funds (Tier 1+ Tier 2 capital), respectively. The norms also stipulated ceilings for certain sectors like capital market exposure, exposure to NBFCs and intra-group exposures.

In order to foster convergence among widely divergent national regulations on dealing with large exposures, the Basel Committee on Banking Supervision issued the Standards on 'Supervisory Framework for Measuring and Controlling Large Exposures' in April 2014. The Reserve Bank decided to suitably adopt these standards for banks in India and, accordingly, the instructions on banks' Large Exposures were issued in December 2016, with implementation date of April 1, 2019.

Timeline and Salient Features

Revised guidelines were issued on LEF *vide* circular dated June 3, 2019 which subsumes and supersedes earlier circulars. The revised LEF introduces economic interdependence criteria for identifying group of connected counterparties, with effect from April 1, 2020, mandates look-through approach, and excludes entities connected with the sovereign from definition of group of connected counterparties, if not connected otherwise. The guidelines align the Indian framework with international best practices and improve measurement, aggregation and monitoring of concentration risk. Salient features of LEF are as follows:

- Exposure limit on single borrower is capped at 20 per cent of Tier 1 capital which can be extended up to 25 per cent of Tier 1 capital under exceptional circumstances with the approval of banks' Boards.
- Exposure limit for group of connected counterparties is capped at 25 per cent of Tier 1 Capital.
- The framework requires group of connected counterparties to be identified based on the control criteria which is based on factors like ownership, voting rights, voting agreements, significant influence on the appointment or dismissal of an entity's administrative, management or supervisory body and significant influence on senior management. Additionally, banks will be required to incorporate economic interdependence criteria in identifying group of connected counterparties starting April 1, 2020.
- Interbank exposures are subject to limit of 25 per cent of Tier 1 capital with constrained limits on exposures to global systemically important banks (G-SIBs); Indian branches of foreign G-SIBs will not be reckoned as G-SIBs under the framework and interbank exposure limit will also apply to exposure of Indian branches of foreign banks on their head-office including overseas branches/subsidiaries.
- Exposure limit for all types of NBFCs is capped at 15 per cent of Tier 1 capital.
- Considering the critical role played by Central Counterparties (CCPs), clearing related exposure to Qualified Central Counterparties (QCCPs) are exempt from the framework.
- The framework envisages Look-through approach for aggregating exposure to counterparties through structures like mutual funds and securitisation.
- Exposure measurement is aligned with Basel III regulations by permitting use of Credit Risk Mitigation (CRM) and Credit Conversion Factors (CCFs).
- Banks can reckon capital infusion and quarterly profits during the year, consistent with Basel III guidelines for calculating the eligible capital base.
- Entities connected with the sovereign are excluded from definition of group of connected counterparties, if not connected otherwise (either by control criteria and/or by economic interdependence criteria, which is effective April 1, 2020).
- Non-centrally cleared derivatives are exempt from the framework till March 31, 2020.

by banks with or without charge. These additional facilities provided will not make the account a non-BSBDA. Banks have to obtain a declaration from the customer that he/she has no BSBDA in any other bank. The instructions come into force from July 1, 2019.

FinTech development and Regulatory initiatives

VI.40 One of the key recommendations of the report of the IRTG on FinTech and Digital Banking (Chairman: Shri Sudarshan Sen) released on February 8, 2018, was to introduce a framework for "regulatory sandbox/innovation hub" within a well-defined space and duration where the financial sector regulator would provide the requisite regulatory guidance. Accordingly, the draft 'Enabling Framework for Regulatory Sandbox' was placed on the Reserve Bank's website on April 18, 2019 for comments of stakeholders. The feedback obtained is currently under examination and the Framework will be finalised soon.

Basel III Capital Regulations – Implementation of Leverage Ratio for Banks

VI.41 With a view to moving further towards harmonisation with Basel III standards, instructions were issued on June 28, 2019, advising banks that the minimum leverage ratio shall be 4 per cent for Domestic Systemically Important Banks (D-SIBs) and 3.5 per cent for other banks. Both the capital measure and the exposure measure along with leverage ratio are to be disclosed on a quarter-end basis. Banks must, however, meet the minimum leverage ratio requirement at all times and these guidelines shall be effective from the quarter commencing October 1, 2019.

Revision in Proforma and Reporting of Banks/ Banking Outlets (BOs) Details under Central Information System for Banking Infrastructure (CISBI)

VI.42 The Master Office File (MOF) system maintained by the Reserve Bank for the directory of all BOs/Offices of banks in India through which Basic Statistical Returns (BSR) code is allotted, has been replaced by a new web-based reporting system *viz.,* CISBI (https://cisbi.rbi.org.in) with a single proforma. All the past information has been migrated to CISBI and reporting henceforth shall be done by all entities/banks in the new system, which has the provision to maintain complete details of banks/AIFIs with a time stamp.

Wholesale and Long-Term Finance (WLTF) Banks

VI.43 In the first bi-monthly monetary policy statement, 2016-17 (April 5, 2016), it was announced that the Reserve Bank would explore the possibilities of licensing other differentiated banks such as WLTF banks. A Discussion Paper on the subject was released on Reserve Bank's website on April 7, 2017. After considering various suggestions/feedback and discussions held with multinational banks and financial institutions, it emerged that there are challenges in evolving a sustainable and viable model for WLTF banks. It was, therefore, decided not to pursue the proposal.

Agenda for 2019-20

VI.44 The Department will continue to work towards aligning the prudential regulatory framework with evolving BCBS and global standards/practices, including implementation of Ind AS for banks, subject to necessary legislative amendments. In order to align the current regulatory framework with global best practices, the Reserve Bank will issue draft guidelines on corporate governance in banks. Further, revised standardised approach for calculating minimum capital requirement for operational risk and draft revised guidelines on credit risk will be issued. The regulatory framework for securitisation as well as interest rate risk in banking book will be finalised.

VI.45 Final prudential regulations will be issued to the AIFIs, covering revised instructions on exposure norms, investment norms, risk management framework and select elements of Basel III capital framework. The implementation of Ind AS for AIFIs has been deferred and will be synchronised with the implementation of the same for the SCBs. In the emerging FinTech area, focus will be on operationalisation of Regulatory Sandbox.

VI.46 Guidelines on minimum balance requirements for savings bank accounts and penalty for non-maintenance will be reviewed. Automated data flow in eXtensible Business Reporting Language (XBRL) platform will be used for settlement of claims relating to interest equalisation scheme. Further, a Discussion Paper will be released on implementation of macro-prudential policies for addressing incipient credit risk in the system. For the purpose of implementation of a framework for credit supply to large borrowers through market mechanism, a study would be undertaken based on the data from banks/Central Repository of Information on Large Credits (CRILC). Digital onboarding of bank customers would be facilitated, enabling video-based KYC for individuals under the provisions of PML Rules.

Cooperative Banks: Department of Cooperative Bank Regulation (DCBR)

VI.47 The Reserve Bank continues to play a key role in strengthening the cooperative banking sector by fortifying the regulatory and supervisory framework. In this context, the Department of Cooperative Bank Regulation (DCBR), which is in charge of prudential regulations of cooperative banks, took several initiatives in 2018-19.

Agenda for 2018-19: Implementation Status

Unlicensed District Central Cooperative Banks (DCCBs) in Jammu and Kashmir

VI.48 A Memorandum of Understanding (MoU) was signed by the state government, the Government of India and NABARD on the three unlicensed DCCBs in Jammu and Kashmir. Accordingly, the state government released its share of ₹2.56 billion in March 2018 (the same is held with the cooperative department of Jammu and Kashmir government for onward transmission). The state government sanctioned the constitution of Professional Boards of the three unlicensed DCCBs in terms of Sub-Section (1)(a) of Section 30-B of Jammu & Kashmir Cooperative Societies (Amendment) Ordinance, 2018 for the implementation of revival package(s) sanctioned by the Government of India/state government/ NABARD. Issue of licenses to these three DCCBs will be considered after the DCCBs comply with the condition in respect of their achieving the required CRAR.

Voluntary Transition of UCBs into SFBs

VI.49 The High Powered Committee (HPC) on UCBs (Chairman: Shri R. Gandhi), had, *inter alia*, recommended the voluntary conversion of large Multi-State UCBs into Joint Stock Companies and other UCBs meeting certain criteria into SFBs. Guidelines were issued on November 27, 2018 for allowing this voluntary transition for UCBs with a minimum net worth of ₹500 million, maintaining CRAR of 9 per cent and meeting other eligibility criteria.

Implementation of Core Banking Solution (CBS) in UCBs

VI.50 As on June 30, 2019, 1,436 UCBs out of 1,545 UCBs have implemented CBS.

Scheduling, Licensing and Mergers of Cooperative Banks

VI.51 Tripura State Cooperative Bank Ltd., Tripura and Delhi State Cooperative Bank were included in the Second Schedule of the RBI Act, 1934 in January 2019 and May 2019, respectively. During 2018-19, six proposals for mergers of UCBs were processed by the Department. Of these, two merger proposals were approved and are awaiting final approval of the concerned Registrars of cooperative societies and one was rejected. The remaining three merger proposals are presently under process. The licenses of 4 weak UCBs were cancelled during the period of review.

Agenda for 2019-20

VI.52 The milestones for 2019-20 include issuance of revised guidelines on supervisory action framework for UCBs, formulation of policy framework for promoting consolidation in UCB sector and establishment of an Umbrella Organisation (UO) for UCBs (Box VI.3). Regulatory approval has been accorded to the National Federation of Urban Cooperative Banks and Credit Societies Ltd. (NAFCUB) for setting up the UO as a non-deposit taking NBFC (NBFC-ND).

NBFCs: Department of Non-Banking Regulation (DNBR)

VI.53 NBFCs play an important role in providing credit by complementing commercial banks and catering to niche sectors. The Department of Non-Banking Regulation (DNBR) is entrusted with the responsibility of regulating the NBFC sector.

Agenda for 2018-19: Implementation Status

Standalone Primary Dealers (SPDs)

VI.54 SPDs were permitted to offer forex services to their foreign portfolio investor (FPI) clients as part of their non-core activities, effective July 27, 2018, subject to compliance with prudential regulations and specific permission from the Reserve Bank.

NBFCs: Minimum Holding Period (MHP) for Securitisation Transactions

VI.55 In order to encourage NBFCs to securitise/ assign their eligible assets, the MHP requirement for originating NBFCs was relaxed in November 2018 in respect of loans of original maturity above five years. The MHP relaxation is in respect of receipt of repayment of six monthly instalments or two quarterly instalments (as applicable), subject to the prudential requirement that minimum retention requirement (MRR) for such securitisation/assignment transactions shall be 20 per cent of the book value of the loans being securitised or 20 per cent of the cash flows from the assets being assigned. This dispensation was given initially for a period of six months, *i.e.*, up

Box VI.3
Establishment of Umbrella Organisation for Primary (Urban) Cooperative Banks (UCBs)

UCBs lack avenues for raising capital funds since they can neither raise capital through public issue nor can they issue shares at a premium. They also have limited avenues for meeting short-term liquidity requirements as only scheduled banks have direct access to the Reserve bank's liquidity support windows.

Cooperative bonding and a mutual support system in the form of an Umbrella Organisation (UO) would contribute to the strength and vibrancy of the sector, as borne out by the international experiences. The UO would be expected to extend liquidity and capital support to the member banks. The UO would also be expected to set up Information Technology (IT) infrastructure for shared use of members to enable them to widen their range of services at a relatively lower cost. The UO can also offer fund management and other consultancy services and contribute to the capacity building in the member UCBs.

The idea of an UO for the UCB sector was first mooted in 2006 by the Reserve Bank's Working Group on Augmentation of Capital of UCBs (Chairman: Shri N. S. Vishwanathan). Later in 2008, the Reserve Bank set up a Working Group on Umbrella Organisation and Constitution of Revival Fund for Urban Cooperative Banks (Chairman: Shri V. S. Das). The Expert Committee on Licensing of New Urban Cooperative Banks (Chairman: Shri Y. H. Malegam) also recommended setting up of an UO in the year 2011 and the same was endorsed in 2015 by the High-Powered Committee on UCBs.

to May 2019, which has been further extended till December 31, 2019.

Interest Subvention Scheme for MSMEs

VI.56 The Government of India extended the Interest Subvention Scheme for MSMEs, 2018 to all NBFC-ND-SIs, who were advised to take appropriate action for implementation of the Scheme and approach the nodal implementation agency, the Small Industries Development Bank of India (SIDBI).

Harmonisation of NBFCs

VI.57 Regulations governing Asset Finance Companies (AFCs), Loan Companies (LCs) and Investment Companies (ICs) were harmonised and they were merged into a new category called NBFC-Investment and Credit Companies (NBFC-ICCs), effective February 22, 2019, in order to move towards activity-based regulation rather than entity-based regulation so as to provide more operational flexibility to NBFCs.

Fit and Proper Criteria for Sponsors of ARCs

VI.58 On October 25, 2018, the Reserve Bank issued directions on fit and proper criteria for sponsors of ARCs in order to strengthen the ARCs.

Permission to ARCs for Acquisition of Assets from Other ARCs

VI.59 In view of the amendment to the Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest (SARFAESI) Act, 2002, ARCs have been permitted to acquire assets from other ARCs, subject to compliance with certain conditions.

Eligible NBFC-ND-SIs as Authorised Dealers (ADs)–Category II

VI.60 The Reserve Bank allowed non-deposit taking systemically important NBFC-ICCs to obtain AD-Category II license, effective April 16, 2019, in order to increase accessibility and efficiency of the services extended to the members of the public for their day-to-day non-trade current account transactions. Eligible NBFCs will have to satisfy certain conditions and seek specific permission from the Reserve Bank.

Appointment of Chief Risk Officer (CRO) for NBFCs

VI.61 To augment risk management practices of the NBFC sector, NBFCs with asset size of more than ₹50 billion have been advised to appoint a CRO, with clearly specified role and responsibilities, who would be required to function independently so as to ensure highest standards of risk management.

Liquidity Framework for NBFCs

VI.62 The guidelines on liquidity risk management framework for NBFCs, including non-deposit taking systemically important Core Investment Companies (CIC-ND-SIs) with asset size of ₹1 billion and above and all deposit taking NBFCs irrespective of asset size, were reviewed in order to strengthen the Asset-Liability Management (ALM) framework for NBFCs and a draft liquidity risk management framework for NBFCs was placed on the Reserve Bank's website for public comments in May 2019 (Box VI.4).

Agenda for 2019-20

Disclosure Requirements

VI.63 In order to bring in more transparency and provide an effective and robust disclosure framework for NBFCs, the extant disclosure requirements for NBFCs will be reviewed.

Harmonisation of NBFC Categories

VI.64 The exercise of harmonising the regulatory framework for various categories of NBFCs, initiated during the year, will be pursued with a view to further bringing down the number of categories of NBFCs, thereby facilitating better implementation of activity based regulation.

Fair Practices Code (FPC) for ARCs

VI.65 A set of principles in the form of FPC will be issued for ARCs to encourage them to follow fair practices while dealing with stakeholders.

4. SUPERVISION OF FINANCIAL INTERMEDIARIES

Department of Banking Supervision (DBS)

VI.66 The Department of Banking Supervision (DBS) is entrusted with the responsibility of supervising SCBs (excluding RRBs), LABs, Payments Banks (PBs), SFBs, Credit Information Companies and AIFIs based on supervisory inputs received through off-site monitoring and on-site inspections.

Agenda for 2018-19: Implementation Status

Recommendations of Expert Committee

VI.67 The Expert Committee (Chairman: Shri Y. H. Malegam), constituted in February 2018 to look into: high divergence in asset classification and

Box VI.4
Liquidity Risk Management Framework for NBFCs

NBFCs have developed significant inter-linkages with the rest of the financial sector in terms of access to public funds and participation in credit intermediation, with implications for systemic risks. This has warranted a review of the liquidity risk management for NBFCs.

The extant ALM guidelines are applicable to non-deposit taking NBFCs with an asset size of ₹1 billion and above, and deposit taking NBFCs having a deposit base of ₹200 million and above:

- Instructions on the three pillars of ALM framework, *viz.,* ALM information systems, ALM organisation (including formation of Asset-Liability Committee (ALCO), its constitution, *etc.*) and ALM processes.
- Monitoring of structural and short-term dynamic liquidity and interest rate sensitivity.
- Maturity gap analysis across time buckets with main focus on 30/31 days time bucket in which the negative gap is not supposed to exceed 15 per cent of the cash out flow.
- CICs with asset size of ₹5 billion and above to disclose the maturity pattern of assets and liabilities.

Proposed Changes

a. Augmentation of the General Framework for Management of Liquidity Risk

i) **ALM Guidelines:** ALM guidelines have been recast on the lines of those applicable to banks, incorporating (a) off-balance sheet and contingent liabilities; (b) stress testing; (c) contingency funding plan; (d) intra-group fund transfers; (e) collateral position management; and (f) diversification of funding.

ii) **Maturity Buckets Revised**: Maturity buckets have been made granular by trifurcating the 1 to 30/31 days bucket into 1-7 days, 8-14 days and 15 to 30 days, with cumulative gap limits set at 10 per cent, 10 per cent and 20 per cent of the respective outflows. Cash flow stress will be captured at an early stage and mitigation is expected to be timely.

iii) **Liquidity Risk Monitoring Tools**: NBFCs will be required to monitor (a) concentration of funding (by counterparty, instrument, currency); (b) available unencumbered assets (that can be used as collateral for raising funds); and (c) market related monitoring information (equity prices, coupon on debts raised, regulatory penalty and the like).

iv) **Stock Approach to Liquidity Risk Management:** Boards of NBFCs are required to identify critical ratios and monitor them against internally prescribed ceilings [an illustrative list could include short-term liabilities to total assets; short-term liabilities to long-term assets; commercial papers to total assets, non-convertible debentures (NCDs) of original maturity less than one year to total assets; short term liabilities to total liabilities; long term assets to total assets].

b. Introduction of the Liquidity Coverage Ratio (LCR) for Large NBFCs

The proposed LCR framework will apply to all deposit taking NBFCs and NBFC-ND-SIs with asset size of ₹50 billion and above. It will be implemented in a phased manner.

(Contd...)

- LCR is defined as:

$$\frac{\textit{Stock of High Quality Liquid Assets (HQLAs)}}{\textit{Total Net Cash Outflows over the next 30 calendar days}}$$

- NBFCs to maintain LCR of minimum 60 per cent from April 1, 2020, progressively increasing in equal steps till it reaches the required level of 100 per cent, by April 1, 2024 and maintaining it at minimum 100 per cent on an on-going basis with effect from April 1, 2024.
- NBFCs to hold HQLAs to cover the net cash outflow over the next 30 day period under a situation of stress.
- Computation of HQLAs to be based on prescribed haircuts applied on the eligible assets.
- For computation of net cash outflow in the 30 day period, the stress scenario is built by overestimating outflows by 15 per cent and underestimating inflows by 25 per cent.

provisioning by banks *vis-à-vis* the Reserve Bank's supervisory assessment; increasing incidence of frauds in banks (including IT interventions); and the role and effectiveness of various types of audits, submitted its report in July 2018. Action in respect of wherever necessary, is being initiated.

Cyber Security

VI.68 Fifty-seven banks, including six cooperative banks, were subjected to IT examinations to assess their level of cyber security preparedness and compliance with the circulars, advisories and alerts on cyber security issued by the Reserve Bank from time to time. Targeted thematic examinations were also carried out, focusing on applications, infrastructure and systems used by the banks. During the year, three cyber drills were conducted on hypothetical scenarios as table top exercises for informing banks' prospective reviews of Cyber Crisis Management Plans/ Incident Response Mechanisms.

VI.69 During the year, key risk indicators were revised to ensure that banks provide a more accurate quantitative indication of cyber risk posture and adequacy of cyber controls implemented by banks. Banks were advised to ensure that members of the Board, senior management and CXOs (*viz.,* Chief Information Officer, Chief Technology Officer, Chief Risk Officer and Chief Information Security Officer) undergo mandatory certification in IT and cyber security.

Other Developments

Frauds Analysis

VI.70 The number of cases of frauds reported by banks increased by 15 per cent in 2018-19 on a year-on-year basis (Table VI.1), with the amount involved rising by 73.8 per cent, though mostly related to occurrences in earlier years. The average lag between the date of occurrence and its detection by banks was 22 months. The average lag for large frauds, *i.e.* ₹1 billion and above, amounting to ₹522 billion reported during 2018-19, was 55 months. Among bank groups, PSBs, which constitute largest market share in bank lending, have accounted for the bulk of frauds reported in 2018-19. It was followed by private sector banks and foreign banks.

VI.71 In terms of area of operations, frauds related to advances constituted the preponderant share of the total amount involved in frauds in 2018-19, while the share of frauds in off-balance sheet items declined from a year ago (Table VI.2). In terms of the number of frauds too, those related to advances were predominant followed by card/internet related frauds and deposits related frauds. Frauds relating to card/internet and deposits constituted only 0.3 per cent of the total value of frauds in 2018-19.

VI.72 Cheating and forgery was the major component, followed by misappropriation and criminal breach of trust. Fraud cases involving an amount of less than ₹0.10 million (*i.e.,* small value frauds) were only 0.1 per cent of the total amount involved in 2018-19.

Cross-Border Supervision

VI.73 The Reserve Bank established agreements for supervisory cooperation with 48 banking supervisory authorities from various jurisdictions. In order to strengthen cross border supervisory processes, meetings of Supervisory Colleges for State Bank of India, Punjab National Bank, Axis Bank, Bank of Baroda, Bank of India and ICICI Bank were held during the year with host supervisors and domestic regulators.

Risk Based Supervision (RBS)

VI.74 Under the Supervisory Programme for Assessment of Risk and Capital (SPARC), RBS has been successfully implemented for banks operating in India over six supervisory cycles. The supervisory framework for SFBs was developed and rolled out on a pilot basis. Sensitisation sessions were conducted for Board members and Senior Management of banks during the year.

Statutory Central Auditors (SCAs)

VI.75 The Reserve Bank has put in place a system of structured meetings between the Reserve Bank supervisors and SCAs of supervised banks at quarterly intervals in order to improve the effectiveness of the relationship between supervisors and auditors for exchange of information, concerns and broader discussions.

Table VI.1: Fraud Cases - Bank Group-wise

Bank Group/ Institution	2017-18		2018-19	
	Number of Frauds	Amount Involved (₹ million)	Number of Frauds	Amount Involved (₹ million)
1	2	3	4	5
Public Sector Banks	2,885	382,608.7	3,766	645,094.3
	(48.8)	*(92.9)*	*(55.4)*	*(90.2)*
Private Sector Banks	1,975	24,782.5	2,090	55,151.4
	(33.4)	*(6.0)*	*(30.7)*	*(7.7)*
Foreign Banks	974	2,560.9	762	9,553.0
	(16.5)	*(0.6)*	*(11.2)*	*(1.3)*
Financial Institutions	12	1,647.0	28	5,534.1
	(0.2)	*(0.4)*	*(0.4)*	*(0.8)*
Small Finance Banks	65	61.9	115	75.2
	(1.1)	*(0.0)*	*(1.7)*	*(0.0)*
Payment Banks	3	9.0	39	21.1
	(0.1)	*(0.0)*	*(0.6)*	*(0.0)*
Local Area Banks	2	0.4	1	0.2
	(0.0)	*(0.0)*	*(0.0)*	*(0.0)*
Total	**5,916**	**411,670.4**	**6,801**	**715,429.3**
	(100.0)	***(100.0)***	***(100.0)***	***(100.0)***

Note: 1. Figures in parentheses represent the percentage share of the total.
2. The above data is in respect of frauds of ₹0.1 million and above reported during the period. The 'Amount Involved' does not equate with loss suffered by banks. In case of some frauds, in foreign exchange transactions for instance, there may not be any loss suffered.
Source: RBI Supervisory Returns.

Table VI.2: Fraud Cases - Area of Operations

Area of Operation	2017-18		2018-19	
	Number of Frauds	Amount Involved (₹ million)	Number of Frauds	Amount Involved (₹ million)
1	2	3	4	5
Advances	2,525	225,583.2	3,606	645,481.7
	(42.7)	*(54.8)*	*(53.0)*	*(90.2)*
Off-balance Sheet	20	162,876.7	33	55,375.2
	(0.3)	*(39.6)*	*(0.5)*	*(7.7)*
Foreign Exchange Transactions	9	14,258.0	13	6,953.8
	(0.2)	*(3.5)*	*(0.2)*	*(1.0)*
Card/Internet	2,059	1,095.6	1,866	713.8
	(34.8)	*(0.3)*	*(27.4)*	*(0.1)*
Deposits	697	4,622.7	596	1,483.1
	(11.8)	*(1.1)*	*(8.8)*	*(0.2)*
Inter-Branch Accounts	6	11.9	3	1.1
	(0.1)	*(0.0)*	*(0.0)*	*(0.0)*
Cash	218	403.4	274	555.4
	(3.7)	*(0.1)*	*(4.0)*	*(0.1)*
Cheques/Demand Drafts, *etc.*	207	341.2	189	336.6
	(3.5)	*(0.1)*	*(2.8)*	*(0.0)*
Clearing Accounts, *etc.*	37	56.2	24	2,088.1
	(0.6)	*(0.0)*	*(0.4)*	*(0.3)*
Others	138	2,421.5	197	2,440.5
	(2.3)	*(0.6)*	*(2.9)*	*(0.3)*
Total	**5,916**	**411,670.4**	**6,801**	**715,429.3**
	(100.0)	***(100.0)***	***(100.0)***	***(100.0)***

Note: 1. Figures in parentheses represent the percentage share of the total.
2. The above data is in respect of frauds of ₹0.1 million and above reported during the period.
Source: RBI Supervisory Returns.

Agenda for 2019-20

VI.76 In order to understand the systemic linkage between banks (SCBs and cooperative banks) and NBFCs, and their interconnectedness, certain functions of supervisory departments are proposed to be integrated to enable: (a) holistic understanding of systemic risks; (b) understanding linkages, contagion and risk build-up across entities for effective off-site monitoring; and (c) identifying systemic early warning signals based on entity-agnostic thematic studies. It is also proposed to have a dedicated and specialised cadre of officers for ensuring a state-of-the-art supervisory framework for banks. Supervisory focus would be on effective risk discovery and better off-site monitoring through leveraging technology.

VI.77 In view of the emergence of cyber risk among threats to financial stability, the DBS proposes to undertake cyber security related supervision of cooperative banks and NBFCs in a phased manner in addition to that of SCBs, FIs and CICs.

VI.78 In line with the evolution of regulatory guidelines on the implementation of IFRS/Ind AS, the impact on quantitative and qualitative reporting by banks would be reviewed, aligned and integrated with the supervisory framework.

VI.79 An Information Technology (IT) solution (ICMTS – Integrated Compliance Management and Tracking System) has been envisaged to have an integrated approach to managing inspection lifecycle and programmes under RBS, IT examination and the like. It will have capabilities such as built-in remediation workflows, time tracking, email-based notifications and alerts, Management Information System (MIS) reports and dashboards to gauge overall progress.

VI.80 The Reserve Bank would coordinate with various agencies including Ministry of Corporate Affairs to examine the feasibility of interlinking various databases and information systems to improve the system of fraud monitoring and take necessary corrective regulatory and supervisory action. To improve the fraud risk management framework for banks: (a) the master directions on frauds shall be revised to incorporate new instructions in the light of experience gained; (b) workshops will be conducted on frauds for the bankers based on comprehensive reviews, to sensitise them on fraud prevention, prompt/ accurate reporting and follow up action; (c) fraud registry will be made more user-friendly; and (d) fraud analytics will be improved.

Cooperative Banks: Department of Cooperative Bank Supervision (DCBS)

VI.81 The primary responsibility of the Department of Cooperative Bank Supervision (DCBS) is supervising UCBs and ensuring the development of a safe and well-managed cooperative banking sector. To achieve this objective, DCBS undertakes periodic on-site and continuous off-site monitoring of the UCBs. At end-March 2019, 1,542 UCBs were operating in the country, out of which 46 UCBs had negative net worth and 26 UCBs were under directions of the Reserve Bank.

Agenda for 2018-19: Implementation Status

Efforts to Make UCBs CBS Compliant

VI.82 The adoption of a technological platform for CBS system in a few UCBs was delayed due to reasons such as lack of expertise and/ or capital or recurring losses. The Reserve Bank has taken measures and coordinated with the state governments to provide adequate support to such UCBs to enable them to implement CBS. Consequently, except for a few UCBs with negative net worth, all UCBs that were not on CBS till a year ago, have initiated the process of implementation of CBS.

Inspection Process Review

VI.83 The inspection process of UCBs was reviewed and revised to make it more focussed and to capture embedded risks in financial and functional parameters. The inspection rating model was also revised to reflect changes in the financial parameters in a precise manner.

Cyber Security Policy

VI.84 All UCBs were advised to put in place a Cyber Security Policy, duly approved by their Board/Administrator, containing a framework and strategy to check cyber threats, depending on the level of complexity of business and acceptable levels of risk. This policy has to be distinct from the IT/information systems (IS) policy of the UCB so that it highlights the risks emanating from cyber threats and the measures required to address/reduce these risks. A supervisory reporting framework has also been put in place for quick action on cyber-attack incidents (Box VI.5).

Agenda for 2019-20

Implementation of Centralised Fraud Registry (CFR)

VI.85 It is proposed to create a mechanism for sharing of fraud related information among UCBs on similar lines of CFR that is in place for commercial banks. This will enable sharing of information on frauds in a timely and uniform manner across the sector.

Development of Prolific Reports for Early Assessment of Deficiencies and Timely Supervisory Action

VI.86 In order to optimally utilise the available data for supervisory inputs, it has been planned to develop standardised reports based on revised incipient indicators derived from select financial parameters using off-site surveillance data for early assessment of deficiencies and timely supervisory action.

Differentiated Supervision Mechanism for Select UCBs

VI.87 It has been envisaged to introduce differentiated supervision framework for UCBs by having risk based assessment for scheduled UCBs. This initiative will entail improving the skill set of inspectors and introducing processes for assessing risk in banks.

Box VI.5
Basic Cyber Security Framework for Primary (Urban) Cooperative Banks (UCBs)

The UCB sector has adopted information technology (IT) in their day-to-day operations to improve the quality and ease of delivery of banking services, accounting and MIS. It has, however, exposed the UCBs to risks associated with IT and cyber threats. Keeping in view incidents of high profile cyber-attacks, theft of customer information, fraudulent use of net banking and skimming of debit/credit cards, putting in place a system to protect UCBs from risk arising out of cyber-threats has become imperative.

In terms of the circular on Basic Cyber Security Framework for Primary (Urban) Cooperative Banks dated October 19, 2018, all UCBs were advised to frame a Cyber Security Policy covering guidelines on organisational arrangements, creating cyber security awareness among all stakeholders, ensuring protection of customer information and implementing basic Cyber Security Controls. The policy also mandated the need to have Inventory Management of Business IT Assets, Environmental Controls, Network Management and Security, Secure Configuration, User Access Control/ Management, Vendor/Outsourcing Risk Management and Awareness Building for Users/Employee/Management in a time bound manner. A supervisory reporting framework has also been prepared for the UCBs to report any unusual cyber security incidents (including intrusion attempts) to the Reserve Bank.

NBFCs: Department of Non-Banking Supervision (DNBS)

VI.88 The mandate of the Department of Non-Banking Supervision (DNBS) is to protect depositors and customers, while ensuring financial stability. Deposit taking NBFCs, depending upon their systemic importance, are subjected to close on-site and off-site monitoring. For ensuring customer protection, the Reserve Bank formulated a *Fair Practices Code* for NBFCs in 2006. The mandate to maintain financial stability is ensured through close supervision of systemically important NBFCs (*i.e.*, with asset size of ₹5 billion and above), currently 276 in number and accounting for 85 per cent of the asset size of the sector. All four pillars of supervision (*viz.*, on-site examination; off-site surveillance; market intelligence; and annual certificate received from statutory auditors) are used for monitoring deposit taking NBFCs and NBFC-ND-SIs. Smaller NBFCs are monitored through off-site surveillance, market intelligence and on-site scrutiny visits. From October 2018, the imposition of monetary penalty has been separated from the supervisory function with a view to ensuring independent and neutral assessment. Enforcement Department now decides monetary penalties in respect of NBFCs.

Agenda for 2018-19: Implementation Status

VI.89 As part of the 'ownership-neutrality' principle, adopted for supervision of NBFCs, all government-owned NBFC-ND-SIs (accounting for 30 per cent of assets of the sector) and government-owned deposit taking NBFCs (accounting for 1.4 per cent of assets of the sector) have been brought under the Reserve Bank's on-site inspection framework and off-site surveillance from the inspection cycle 2018-19. All NBFCs including FinTech-based P2P NBFCs are also being brought under off-site reporting through XBRL platform of the Reserve Bank.

VI.90 In the context of electronic transactions and their surveillance, monitoring of cyber security related incidents in the NBFC sector has gained traction and has been centralised in the Cyber Security and Information Technology Examination (CSITE) cell of the DBS with effect from April 1, 2019. All NBFCs have been advised to report all types of unusual cyber security related incidents in a specified format to the CSITE cell of the DBS through a generic e-mail id (cybersecuritynbfc@rbi.org.in).

VI.91 As part of the efforts to weed out non-compliant weak NBFCs, Certificates of Registration of 1604 NBFCs were cancelled for non-fulfilment of the criterion of the minimum net owned fund requirement of ₹20 million. In preparation of the implementation of Ind AS, a seminar on the subject was conducted at Mumbai in February 2019.

Agenda for 2019-20

VI.92 Concerted efforts would be made during 2019-20 towards further strengthening each of the four supervisory pillars of NBFCs.

Onsite Supervision

VI.93 Inspection of all regulated entities (*i.e.,* banks/NBFCs) will be conducted together to facilitate better understanding of intra/inter-group transactions and exposures and to obtain a holistic view of an NBFC which has other NBFCs/banks in the same group. The concept of Senior Supervisory Manager, as the central point of contact for a single large NBFC/group of NBFCs, will be implemented for focussed attention on large entities/groups. In addition, system of on-site inspection and off-site surveillance mechanism is being strengthened and a review of the supervisory/regulatory framework of CICs would be undertaken keeping in view the need for close monitoring of CICs, which tap funds from the market and invest in/lend to the group companies.

Off-site Surveillance

VI.94 Off-site returns for NBFCs are being revised and rationalised from 21 to 17 returns, while deepening and widening the information set being obtained. The returns are being developed in XBRL, with in-built validation checks. Various reports have been designed to check timely submission of data along with accuracy of reporting as well as to pick up early warning signals of weakness in the regulated entity.

Market Intelligence

VI.95 The *Sachet* portal was launched in 2016 in two languages (Hindi and English) for reporting unauthorised collection of deposits/Ponzi Schemes. The portal will be made available in 11 regional languages in 2019-20 in addition to Hindi and English, which are already available. This will facilitate receipt of information on Ponzi Schemes and deposit collection by unauthorised bodies. It will also help in spreading financial literacy as the portal also contains material on financial literacy in many languages.

Submission of Annual Reports by Statutory Auditors (SAs)

VI.96 A template will be designed for SAs to enable them to directly upload the audited data to the Reserve Bank's database through XBRL, which will also provide a benchmark for comparing off-site data submitted by NBFCs.

Interaction with Other Stakeholders

VI.97 DNBS would work towards development of the fifth pillar of supervision *i.e.,* engagement with stakeholders of the sector, including the NBFCs, their SAs, CRAs, other regulators and banks having large exposures to the sector so as to, *inter alia*, identify the emerging risks and developments in the sector and take prompt action.

Enforcement Department (EFD)

VI.98 The Enforcement Department (EFD) was set up in April 2017 to enforce regulations uniformly across the banks, with an objective to engender greater compliance by the regulated entities, within the overarching principle of ensuring financial stability, public interest and consumer protection. The enforcement policy and framework approved by the Board for Financial Supervision (BFS) emphasises the need to be objective, consistent and non-partisan in undertaking enforcement (Box VI.6).

Agenda for 2018-19: Implementation Status

VI.99 The enforcement work pertaining to cooperative banks and NBFCs was brought under the Department, with effect from

Box VI.6

Enforcement Policy and Framework

An effective, consistent and predictable enforcement framework is a *sine qua non* for a credible banking regulatory and supervisory framework. Enforcement action has a deterrent effect in terms of money and reputation for the regulated entity (RE) and the demonstration effect of an enforcement action has been well documented. Studies have suggested that enforcement action leads to better behaviour not only in case of sanctioned banks but also modifies the behaviour of non-sanctioned banks favourably (Delis, Staikouras and Tsoumas, 2016)

Enforcement can be formal, *ex post* in the form of obtaining compliance as part of the supervisory process or imposing penalty on the banks/ individuals; or, informal, *ex ante* in terms of clarifications/cautionary advices issued by the regulator. A balanced approach to enforcement involves elements of both, with persisting /recurring non-compliance attracting exemplary formal action.

International Experiences

In the United States, the Federal Deposit Insurance (FDI) Act and Federal Deposit Insurance Corporation (FDIC)

(Contd...)

Rules and Regulations, Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA), 1989 and US Civil Code are some of the laws that regulate the financial sector. Supervisory and enforcement powers are divided between various agencies at the federal and state level and four agencies, *viz.,* Board of Governors of the Federal Reserve System (Federal Reserve), FDIC, Office of the Comptroller of the Currency (OCC) and the Consumer Financial Protection Bureau (CFPB).[2] In addition, the Department of Justice (DoJ) enforces misconduct related to criminal offences and anti-competitive conduct. On the basis of gravity, the violations are classified as Tier 1, Tier 2 and Tier 3 and enforcement action may include non-monetary action like public statements, cease and desist orders, withdrawal of authorisation and temporary bans on the management, monetary fine and criminal penalties.

In the European Union (EU), banking supervision is carried out by a Single Supervisory Mechanism, one of the two pillars of the EU Banking Union, the other being Single Resolution Mechanism, and comprises the European Central Bank (ECB) and the national competent authorities (NCAs) of participating Member States. The supervisory domain of ECB and NCAs is determined on the basis of classification of an institution, *viz.,* significant institutions are supervised by ECB and the less significant institutions by the NCAs. Monetary penalties can be imposed on significant institutions and less significant institutions by ECB or by the NCAs depending on the nature of breach (of EU Law, ECB regulation and decisions or national law), up to twice the amount of the profits gained or losses avoided because of the breach, or up to 10 per cent of the significant institution's total annual turnover in the preceding business year, based on the principles of *effectiveness, proportionality* and *dissuasiveness*, taking into account severity of the infringement and also any aggravating and mitigating circumstances of the case. The period of limitation (from the date of infringement) within which the decision to impose penalty is to be taken as well as the period within which the penalty is to be recovered is also provided by the Regulation.

India

The Reserve Bank has the powers to impose penalties under the various laws affecting the banking and financial sector[3]. While the Reserve Bank has been taking penal action under these statutes, the process was spread across various supervisory/regulatory departments and was not in line with the international best practice of separating enforcement action from the supervisory process. Accordingly, with a view to separate identification of violations and enforcement action from supervisory process, and to put in place a sound framework and process for enforcement action and undertake enforcement, Enforcement Department (EFD) was set up within the Reserve Bank in April 2017.

Enforcement Policy and Objective

The objective of the policy is to engender greater compliance with statutes and regulations/directions issued by the Reserve Bank thereunder, within the overarching principle of ensuring financial stability, public interest and consumer protection. It envisages enforcement action to be initiated on the basis of inspection reports and scrutiny reports finalised by the supervisory departments (evidence based), based on well-defined principles of *materiality, proportionality* and *intent* applied uniformly across all entities to minimise arbitrariness and discretion (objective, consistent and predictable) with violations of higher incidence and greater systemic impact attracting sterner action (responsive, risk focussed and proportionate).

Scope of Enforcement

While various statutes empower the Reserve Bank to take penal action, both monetary and non-monetary, Enforcement Policy addresses violations attracting imposition of monetary penalty. Violations inviting non-monetary penalties or imposition of penal interest would be enforced by the respective regulatory and supervisory departments. The Policy neither envisages dealing with individual consumer grievances nor is enforcement a mechanism for grievance redressal. Enforcement action is also not a substitute for the supervisory compliance process.

Basis of Enforcement

Actionable violations are determined on the basis of (a) *fact* of violation, and (b) *materiality* of the violation. *Fact* of the violation is determined on the basis of the existence of statutory provision and directive/guideline issued thereunder and violation thereof. *Materiality* of the violation

(Contd...)

[2] The Federal Reserve supervises bank holding companies, state chartered banks that are members of Federal Reserve System, and foreign banks operating in US; FDIC regulates state chartered banks not part of the Federal Reserve System and state chartered thrifts; OCC regulates and supervises all national banks and federal savings associations and branches of foreign banks; CFPB enforces federal consumer financial protection laws.

[3] Banking Regulation Act, 1949; Reserve Bank of India Act, 1934; Payments and Settlement Systems Act, 2007; SARFAESI Act, 2002; Factoring Regulation Act, 2011; Credit Information Companies (Regulation) Act, 2005; *etc.*

is determined on the basis of the *extent*[4], *frequency*[5] and *seriousness* of the violation. Seriousness of the violation is determined on the basis of the amount involved in the violation in an absolute number or as a proportion to business size. *Aggravating factors* like repeat/persisting violations and false compliance, if any, are also factored in to determine materiality.

Adjudication Process

The process of enforcement action entails issuance of a show cause notice to the RE and providing it with a reasonable opportunity of being heard, in writing, and also, if requested, orally. A three member Committee[6] adjudicates the matter and issues to the RE a reasoned speaking order, indicating therein the enforcement action being taken and the reasons therefor. While the maximum amount that can be levied as penalty for a violation has been stipulated in respective statutes, the amount of penalty to be imposed in each case within that limit is assessed on its merits based on the principle of *proportionality, intent* and *mitigating factors*, if any. The penalty imposed is payable by the RE within the period specified in the respective statutes. At present, statutes enable the Reserve Bank to impose penalty only on the RE and not on the individual in charge of the entity or those apparently responsible for the violation. The Reserve Bank is not empowered to entertain any appeal against or review the order of the Executive Directors' Committee (EDC), except in cases where monetary penalty has been imposed under the SARFAESI Act, 2002.

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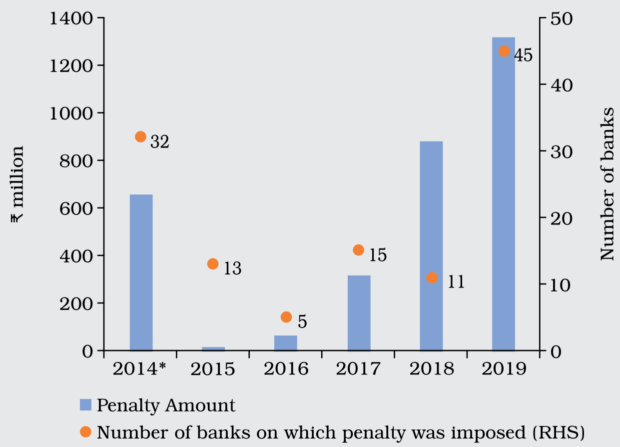
5. RBI (2017), "Statement on Developmental and Regulatory Policies", February.

October 3, 2018. During July 2018 to June 2019 (Chart VI.1), the Department undertook enforcement actions against 47 banks (including nine foreign banks, one payment bank and one cooperative bank), and imposed an aggregate penalty of ₹1,238.6 million for non-compliance with/ contravention of directions on fraud classification and reporting; not adhering to discipline while opening current accounts; not reporting to CRILC platform under RBS; violations of directions/ guidelines issued by the Reserve Bank on KYC norms, IRAC norms, payment of compensation for delay in resolution of ATM-related customer complaints; violation of all-inclusive directions and specific directions prohibiting opening of new accounts; non-compliance with the directions

Chart VI.1: Monetary Penalties Imposed on SCBs under BR Act



***:** Includes penalties imposed on 31 banks for KYC violations on the basis of scrutiny initiated, following media reports.
Note: Data relate to March 31 of every year.
Source: RBI.

[4] By what degree or percentage a regulatory limit has been breached; or how widespread (geographically), even if by smaller percentage/ degree, the violation is.

[5] Multiple instances of the same violation in a given sample.

[6] At the Central Office level, it comprises three Executive Directors, and at Regional Office level, it comprises the Regional Director and two Senior Officers of the RO.

on cyber security framework and time-bound implementation and strengthening of SWIFT-related operational controls; contravention of the directions pertaining to third party account payee cheques and non-compliance with directions on note sorting, directions contained in risk mitigation plan (RMP), directions to furnish information and directions on 'Guarantees and Co-acceptances'.

Agenda for 2019-20

VI.100 The Enforcement Policy and Framework, which was developed in the background of the Department's mandate to undertake enforcement action against commercial banks, will be taken up for revision in the light of the extension of its mandate to undertake enforcement action against cooperative banks and NBFCs. In pursuance of the extended mandate, EFD regional offices (ROs), which were set up in 2018-19, will be strengthened during the year, with sufficient manpower. A database management system to capture violations, record enforcement action and compliance and generate MIS is proposed to be designed.

5. CONSUMER EDUCATION AND PROTECTION

Consumer Education and Protection Department (CEPD)

VI.101 The Consumer Education and Protection Department (CEPD) was formed to, *inter alia,* frame policy guidelines to ensure protection of interests of consumers of the regulated entities, undertake oversight of the functioning of the Ombudsman schemes of the Reserve Bank and also strive for spreading education/awareness among the general public about safe banking practices, extant regulations on customer services and protection and avenues for redressal of customer complaints.

Agenda for 2018-19: Implementation Status

Introduction of the Ombudsman Scheme for Digital Transactions (OSDT)

VI.102 In continuation of its efforts, the Reserve Bank implemented the OSDT on January 31, 2019 in all the existing offices of the Banking Ombudsman (BO). The Scheme was launched under Section 18 of the Payments and Settlement Systems Act, 2007. The Ombudsman for digital transactions handles complaints of customers of non-bank issuers of Prepaid Payment Instruments (PPIs) authorised/regulated by the Reserve Bank. The Scheme provides a cost-free and expeditious grievance redressal mechanism aimed at resolution of complaints through mediation/ conciliation on lines of the Banking Ombudsman Scheme (Box VI.7).

Widening the Coverage of Ombudsman Scheme for NBFCs

VI.103 The Ombudsman Scheme for NBFCs was implemented in February 2018. Offices of NBFC Ombudsman are functioning from the four metro centres-Chennai, Kolkata, Mumbai and New Delhi; each handling complaints of customers of NBFCs from South, East, West and North zones, respectively. The scheme was initially made applicable to deposit taking NBFCs registered with the Reserve Bank and subsequently widened to encompass NBFC-NDs having customer interface and asset size of ₹1 billion and above, with effect from April 26, 2019 as announced in the Statement on Developmental and Regulatory Policies of April 4, 2019.

Rolling out of Complaint Management System (CMS)

VI.104 In June 2019, the Reserve Bank rolled out the CMS which is a web based software that helps customers of regulated entities to lodge their complaints online and track their status.

Box VI.7
Mediation and Conciliation as Tools for Efficient Customer Grievance Redressal

The Banking Ombudsman (BO) Scheme, 2006 as amended up to July 1, 2017, emphasises resolution of complaints through settlement. In terms of Clause 11(1) of the Scheme, the BO endeavours to promote settlement of complaints by agreement between the complainant and the bank through conciliation or mediation. The BO tries to arrive at settlement based on documentary evidence and written submissions. However, in case there is a need for a meeting with the bank and the complainant for an amicable solution, the BO holds conciliatory meetings. These meetings generally start from mediation and move towards conciliation if the solution is not reached. In situations where a mutual settlement is not reached, the BO goes on to issue an 'Award', which is binding on the bank. An increasing number of maintainable complaints received in the offices of BOs are being disposed through mutual settlements and agreements, up from 35.93 per cent (18,031 complaints) in 2015-16 to 70.5 per cent (64,171 complaints) in 2018-19.

The Ombudsman Scheme for NBFCs, 2018 and the Ombudsman Scheme for Digital Transactions, 2019 have been formulated on the lines of the BO Scheme, 2006. In these Schemes too, the Ombudsman endeavours towards resolution of complaints through conciliation.

References:

Rao, M.J. (2019) "Concepts of Conciliation and Mediation and their Differences".

This system provides a single platform for lodging of complaints under the three Ombudsman Schemes–the Banking Ombudsman Scheme; the Ombudsman Scheme for NBFCs; and the OSDT as also Consumer Education and Protection Cells on a single electronic platform. The CMS has an advanced MIS which can be used as policy input for improving consumer protection as well as supervisory/regulatory interventions, if any.

Operationalisation of Internal Ombudsman (IO) Scheme in Banks

VI.105 The functioning of then IO mechanism, mandated by the Reserve Bank in 2015, was revisited and the IO Scheme, 2018 was formulated under Section 35A of BR Act, 1949 with a view to strengthening the internal grievance redressal system in banks. It covers all SCBs (other than RRBs) with more than 10 banking outlets in India. The scheme has been implemented from September 3, 2018.

Satisfaction Survey

VI.106 An All India level customer satisfaction survey is being conducted by the Reserve Bank through a specialised third party agency to gauge the response to consumer protection measures undertaken by the Reserve Bank. The survey findings will indicate the adequacy/inadequacy of the mechanism and the need for further interventions will be considered, if any.

Education/Awareness Initiatives

VI.107 During 2018-19, the Reserve Bank conducted country-wide awareness campaigns through print and electronic media on various topics such as fictitious offers, BSBDA, banking facilities for senior citizens and differently-abled persons and safe digital banking. The Reserve Bank's SMS handle 'RBISAY' was also extensively used for sending text messages on such topics across India. An Interactive Voice Response System was made available to the public for obtaining information in these and other awareness initiatives of the Reserve Bank. During the year, the offices of BO also conducted 259 Town Hall/awareness/outreach programs, mainly in Tier II cities.

Agenda for 2019-20

VI.108 Grievance redressal is an important part of consumer protection framework. In this direction, it has been decided to take following steps to further strengthen the redressal mechanism and the preventive aspects of consumer protection framework so that the confidence of the consumers of financial services is maintained: (i) review of IO Scheme, 2018 for extension to NBFCs, (ii) review of Consumer Education and Protection Cells for empowering them on the lines of BO, (iii) review of the Ombudsman Schemes for updation and effective implementation including through convergence, and (iv) formulation of policy to strengthen the system based on root-cause analysis of major areas of complaint.

Deposit Insurance and Credit Guarantee Corporation (DICGC)

VI.109 Deposit insurance contributes to the stability of the financial system by protecting the interests of depositors and ensuring public confidence (Box VI.8). The Deposit Insurance and Credit Guarantee Corporation (DICGC), a wholly owned subsidiary of the Reserve Bank, provides insurance cover to deposits in all commercial banks including LABs, PBs, SFBs, RRBs and cooperative banks.

VI.110 As on March 31, 2019, the number of registered insured banks stood at 2,098, comprising 157 commercial banks (including 51 RRBs, 3 LABs, 7 PBs and 10 SFBs) and 1,941 cooperative banks (33 state cooperative banks, 364 DCCBs and 1,544 UCBs). With the current limit of deposit insurance in India at ₹0.1 million, the number of fully protected accounts (2,000 million) at end-March 2019 constituted 92 per cent of the total number of accounts (2,174 million), as against the international benchmark[7] of 80 per cent. In terms of amount, the total insured deposits of ₹33,700 billion as at end-March 2019 constituted 28.1 per cent of assessable deposits of ₹120,051 billion, as against the international benchmark of 20 to 30 per cent. At the current level, insurance cover works out to be 0.8 times of per capita income in 2018-19.

VI.111 The DICGC builds up its Deposit Insurance Fund (DIF) through transfer of its surplus, *i.e.,* excess of income (mainly comprising premiums received from insured banks, interest income from investments and cash recovery out of assets of failed banks) over expenditure (payment of claims of depositors and related expenses) each year, net of taxes. This fund is available for settlement of claims of depositors of banks taken into liquidation/amalgamation. The size of the DIF stood at ₹937.5 billion as on March 31, 2019. During 2018-19, the Corporation sanctioned total claims of ₹0.37 billion as against claims aggregating ₹0.43 billion during the preceding year. Four cooperative banks were liquidated during the year, for which the claim list of depositors are yet to be received.

National Housing Bank (NHB)

VI.112 The National Housing Bank (NHB) was set up on July 9, 1988, under the National Housing Bank Act, 1987, as an apex institution for housing finance. The primary function of NHB is to register, regulate and supervise HFCs. However, in the Union Budget 2019-20, Government of India has proposed to shift the regulatory power over HFCs from NHB to the Reserve Bank. In addition, NHB provides refinance to HFCs, SCBs, RRBs and cooperative credit institutions for housing loans and also undertakes direct lending

[7] International Association of Deposit Insurers (2013), "Enhanced Guidance for Effective Deposit Insurance Systems: Deposit Insurance Coverage", Guidance Paper, March. (available at www.iadi.org)

Box VI.8
The Role of Deposit Insurers in Contingency Planning and Crisis Management

As per the International Association of Deposit Insurers (IADI) Core Principle 6 *"the deposit insurer should have in place effective contingency planning and crisis management policies and procedures to ensure that it is able to effectively respond to the risk of, and actual, bank failures and other events. The development of system-wide crisis preparedness strategies and management policies should be the joint responsibility of all safety net participants related to system-wide crisis preparedness and management"*.

All deposit insurers should ensure that they have in place the necessary tools and procedures to perform normal operations in accordance with their mandate while dealing with a crisis. Deposit insurers should establish effective information sharing arrangements with other financial safety net (FSN) members as a basis for enhanced sharing of information and coordination during crises, explicitly formalised through legislation or other legal provisions.

According to the IADI's 2018 Annual Survey, 31 per cent of deposit insurers worldwide were pay box, 40 per cent were pay box plus, 14 per cent were loss minimisers and 13 per cent were risk minimisers[8]. Around 60 per cent engage in contingency planning in one form or other. Out of twenty-three jurisdictions for which information is available, around two-thirds of respective resolution authorities have implemented a Recovery and Resolution Planning (RRP) framework. The RRP is under development in a few risk/loss minimisers such as Chinese Taipei, Korea and Malaysia. 11 IADI member-jurisdictions belonging to G-20 have established RRP frameworks for systemic institutions.

In India, the DICGC functions primarily as a pay box entity *i.e.,* reimbursing the depositors of failed member banks, although it has some role in resolution through the provision of financial support to depositors of weak banks that merge with strong banks. It has provided financial support to depositors of 19 banks (9 commercial banks and 10 cooperative banks) under the merger scheme since 1985. The pay-out ratio to depositors is fixed between the acquiring bank(s) and the DICGC. In line with its pay box function, DICGC also follows a judicious investment policy of investing its funds in liquid securities, so as to ensure regular inflows to take care of liquidity requirements. The current contingency planning and crisis management mechanisms in India comprise provision of liquidity and early warning supervisory actions by the Reserve Bank, macro-prudential supervision and inter-regulatory coordination by the Financial Stability and Development Council (FSDC) and mitigation of crisis-related events by the Ministry of Finance.

References:

1. IADI (2014), "IADI Core Principles for Effective Deposit Insurance Systems", November.

2. IADI (2019), "Deposit Insurers' Role in Contingency Planning and System-wide Crisis Preparedness and Management", Guidance Paper, May.

(project finance) to borrowers in the public and private sectors. Over the years, NHB's focus has been on providing financial support to housing programmes for unserved and underserved segments of the population. Additionally, NHB manages the Credit Risk Guarantee Fund Trust for Low Income Housing. The entire capital of NHB amounting to ₹14.5 billion was divested by the Reserve Bank on March 19, 2019 to the Government of India.

[8] The mandates can be broadly classified into four categories:
i) "Pay box": deposit insurer is responsible only for the reimbursement of insured deposits;
ii) "Pay box plus": deposit insurer has additional responsibilities such as certain resolution functions (*e.g.*, financial support);
iii) "Loss minimiser": insurer actively engages in a selection of least-cost resolution strategies;
iv) "Risk minimiser": insurer has comprehensive risk minimisation functions that include risk assessment/management, a full suite of early intervention and resolution powers and in some cases prudential oversight responsibilities.

VII PUBLIC DEBT MANAGEMENT

In pursuance of the objectives of debt management of cost minimisation, risk mitigation and market development, the Reserve Bank successfully conducted the market borrowing programmes of the centre and states during 2018-19 in the face of global spillovers, volatile financial markets and perceptions of oversupply of paper among the market participants.

VII.1 The Internal Debt Management Department (IDMD) of the Reserve Bank manages the domestic debt of the central government *vide* Sections 20 and 21 of the RBI Act, 1934, and that of 29 state governments and the Union Territory of Puducherry in accordance with bilateral agreements as provided in Section 21A of the Act. The Reserve Bank also provides short-term credit up to three months to both central and state governments in the form of Ways and Means Advances (WMA) to bridge temporary mismatches in cash flows, as laid down in Section 17(5) of the RBI Act, 1934.

VII.2 The rest of the chapter is arranged as follows: section 2 presents implementation status of agenda for 2018-19 both for central and state governments. Section 3 covers major initiatives to be undertaken in 2019-20 to bring improvement in the debt management of central and state governments.

2. Agenda for 2018-19: Implementation Status

VII.3 The market borrowing programme was conducted under a debt management strategy that was geared around cost minimisation, risk mitigation and market development, amidst challenging domestic and global economic and financial conditions. In particular, market demand for securities was impacted by the reduction in securities maintained in the Held to Maturity (HTM) category and in Statutory Liquidity Ratio (SLR) requirements, volatility in financial markets, elevated crude prices and monetary policy normalisation in major economies. Furthermore, the combined gross market borrowing of central and state governments during 2018-19 increased by 4.2 per cent over the previous year to ₹10,493 billion, imparting an upside push to yields.

VII.4 Continuing with the strategy of consolidation, 206 out of 212 issuances of Government of India (GoI) securities were re-issuances as against 156 re-issuances out of the total 159 issuances a year ago. Seven tranches of switch operations of GoI securities were also conducted during 2018-19 under which securities worth face value ₹280.6 billion were switched to a longer tenor as compared with ₹580.8 billion in the preceding year. The budget for buybacks was reduced to zero in the revised estimates for 2018-19 as against buyback of ₹415.6 billion carried out in the previous year. The centre refrained from its usual strategy of front loading[1] of issuances and instead, shifted borrowing to H2 of 2018-19. Accordingly, the borrowing programme of the centre and state was co-ordinated to even out the pressure on yields.

VII.5 In order to meet the diverse needs of investors and to align Separate Trading of Registered Interest and Principal Securities

[1] Front loading signifies raising majority portion of market borrowing during H1.

(STRIPS) with market requirements, revised guidelines on STRIPS was issued on May 3, 2018. Restrictions on the securities eligible for Stripping/Reconstitution as well as the requirement of authorisation of all requests for Stripping/Reconstitution by Primary Dealers (PDs) were removed. Currently, all fixed coupon securities issued by the GoI, irrespective of the year of maturity, are eligible for Stripping/ Reconstitution, subject to the criteria that the securities are reckoned as eligible for the purpose of SLR and they are transferable.

VII.6 Issuances of new government securities (G-sec) of 2 years {(6.65 per cent GS 2020) and (7.00 per cent GS 2021)} and 5 years {(7.37 per cent GS 2023) and (7.32 per cent GS 2024)} in addition to longer tenor Floating Rate Bonds (FRBs) were undertaken during the year in order to broaden the investor base.

VII.7 A new 7-year security was issued in April 2019 for the purpose of creating benchmark in the yield curve. Furthermore, FRB 2031 was issued in the 10-14 years maturity bucket in May 2018 and barring a few months of the year, it was re-issued in alternate weeks, subject to the limits set in the Medium-Term Debt Strategy (MTDS). The share of FRBs in total issuances stood at 9.1 per cent *vis-à-vis* 10.2 per cent a year ago.

VII.8 An Inter-Departmental Group reviewed the activities of the Standalone PDs with a view to expanding the PD activities and strengthening their network. As recommended by the committee, limited foreign exchange licences were allowed for these PDs *vide* circular dated July 27, 2018 in pursuance of the announcement made in the Statement on Developmental and Regulatory Policies of June 6, 2018.

VII.9 Under the Foreign Central Bank (FCB) scheme, FCBs are considered eligible investors in the G-sec market. In consultation with the central government, multilateral financial institutions, *viz.,* New Development Bank (NDB) and World Bank entities were included in the scheme during the year. Further, Treasury Bills (T-Bills) were also included as eligible instruments under the scheme. An agreement was signed with the NDB in February 2019 and the NDB has started investing in G-sec from March 2019. Agreements with four World Bank entities—the International Bank for Reconstruction and Development (IBRD); the IBRD Trust; the Multilateral Investment Guarantee Agency (MIGA); and the International Development Association (IDA)—for investing in G-sec were also signed in April 2019.

VII.10 The strategies followed in the issuances during the year helped in elongation of the weighted average maturity (WAM) of primary issuance of G-sec to 14.73 years during 2018-19.

VII.11 Given the lack of correlation between the spread on State Development Loans (SDLs) and issuing states' fiscal positions, rating of SDLs are being encouraged to reflect differential risks in the cost of borrowing across state governments (Box VII.1).

VII.12 Consolidation of various links pertaining to internal and external public debt information and hosting of a single web link on the Reserve Bank's website have been undertaken. Capacity building programmes for state government officials were conducted in five states, *viz.*, Haryana, Punjab, Uttarakhand, Madhya Pradesh, Gujarat during 2018-19.

Debt Management of the Central Government

VII.13 The Union Budget 2018-19 had estimated its gross market borrowing through dated G-sec at ₹6,055.4 billion. Following the revision of the borrowing programme for H2 of 2018-19, the Interim Budget 2019-20, has reduced gross

Box VII.1
Risk Asymmetry in SDLs

Yields represent the cost of market borrowing for state governments and should ideally reflect the underlying creditworthiness of the issuer. However, there appears to be no observable and considerable relationship between borrowing spreads of SDLs and states' fiscal health, resulting symmetry in bidding patterns and states mobilise funds at similar or near similar yields for the same tenor SDLs (Table 1).

In this context, other emerging market economies are moving towards subnational credit ratings for issuances by state governments, provinces and municipalities for their bond offerings both international and domestic. This may help the market to price risks appropriately and in turn enable efficient price discovery. For instance, subnationals were given ratings based on debt sustainability factors in Colombia. Mexico's new banking regulations require banks to risk weight credit exposures as per subnational credit ratings and set aside capital as determined by the rating gap between the federal government and the subnational. In Indonesia, economic factors, financial management, budgetary flexibility, budgetary performance, liquidity, debt burden and contingent factors are considered for ratings. In South Africa, quantitative methodologies have been used, while in Argentina, ratings for municipalities are regarded necessary in the context of transparency considerations.

In India, as a market development measure, an Automatic Debit Mechanism (ADM) was introduced for state governments to increase the confidence of investors; providing a risk-free status to the SDLs. However, this impedes the development of the SDL segment of the market through better price discovery process. Consequently, the process of cross subsidisation occurs between fiscally well-managed states and other states.

The Reserve Bank has been making various efforts to address the issue of lack of risk asymmetry in pricing of SDLs. In addition to weekly auctions of SDLs since October 2017, the Reserve Bank is now publishing monthly data on states' market borrowing, data on financial accommodation through SDF/WMA/OD and investments by states in auction treasury bills and also in reserve funds, *viz.*, consolidated sinking fund (CSF) and guarantee redemption fund (GRF). Further, it was announced in the Statement on Developmental and Regulatory Policies of June 2018, that the initial margin requirement for rated SDLs in the LAF window (repo) shall be set at 1.0 per cent lower than that of other SDLs for the same maturity buckets, *i.e.,* in the range of 1.5 per cent to 5.0 per cent with a view to incentivising states to

Table 1: Inter-State Spread of SDLs

Year	Gross Borrowing of States (₹ billion)	Gross Borrowing of GoI (₹ billion)	Weighted Average Spread over G-sec (bps)	Average Inter-State Spread (bps)
1	2	3	4	5
2014-15	2,408	5,920	38	4
2015-16	2,946	5,850	50	7
2016-17	3,820	5,820	59	7
2017-18	4,191	5,880	59	6
2018-19	4,783	5,710	65	6

Source: RBI.

Table 2: Regulatory Treatment of Securities

Regulatory Treatment	G-Sec	SDLs	Corporate Bonds
SLR	Yes	Yes	No
LAF	Yes	Yes	No
Risk weights in bank's book	Zero	Zero	Based on their ratings
Fair Valuation	Traded price for the securities that are traded, otherwise FBIL Price	25 basis points over G-Sec #	Traded Price
Haircut in LAF	4 per cent	6 per cent	Not eligible
Margins in TREPS	Haircut rate vary between different G-Sec based on the liquidity of the paper as ascertained from the volume traded.	Have been recently approved for inclusion in TREPS	Not allowed in TREPS

TREPS: Triparty Repo.
#: Consequent to the Second Bi-Monthly Monetary Policy of 2018-19, Financial Benchmark India Pvt. Ltd. (FBIL) has come up with its new valuation methodology as on March 26, 2019.

(Contd...)

get SDLs rated. Measures have also been taken to bring differentiation in valuation of SDLs in the books of the bank as per observed prices in the primary and secondary market given by the Financial Benchmark India Private Ltd. (FBIL).

The rating of SDLs could be challenging in the light of the diverse structural and economic characteristics across states and preferential treatments accorded to them as compared with corporate bonds (Table 2). Other challenges include non-availability of high frequency data, poor quality of financial reporting, accounting system, disclosure standards, and the lack of insolvency systems for subnationals. From a market perspective, phasing out of ADM facility could be one of the steps which may result in better price discovery of SDLs.

References:

1. Giugale M., F. H. Trillo and J. C. Olivieira (2000), 'Subnational Borrowings and Debt Management: World Bank, Achievements and Challenges of Fiscal Decentralization: Lessons from Mexico'
2. Canuto O. and L. Liu (2010), 'Subnational Debt Finance: Make it Sustainable', *World Bank*
3. Liu L. & K. S. Tan (2009), 'Subnational Credit Ratings, A Comparative Review', *World Bank Policy Research Working Paper* 5013.
4. Kanungo B. P. (2018), 'State Government Market Borrowings - Issues and Prospects' *RBI Bulletin*, September.
5. Report of the Group to Assess the Fiscal Risk of State Government Guarantees, RBI, July 2002.

market borrowing through dated G-sec to ₹5,710 billion and the net borrowing to ₹4,227 billion as against ₹5,880 billion of gross borrowing and ₹4,484 billion of net market borrowing respectively, in the previous year. Gross borrowing through GoI dated securities decreased by 2.9 per cent in 2018-19 while the net market borrowing decreased by 5.7 per cent during the same period. The net market borrowing of the GoI through Auction Treasury Bills (ATBs) decreased to ₹356 billion during 2018-19 as against ₹504.8 billion in the previous year (Table VII.1).

Table VII.1: Net Market Borrowing of the Central Government

(Amount in ₹ billion)

Item	2016-17	2017-18	2018-19	2019-20*
1	2	3	4	5
Net Borrowings	3,783	4,989	4,583	2,636
i. Dated Securities@	4,082	4,484	4,227	1,518
ii. 91-day T-Bills	-260	319	-465	973
iii. 182-day T-Bills	76	14	329	174
iv. 364-day T-Bills	-115	172	492	-29

*: Up to June 30, 2019. @ : not adjusted for buybacks & switches.
Note: After adjusting for buyback & net switches, net borrowings during 2018-19 stood at ₹4,232.7 billion as against ₹4,102.6 billion in 2017-18.
Source: RBI.

Debt Management Operations

VII.14 The weighted average yield (WAY) on GoI dated securities issued during the year increased by 81 basis points (bps) to 7.78 per cent, and the weighted average coupon on dated securities on the entire debt stock increased by 5 bps to 7.81 per cent over the previous year. The WAM of outstanding dated securities was at 10.40 years in 2018-19 as compared with 10.62 years in the previous year (Table VII.2).

VII.15 During 2018-19, about 53.5 per cent of the market borrowing were raised through issuance of dated securities with a residual maturity of 10 and over 10 years, as compared with 53.6 per cent in the previous year, leading to a marginal increase in the share of securities with maturity less than 10 years. Further, securities of 35-year and 40-year tenor were re-issued during the year with the objective of catering to demand from long-term investors such as insurance companies and pension funds (Table VII.3).

Issuance of Special GoI Securities

VII.16 Special GoI Securities (Non-Transferable) were issued to 14 public sector banks (PSBs) and Exim Bank for a total amount of ₹1,105 billion in 10 tranches on a cash neutral basis towards

Table VII.2: Market Loans of Central Government - A Profile*

(Yield in per cent / Maturity in years)

Years	Range of YTMs in Primary Issues			Issued during the Year			Outstanding Stock	
	Under 5 years	5-10 years	Over 10 years	Weighted Average Cut-off Yield	Range of Maturities @	Weighted Average Maturity	Weighted Average Maturity	Weighted Average Coupon
1	2	3	4	5	6	7	8	9
2013-14	7.22-9.00	7.16-9.40	7.36-9.40	8.41	6-30	14.23	10.00	7.98
2014-15	-	7.66-9.28	7.65-9.42	8.51	6-30	14.66	10.23	8.08
2015-16	-	7.54-8.10	7.59-8.27	7.89	6-40	16.03	10.50	8.08
2016-17	6.85-7.46	6.13-7.61	6.46-7.87	7.16	5-38	14.76	10.65	7.99
2017-18	7.23-7.27	6.42-7.48	6.68-7.67	6.97	5-38	14.13	10.62	7.76
2018-19	6.56-8.12	6.84-8.28	7.26-8.41	7.78	1-37	14.73	10.40	7.81
2019-20**	6.22-7.38	6.87-7.44	6.76-7.77	7.22	1-40	15.86	10.48	7.81

Note: YTM: Yield to Maturity**.** **-:** Not applicable. **@:** Residual maturity of issuances and figures are rounded off.
***:** Excluding buyback/switch in GoI securities and special securities.
****:** Up to June 30, 2019.
Source: RBI.

recapitalisation. The coupon on these securities ranged between 7.30 per cent to 8.11 per cent.

Ownership of Securities

VII.17 Commercial banks (including the PD segment) remained the largest holders of G-sec, accounting for 39.1 per cent as on end-March 2019, followed by insurance companies and provident funds holding 26.2 per cent and 10.3 per cent, respectively. The share of the Reserve Bank's holding stood at 9.9 per cent while Foreign Portfolio Investors (FPIs) held 2.1 per cent of the outstanding stock. Other holders included cooperative banks, mutual funds, financial institutions and corporates.

Table VII.3: Issuance of Government of India Dated Securities – Maturity Pattern

(Amount in ₹ billion)

Residual Maturity	2017-18		2018-19		2019-20*	
	Amount raised	Percentage to total	Amount raised	Percentage to total	Amount raised	Percentage to total
1	2	3	4	5	6	7
Less than 5 years	90	1.5	1,089	19.1	510	23.1
5-9.99 years	2,640	44.9	1,570	27.5	560	25.3
10-14.99 years	1,550	26.4	980	17.2	360	16.3
15-19.99 years	740	12.6	711	12.5	20	0.9
20 years & above	860	14.6	1,360	23.8	760	34.4
Total	**5,880**	**100**	**5,710**	**100**	**2,210**	**100**

*: Up to June 30, 2019.
Note: Figures in the columns might not add up to the total due to rounding off of numbers.
Source: RBI.

Primary Dealers and Devolvement

VII.18 The number of PDs stood at 21 [14 bank-PDs and 7 Standalone PDs (SPDs)] at end-March 2019. All the PDs maintained Capital to Risk-weighted Assets Ratio (CRAR) above the minimum requirement of 15 per cent during the year. PDs have a mandate of underwriting primary auctions of dated central government securities and achieving bidding commitment/ success ratio targets in respect of T-Bills/ cash management bills (CMBs). The share of PDs in primary auctions of central government securities stood at 50.6 per cent in 2018-19 as compared with 53.7 per cent in the previous year. Underwriting commission paid to PDs during 2018-19 was ₹1.40 billion as compared with ₹0.61 billion in the previous year reflecting the volatile market conditions. There were seven instances of devolvement of central government securities on PDs for an amount of ₹146 billion in 2018-19 as compared with four instances for ₹103 billion a year ago.

Sovereign Gold Bonds (SGBs) Scheme

VII.19 The Reserve Bank, in consultation with the GoI, issued six tranches of Sovereign Gold Bonds (SGBs) for an aggregate amount of ₹5.88 billion (1.84 tonnes) during 2018-19. The SGB scheme aims to broaden the investment choice for investors as well as to widen the retail investor base. The incentives granted to investors in 2017-18 by enhancing the maximum holding limit to 4 kg for individuals/Hindu Undivided Family (HUF) and 20 kg for trusts per fiscal year and allowing a discount of ₹50/gm on the nominal value for making online applications and digital payment were continued in 2018-19 as well. A total of ₹74.83 billion (25.3 tonnes) has been raised through the scheme since its inception in November 2015.

Debt Management Strategy (DMS)[2]

VII.20 The Debt Management Strategy (DMS) was introduced in 2015, in consultation with GoI, to smoothen the government's borrowing programme and execute it in a planned manner. The DMS is reviewed annually and rolled over for the next three years. According to the current DMS for the period 2018-19 to 2020-21, in addition to internal debt, small savings schemes and certain aspects of external loans tenure, currency of loans and repayments terms, *etc.* are brought under the scope of DMS. The DMS revolves around three broad pillars, *viz*., low cost, risk mitigation and market development. The low cost objective is attained by planned issuances, offer of appropriate instruments in the medium to long-run, and by considering market conditions and preferences of various investor segments, and a detailed issuance calendar for G-sec and T-Bills. Debt sustainability indicators such as debt-to-GDP, average time to maturity and interest expense to GDP are projected. Stress tests to measure debt sustainability in the face of economic and financial shocks are also undertaken.

Treasury Bills

VII.21 Short-term cash requirements of the government are met through issuance of T-Bills. The net short-term market borrowing of the government through T-Bills decreased to ₹356 billion during 2018-19 as against ₹504.8 billion in the previous year. PDs individually achieved the stipulated minimum success ratio of 40 per cent in bidding for T-Bills. Their share in T-Bills auctions increased to 71.4 per cent during 2018-19 as compared with 66.5 per cent in the preceding year.

[2] Status Paper on Government Debt, Ministry of Finance, Government of India, January 2019.

Cash Management of the Central Government

VII.22 The government started the year 2018-19 with a cash balance of ₹1,676 billion. The WMA limit for the first quarter and second quarter was fixed at ₹600 billion and ₹700 billion, respectively, while it was ₹350 billion during October 2018 to February 2019, and ₹250 billion in March 2019. The government's cash position remained under stress during the first half of the year, mainly because of high redemption pressures. Hence, GoI resorted to WMA for 173 days in 2018-19 *vis-à-vis* 106 days in the previous year, and overdraft (OD) for 50 days *vis-à-vis* 6 days during the same period. The government also issued CMBs for ₹1,900 billion with tenors ranging between 12 to 70 days to tide over short-term mismatches in cash flows. The GoI's cash position improved during H2 of 2018-19, and ended the year with cash balance of ₹1,227 billion. The WMA limit for the H1 of 2019-20 was fixed at ₹750 billion (Chart VII.1).

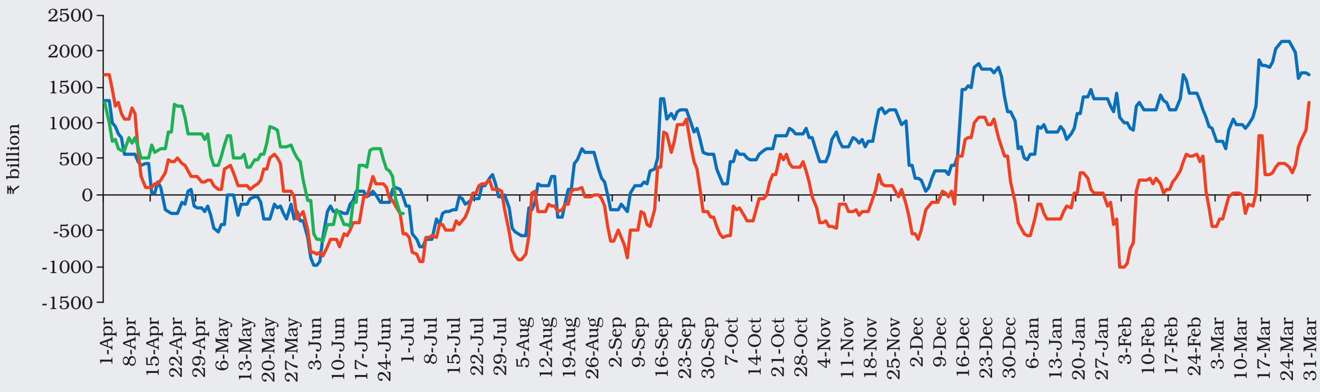
Debt Management of State Governments

VII.23 States' dependence on market borrowing has increased significantly over the years, especially since 2017-18, following the recommendation of the 14th Finance Commission (FC) to exclude states from the National Small Savings Fund (NSSF) financing facility (barring Delhi, Madhya Pradesh, Kerala and Arunachal Pradesh). The share of market borrowing in financing GFD has increased from 65.8 per cent in 2016-17 to 90.6 per cent in 2018-19 (BE), mainly due to the drying up of other sources of financing.

VII.24 The gross and net market borrowing of the state governments stood at ₹4,783 billion and ₹3,486 billion, respectively. The gross market borrowing of state governments increased by 14.1 per cent, while the net borrowing increased by 2.4 per cent reflecting higher redemptions during the year. There were 467 successful issuances in 2018-19, of which 59 were re-issuances, reflecting efforts by states towards consolidation of debt (Table VII.4).

VII.25 The weighted average cut-off yield (WAY) of SDLs stood at 8.32 per cent, up from 7.67 per cent in the previous year, reflecting the volatile market conditions. The weighted average spread of SDL issuances over comparable central government securities stood at 65 bps as compared with 59 bps in 2017-18. Sixteen states issued non-standard securities of tenors ranging from 2 to 30 years in 2018-19. As a strategic response to higher spreads, 11 states rejected all the bids in some auctions. Following

Chart VII.1: GoI Cash Balance



Source: RBI.

Table VII.4: Market Borrowing of States through SDLs

(Amount in ₹ billion)

Item	2016-17	2017-18	2018-19	2019-20*
1	2	3	4	5
Maturities during the year	393	788	1,297	226
Gross sanction under article 293(3)	4,000	4,825	5,501	5,139
Gross amount raised during the year	3,820	4,191	4,783	8,15
Net Amount raised during the year	3,427	3,403	3,486	589
Amount raised during the year to total sanctions (per cent)	96	87	87	16
Outstanding liabilities (at the end period) #	20,896	24,298	27,785	28,375

*: As on June 30, 2019. #: Including UDAY and other special securities.
Source: RBI.

the policy of passive consolidation, states like Haryana, Maharashtra, Punjab, Himachal Pradesh, Madhya Pradesh and Tamil Nadu undertook re-issuances amounting to ₹599 billion during 2018-19, which may improve the liquidity of these securities in the secondary market. The average inter-state spread during 2018-19 stood at 6 bps same as a year ago, indicating the disconnect between the spread on SDLs and fiscal health of issuing states. These issues were discussed in the 31st State Finance Secretaries (SFS) Conference held in March 2019.

VII.26 As announced in the second bi-monthly Monetary Policy on June 6, 2018, SDLs held by banks in their investment portfolios will henceforth be valued at observed prices, *i.e.,* the actual price at which the securities have been traded in the market in order to align the value of SDLs with prevailing market prices. In case of non-traded state government securities, the Financial Benchmark of India Private Limited (FBIL) has recently come up with new methodology for valuation.

Cash Management of State Governments

VII.27 Following the recommendations of the Advisory Committee on Ways and Means Advances (WMA) scheme of the state government (Chairman: Shri Sumit Bose), the limits of WMA for states was reviewed and it was decided to retain the existing limit (₹322.25 billion for all states together) of WMA until reviewed by the next committee (effective from 2020-21). Fourteen states resorted to WMA, 10 states availed OD and 9 states availed the Special Drawing Facility (SDF) in 2018-19.

VII.28 States have been accumulating sizeable cash surpluses in recent years in the form of Intermediate Treasury Bills (ITBs) and ATBs. The outstanding investments of states in ITBs stood at ₹1,221 billion at end-March 2019, while outstanding investments of states in ATBs stood at ₹739 billion (Table VII.5).

Table VII.5: Investments in ITBs and ATBs by State Governments/UT

(Amount in ₹ billion)

Item	Outstanding as on March 31				
	2015-16	2016-17	2017-18	2018-19	2019-20*
1	2	3	4	5	6
14-Day (ITBs)	1,206	1,561	1,509	1,221	1,127
ATBs	383	366	621	739	818
Total	**1,589**	**1,927**	**2,130**	**1,960**	**1,945**

*: As on June 30, 2019.
Source: RBI.

Investments in Consolidated Sinking Fund (CSF)/ Guarantee Redemption Fund (GRF)

VII.29 State governments maintain the Consolidated Sinking Fund (CSF) and Guarantee Redemption Funds (GRF) with the Reserve Bank as buffer for repayment of their liabilities. States can also avail SDF at a discounted rate from the Reserve Bank against incremental funds invested in CSF and GRF as collateral. In order to incentivise adequate maintenance of these funds by the state governments and to encourage them to increase the corpus of these funds, it was announced in the Statement on Developmental and Regulatory Policies of June 2018 that the rate of interest on SDF has been lowered from 100 bps below the repo rate to 200 bps below the repo rate.

VII.30 Currently, 24 states are members of the CSF scheme while 18 states are members of GRF scheme. Outstanding investment by states in the CSF and GRF as at end-March 2019 stood at ₹1,147 billion and ₹65 billion, respectively, as against ₹993 billion and ₹54 billion at end-March 2018. Total investment in CSF/GRF was ₹254 billion in 2018-19 as compared with ₹194 billion a year ago. Total disinvestment by states from CSF and GRF during 2018-19 was ₹12 billion (₹4 billion in 2017-18).

3. Agenda for 2019-20

VII.31 The gross market borrowing through dated securities as budgeted in the Union Budget 2019-20 stands at ₹7,100 billion, higher by about 24.3 per cent than ₹5,710 billion in 2018-19 predominately due to higher redemption. The net market borrowing (including the net short-term borrowing of ₹250 billion) at ₹4,481 billion is envisaged to finance 63.7 per cent of the fiscal deficit in 2019-20 (BE) as compared to 70.6 per cent in 2018-19 (RE).

VII.32 The market borrowing programme of the central and state governments would continue to be guided by the following strategic measures within the overall objective of developing a deep and liquid market for G-sec as well as SDLs:

i. The overall liquidity in G-sec market will be enhanced by consolidation of debt through a calendar of auction based switches and buyback operations.

ii. Issuance of GoI benchmarks, securities of 2, 5, 7 and 10 year tenor along with the issuance of half-yearly calendar for SGBs will be undertaken.

iii. For enhancing secondary market liquidity, it is proposed to formulate a market making scheme and operationalise it through the PDs; and to revise retail and mid-segment turnover targets for PDs based on market data in the G-sec market (primary market and secondary market).

iv. Expansion of investor base by greater participation of multilateral financial institutions and multilateral development banks, apart from FCBs in the G-sec market will be undertaken.

v. Close co-ordination with state governments will be undertaken to improve their cash and debt management practices. Specified Stock exchanges will also be permitted in the Aggregator Scheme for bidding in the non-competitive segment of the SDLs. Further, the possibility of changing the nomenclature of SDLs to state government securities will be explored.

vi. Various investment avenues for state governments will be explored, including the review of the CSF/GRF scheme.

vii. A rule-based method for determining WMA limit of the central government and revision of the WMA limit for state governments will be examined.

viii. Best practices in reporting data to improve the quality and veracity of data will also be undertaken. The coverage of data will also be broadened for internal dissemination and use.

ix. Various options will be explored to reflect risk asymmetry among state governments in their cost of borrowing.

x. Capacity building programmes for sensitising state governments about the prudent measures of cash and debt management will be conducted. Further, meetings between states and investors will be facilitated.

VIII CURRENCY MANAGEMENT

The issuance of ₹100 and ₹20 currency notes under the Mahatma Gandhi (New) Series, amendment of Note Refund Rules and upgradation of Currency Verification and Processing Systems across offices of the Reserve Bank were the notable features of currency management during 2018-19 within the endeavour to ensure an adequate supply of clean banknotes of various denominations in the economy.

VIII.1 The Reserve Bank's currency management function is guided by the goal of ensuring an adequate supply of clean banknotes of various denominations in the economy. During 2018-19, important developments included introduction of ₹100 and ₹20 denomination notes under the Mahatma Gandhi (New) Series, amendment of Note Refund Rules, 2009, and upgradation of Currency Verification and Processing Systems (CVPS) across offices of the Reserve Bank. Concerted efforts were also made towards indigenisation of manufacturing colour shifting ink. The project of replacing the Integrated Computerised Currency Operations and Management System (ICCOMS) application with an improved currency management module and integration of currency management functions with the Core Banking Solution (e-Kuber) of the Reserve Bank is in progress. The Reserve Bank has also set up a state-of-the-art Banknote Quality Assurance Laboratory in October 2018 at Mumbai.

VIII.2 Against the above backdrop, the rest of the chapter is arranged as follows: section 2 presents the important developments in currency in circulation. Section 3 covers implementation status of the agenda for 2018-19 and section 4 provides agenda for 2019-20.

2. Developments in Currency in Circulation

VIII.3 Currency in circulation (CiC) includes banknotes and coins. At present, the Reserve Bank issues notes in denominations of ₹2, ₹5, ₹10, ₹20, ₹50, ₹100, ₹200, ₹500 and ₹2000. Coins in circulation comprise 50 paise and 1, 2, 5 and 10 rupee denominations. In terms of value, banknotes accounted for major share of the total CiC (around 99 per cent).

Banknotes

VIII.4 The value and volume of banknotes in circulation increased by 17.0 per cent and 6.2 per cent to ₹21,109 billion and 108,759 million pieces, respectively, during 2018-19. In value terms, the share of ₹500 and ₹2000 banknotes, which had together accounted for 80.2 per cent of the total value of banknotes in circulation at end-March 2018, increased to 82.2 per cent at end-March 2019. There was a sharp increase in the value of ₹500 banknotes in circulation—from 42.9 per cent to 51.0 per cent over the year. In volume terms, ₹10 and ₹100 banknotes constituted 47.2 per cent of total banknotes in circulation at end-March 2019 as against 51.6 per cent at end-March 2018 (Table VIII.1).

Coins

VIII.5 The total value of coins in circulation increased by 0.8 per cent in 2018-19 as against an increase of 2.4 per cent last year, while the total volume increased by 1.1 per cent as compared to an increase of 2.4 per cent in the previous year. As on March 31, 2019, coins of

Table VIII.1: Banknotes in Circulation (end-March)

Denom-ination (₹)	Volume (million pieces)			Value (₹ billion)		
	2017	2018	2019	2017	2018	2019
1	2	3	4	5	6	7
2 and 5	11,557 (11.5)	11,425 (11.2)	11,302 (10.4)	45 (0.3)	44 (0.2)	44 (0.2)
10	36,929 (36.8)	30,645 (29.9)	31,260 (28.7)	369 (2.8)	307 (1.7)	313 (1.5)
20	10,158 (10.2)	10,016 (9.8)	8,713 (8.0)	203 (1.5)	200 (1.1)	174 (0.8)
50	7,113 (7.1)	7,343 (7.2)	8,601 (7.9)	356 (2.7)	367 (2.0)	430 (2.0)
100	25,280 (25.2)	22,215 (21.7)	20,074 (18.5)	2,528 (19.3)	2,222 (12.3)	2,007 (9.5)
200	- -	1,853 (1.8)	4,000 (3.7)	- -	371 (2.1)	800 (3.8)
500	5,882 (5.9)	15,469 (15.1)	21,518 (19.8)	2,941 (22.5)	7,734 (42.9)	10,759 (51.0)
1000	89 (…)	66 (…)	- -	89 (0.7)	66 (0.4)	- -
2000	3,285 (3.3)	3,363 (3.3)	3,291 (3.0)	6,571 (50.2)	6,726 (37.3)	6,582 (31.2)
Total	**100,293 (100.0)**	**102,395 (100.0)**	**108,759 (100.0)**	**13,102 (100.0)**	**18,037 (100.0)**	**21,109 (100.0)**

- : Not applicable. … : Negligible.

Note: Figures in parentheses represent the percentage share in total volume/value.

Source: RBI.

₹1, ₹2 and ₹5 together constituted 83.6 per cent of the total volume of coins in circulation, while in value terms, these denominations accounted for 78.3 per cent (Table VIII.2).

Currency Management Infrastructure

VIII.6 The functions relating to issuance of currency (both banknotes and coins) and their management are performed by the Reserve Bank through its issue offices, currency chests and small coin depots spread across the country. As at end-March 2019, the State Bank of India accounted for the highest share of around 63 per cent of currency chests, followed by the nationalised banks with around 31 per cent (Table VIII.3).

Table VIII.2: Coins in Circulation (end-March)

Denomination (₹)	Volume (million pieces)			Value (₹ billion)		
	2017	2018	2019	2017	2018	2019
1	2	3	4	5	6	7
Small coins	14,788 (12.7)	14,788 (12.4)	14,788 (12.3)	7 (2.8)	7 (2.7)	7 (2.7)
1	48,347 (41.6)	49,636 (41.7)	50,326 (41.8)	48 (19.2)	50 (19.5)	50 (19.4)
2	32,059 (27.6)	32,855 (27.6)	33,154 (27.6)	64 (25.6)	66 (25.8)	66 (25.6)
5	15,783 (13.6)	16,650 (14.0)	17,151 (14.2)	79 (31.6)	83 (32.4)	86 (33.3)
10	5,205 (4.5)	5,049 (4.2)	4,905 (4.1)	52 (20.8)	50 (19.5)	49 (19.0)
Total	**116,182 (100.0)**	**118,978 (100.0)**	**120,324 (100.0)**	**250 (100.0)**	**256 (100.0)**	**258 (100.0)**

Note: 1. Figures in parentheses represent the percentage share in total volume/value.
2. Figures in parentheses may not add up to 100 due to rounding off of numbers.

Source: RBI.

Indent and Supply of Currency

VIII.7 The indent of banknotes for 2018-19 was lower by 5.6 per cent from their level a year ago. However, the supply of banknotes during 2018-19 was higher than in the previous year. The supply of coins also increased during the period by 4.8 per cent over the previous year (Tables VIII.4 and VIII.5).

Table VIII.3: Currency Chests and Small Coin Depots (as at end-March 31, 2019)

Category	No. of Currency Chests	No. of Small Coin Depots
1	2	3
State Bank of India	2,408	2,303
Nationalised Banks	1,186	1,006
Private Sector Banks	197	193
Cooperative Banks	5	5
Foreign Banks	4	4
Regional Rural Banks	7	7
Sub Treasury Offices	4	0
Reserve Bank of India	1	1
Total	**3,812**	**3,519**

Source: RBI.

Table VIII.4: Indent and Supply of Banknotes by BRBNMPL and SPMCIL (April-March)

(Million pieces)

Denomination (₹)	2016-17		2017-18		2018-19	
	Indent	Supply	Indent	Supply	Indent	Supply
1	2	3	4	5	6	7
5	..	..	..	..	..	..
10	3,000	2,785	4,237	4,313	3,920	4,289
20	6,000	4,118	2,458	2,051	46	210
50	2,125	2,700	3,784	2,793	4,233	4,040
100	5,500	5,738	8,068	3,170	6,330	6,407
200	-	-	2,694	2,832	2,615	2,730
500 (MG series)	5,725	2,013	-	-	-	-
500 (new design)	-	7,260	9,213	9,693	11,692	11,468
1000	2,200	925	-	-	-	-
2000	3,500	3,504	151	151	47	47
Total	**28,050**	**29,043**	**30,605**	**25,003**	**28,883**	**29,191**

- : Not Applicable. .. : Nil.
Note: BRBNMPL: Bharatiya Reserve Bank Note Mudran Private Limited.
SPMCIL: Security Printing and Minting Corporation of India Limited.
Source: RBI.

Disposal of Soiled Notes

VIII.8 After completion of processing of the Specified Bank Notes (SBNs) by March 2018, the Reserve Bank focused on the other denominations of soiled notes accumulated due to prioritisation of SBNs processing during 2017-18. As on March 2019, denominations of ₹10 and ₹100 together accounted for 83.3 per cent of the total disposed soiled banknotes (Table VIII.6).

Counterfeit Notes

VIII.9 During 2018-19, out of the total Fake Indian Currency Notes (FICNs) detected in the banking sector, 5.6 per cent were detected at the Reserve Bank and 94.4 per cent were detected by other banks (Table VIII.7).

Table VIII.5: Indent and Supply of Coins by Mints (April-March)

(Million pieces)

Denomination	2016-17		2017-18		2018-19	
	Indent	Supply	Indent	Supply	Indent	Supply
1	2	3	4	5	6	7
50 Paise	30	30	..	..	..	..
₹1	6,300	3,548	1,830	2,008	2,000	2,555
₹2	4,200	2,461	1,184	1,539	1,000	1,286
₹5	2,270	2,429	1,698	1,545	1,132	678
₹10	2,200	1,223	3,000	760	2,000	1,613
Total	**15,000**	**9,691**	**7,712**	**5,852**	**6,132**	**6,132**

.. : Nil.
Source: RBI.

Table VIII.6: Disposal of Soiled Banknotes (April-March)

(Million pieces)

Denomination (₹)	2016-17	2017-18	2018-19
1	2	3	4
2000	..	..	1
1000	1,514	6,847	2
500	3,506	20,024	15
200	-	-	..
100	2,586	105	3,795
50	778	83	835
20	546	114	1,163
10	3,540	497	6,524
Up to 5	34	8	59
Total	**12,503**	**27,678**	**12,393**

- : Not Applicable. .. : Nil.
Note: Figures in the column may not add up to the total due to rounding-off of the numbers.
Source: RBI.

VIII.10 Compared to the previous year, there was an increase of 20.2 per cent, 87.2 per cent and 57.3 per cent in counterfeit notes detected in the denominations of ₹10, ₹20 and ₹50, respectively. Counterfeit notes detected in the denomination of ₹100 declined by 7.5 per cent. In the denomination of ₹200, which was introduced in August 2017, 12,728 counterfeit notes were detected as against 79 during the previous year. Counterfeit notes in the denomination of ₹500 (new design notes), increased by 121.0 per cent, while in ₹2000, it increased by 21.9 per cent during 2018-19 (Table VIII.8).

Table VIII.7: Number of Counterfeit Notes Detected (April-March)

(No. of pieces)

Year	Detection at Reserve Bank	Other Banks	Total
1	2	3	4
2016-17	32,432	729,640	762,072
	(4.3)	(95.7)	(100.0)
2017-18	188,693	334,090	522,783
	(36.1)	(63.9)	(100.0)
2018-19	17,781	299,603	317,384
	(5.6)	(94.4)	(100.0)

Note: 1. Figures in parentheses represent the percentage share in total.
2. Does not include counterfeit notes seized by the police and other enforcement agencies.
Source: RBI.

Table VIII.8: Denomination-wise Counterfeit Notes Detected in the Banking System (April-March)

(No. of pieces)

Denomination (₹)	2016-17	2017-18	2018-19
1	2	3	4
2 and 5	80	1	..
10	523	287	345
20	324	437	818
50	9,222	23,447	36,875
100	177,195	239,182	221,218
200	-	79	12,728
500 (MG series)	317,567	127,918	971
500 (New design)	199	9,892	21,865
1000	256,324	103,611	717
2000	638	17,929	21,847
Total	**762,072**	**522,783**	**317,384**

- : Not Applicable. .. : Nil.
Source: RBI.

Expenditure on Security Printing

VIII.11 The total expenditure incurred on security printing during July 1, 2018 to June 30, 2019 stood at ₹48.11 billion as against ₹49.12 billion in the previous year.

3. Agenda for 2018-19: Implementation Status

Integration of Currency Management Functions with Core Banking Solution (e-Kuber)

VIII.12 The Reserve Bank has been using ICCOMS application as its currency management solution for inventory management and accounting of currency chest transactions as well as currency management operations at its regional offices. ICCOMS is being replaced by an improved currency management module, with integration of currency management functions with the Core Banking Solution (e-Kuber) of the Reserve Bank. Some of the salient features of the new module include improved inventory management, near real time accounting of currency chest transactions, transit accounting and better tracking of CiC. The integration project is to be implemented in three phases: Regional Office-Issue Department module (Phase I); external accounting module with currency chests portal (Phase II); and MIS-Ancillary module (Phase III). Phase I has been implemented and Phase II is in an advanced stage of implementation.

Laboratory for Banknote Quality Assurance

VIII.13 The Reserve Bank has set up a state-of-the-art Banknote Quality Assurance Laboratory in October 2018 at Mumbai to ensure the standardisation and quality of banknotes among different presses, based on the recommendation of the Group of Experts for Review of Systems and Processes relating to banknote production (Chairman: Shri C. Krishnan).

Automation of Banknote Handling Process

VIII.14 In order to upgrade the infrastructure and processes for currency management, the Reserve Bank is actively deliberating on inducting modern technology and automating the processes of banknote handling, in addition to the existing automated system of processing banknotes through CVPS.

Minimum Standards for Currency Chests (CCs)

VIII.15 The Committee on Currency Movement (CCM) (Chairman: Shri Deepak Mohanty), recommended, *inter alia*, that the Reserve Bank should encourage banks to establish large CCs with modern infrastructure facilities. Accordingly, the revised minimum standards for CCs were issued on April 8, 2019 which stipulate that the strong rooms/vaults should have an area of at least 1500 sq. feet and processing capacity of 660,000 pieces of banknotes per day. For hilly/inaccessible areas, the CCs should have an area of the strong room/vault of at least 600 sq. feet and processing capacity of 210,000 pieces. In addition, the infrastructure at these CCs should be amenable to adoption of automation and implementation of IT solutions.

New Security Features for Banknotes

VIII.16 A Global Pre-Qualification Bid Notice was issued in July 2017 incorporating the “Make in India” clause (to the extent feasible) in terms of Government of India’s Public Procurement (Preference to Make in India) Order, 2017, for procurement of security features for banknotes. The Reserve Bank is actively involved in taking the process forward.

Banknotes in Mahatma Gandhi (New) Series (MGNS)

VIII.17 Banknotes under the Mahatma Gandhi (New) Series were launched in 2016, highlighting the cultural heritage and scientific achievements of the country. During the year, banknotes of ₹100 and ₹20 denominations of the same series were also issued (Table VIII.9).

Procurement of CVPS

VIII.18 During 2017-18, the Reserve Bank invited a global tender for replacing 50 old CVPS machines, and orders for procurement of these machines were placed. The process of supplying and installing the machines is underway and is expected to be completed by December 2019. Fifteen machines have already commenced operations in various offices.

Amendment of Note Refund Rules, 2009

VIII.19 In order to enable the public to exchange mutilated notes in the Mahatma Gandhi (New) series, which are smaller in

Table VIII.9: Introduction of Banknotes under Mahatma Gandhi (New) Series

Denomination (₹)	Motif-Theme	Base Colour	Dimension
1	2	3	4
100	Rani ki Vav	Lavender	66 mm*142 mm
20	Ellora Caves	Greenish Yellow	63 mm*129 mm

Source: RBI.

size compared to the earlier series, at bank branches and RBI offices, the Reserve Bank has made changes to its Note Refund Rules, 2009 (Box. VIII.1).

Implementation of the Recommendations of Committees on Currency Management Aspects

VIII.20 As announced in the Statement on Developmental and Regulatory Policies of

Box. VIII.1

Amendment of Note Refund Rules, 2009

In terms of Section 28 read with Section 58(1) of the RBI Act, 1934, the Central Board of the Reserve Bank of India, with the previous sanction of the central government, makes rules to refund the value of any mutilated or imperfect currency note as a matter of grace. Such notes are exchanged at RBI offices and bank branches in terms of Reserve Bank of India (Note Refund) Rules. The Reserve Bank made amendments to the Reserve Bank of India (Note Refund) Rules, 2009 in view of introduction of the new series of notes having different dimensions as compared to the earlier series notes and introduction of new denominations of banknotes of ₹2000 and ₹200. The Reserve Bank of India (Note Refund) Amendment Rules, 2018 was notified in the Gazette of India on September 6, 2018 and came into force with immediate effect. As per the new Note Refund Rule, there is a change in the minimum area of the single largest undivided piece of the note required for payment of full value for notes of ₹50 and above denominations.

The value of a mutilated note of less than ₹50 denomination may be refunded in full if the undivided area of the single largest piece of the note is as specified in Table 1.

Table 1: Minimum Area Required for Payment of Full Value of Notes Less than ₹50

Denomination (₹)	Length (cm)	Width (cm)	Area (cm^2)	Minimum area (cm^2) required for payment of full value*
1	2	3	4	5
1	9.7	6.3	61.11	31
2	10.7	6.3	67.41	34
5	11.7	6.3	73.71	37
10	13.7	6.3	86.31	44
10 (New MG Series)	12.3	6.3	77.49	39
20	14.7	6.3	92.61	47
20 (New MG Series)	12.9	6.3	81.27	41

*: Indicated as the next complete higher square centimetre after half of the area of the notes in a particular denomination.

The value of a mutilated note of ₹50 and above denomination may be refunded in full or half if the undivided area of the single largest piece of the note is as specified in Table 2.

Mutilated notes of ₹50 and above denomination composed of two pieces of the same note and the two pieces individually having an area equal to or more than 40 per cent of the total area of the note may be refunded for full value of the note.

Table 2: Minimum Area required for Payment of Full and Half Value of Notes of ₹50 and Above

Denomination (₹)	Length (cm)	Width (cm)	Area (cm^2)	Minimum area (cm^2) required for payment of full value@	Minimum area (cm^2) required for payment of half value*
1	2	3	4	5	6
50	14.7	7.3	107.31	86	43
50 (New MG Series)	13.5	6.6	89.10	72	36
100	15.7	7.3	114.61	92	46
100 (New MG series)	14.2	6.6	93.72	75	38
200	14.6	6.6	96.36	78	39
500	15.0	6.6	99.00	80	40
2000	16.6	6.6	109.56	88	44

@: Rounded off to the next complete higher square centimetre of 80 per cent of the area of the notes in a particular denomination.
*: Rounded off to the next complete higher square centimetre of 40 per cent of the area of the notes in a particular denomination.

February 7, 2018, a Task Force was formed to implement the recommendations of inter-agency committees, *viz.,* the High Level Committee on Currency Storage and Movement (HLCCSM) (Chairman: Shri N. S. Vishwanathan) and the Committee on Currency Movement (CCM) (Chairman: Shri Deepak Mohanty). Recommendations relating to standardisation of raw material procurement, quality assurance, note printing processes, security features *etc.,* across all presses and paper mills, made by a Group of Experts (Chairman: Shri C. Krishnan) were also pursued for implementation. Pursuant to the recommendations of the CCM, the Reserve Bank has issued circulars/instructions relating to minimum standards for engaging service providers for cash management activities, using lockable cassettes in ATMs, processing of notes on note sorting machines and standardisation of storage facilities in currency chests, timely reconciliation of transactions of ATM cash replenishment and increasing service charge on cash deposited with a large modern currency chest by non-chest branches to make the retail currency circulation system in India efficient and secure. Norms for opening large currency chests with modern facilities were also issued. The recommendations of the HLCCSM (Interim Report), CCM and Expert Group are in various stages of implementation.

4. Agenda for 2019-20

Introduction of Varnished Banknotes - Field Trial

VIII.21 The Reserve Bank will introduce varnished banknotes of ₹100 denomination on a field trial basis in order to increase the life of Indian banknotes.

Aiding Visually Impaired in Identification of Denomination of Banknotes

VIII.22 The Reserve Bank will develop a mechanism/device for aiding the visually impaired in identification of denomination of banknotes. Indian banknotes have several features which enable the visually impaired (colour blind, partially sighted and blind people) to identify them, *viz.,* intaglio printing and tactile mark, variable banknote size, large numerals, variable colour, monochromatic hues and patterns. Once the old series banknotes are withdrawn from circulation, identification of the new series banknotes will automatically become easy for the visually impaired. As indicated in the Statement on Developmental and Regulatory Policies of June 6, 2018, the Reserve Bank has embarked upon exploring alternative technological solutions to help the visually impaired in identifying the denomination of banknotes.

Other Areas of Focus

VIII.23 As part of the medium-term strategy framework, the scope for enhancing manufacturing capacities and indigenisation of banknotes, effecting improvements in the processing capabilities and logistics for efficient inventory management of currency and fine-tuning the models for estimation of demand for banknotes and coins are the areas which would receive increased focus during the year 2019-20.

*Bhartiya Reserve Bank Note Mudran Private Ltd. (*BRBNMPL)

VIII.24 BRBNMPL has set up an ink factory at Mysuru with an annual production capacity of 1,500 metric tonnes, which has started its commercial production from August 2018. Consequently, dry offset inks, Quickset Intaglio Inks (QSI), numbering inks and colour shifting inks used in the printing of banknotes are being manufactured at the Mysuru ink factory. This is a significant milestone achieved in the long journey towards indigenisation.

IX PAYMENT AND SETTLEMENT SYSTEMS AND INFORMATION TECHNOLOGY

The Reserve Bank has endeavoured to ensure that India has 'state-of-the-art' payment and settlement systems that are not just safe and secure, but are also efficient, fast and affordable, while recognising the need for continued emphasis on innovation, cyber security, financial inclusion, customer protection and competition. Going forward, Vision 2021 envisages to achieve a 'highly digital' and 'cash-lite' society through the goalposts of competition, cost, convenience and confidence, thus empowering every citizen with an access to a bouquet of e-payment options.

IX.1 The Reserve Bank's efforts have been to develop efficient and secure payment and settlement systems with a focus on their greater penetration through availability of user-friendly platforms at affordable cost. The Payment System Vision 2021 document also sets out the future path in this direction. Against this backdrop, following section covers developments in the areas of payment and settlement systems during the year and also takes stock of the implementation status of the agenda for 2018-19. Section 3 provides various measures undertaken by the Department of Information Technology (DIT) during the year along with the assessment of its performance against agenda set for 2018-19. These departments have also set out their agenda for 2019-20 in the respective sections.

2. DEPARTMENT OF PAYMENT AND SETTLEMENT SYSTEMS (DPSS)

IX.2 The Department of Payment and Settlement Systems (DPSS) continued to work towards the planned development of the payment systems as guided by the '*Payment and Settlement Systems in India: Vision 2018*'. This endeavour was driven by the goals of: *(a)* reducing paper-based clearing instruments; *(b)* steady growth in individual segments of the retail electronic payment systems such as the National Electronic Funds Transfer (NEFT), Immediate Payment Service (IMPS) and card transactions; *(c)* increasing the registered customer base for mobile banking; *(d)* launch of new products like Unified Payments Interface (UPI) and Bharat QR (BQR); *(e)* growth in acceptance infrastructure; and *(f)* accelerated use of *Aadhaar* in payment systems.

IX.3 On May 15, 2019, the Department released the Payment System Vision 2021 that envisages a two-pronged approach: (a) exceptional customer experience; and (b) enabling an eco-system which will result in this customer experience. The Vision aims at empowering payment system operators and service providers, and putting in place forward-looking regulation, supported by risk-focussed supervision. It encompasses the four elements—competition, cost, convenience, and confidence. Specific thrust areas like creating a regulatory sandbox and authorising new players have been incorporated for **competition** in the payment systems landscape. This is expected to achieve economy in **cost** for the customers. Freer access with availability of multiple payment system options anytime-anywhere is intended to ensure **convenience**; and a 'no-compromise' approach towards safety of payment systems would address security vulnerabilities and retain customer **confidence**.

Payment Systems

IX.4 The payment and settlement systems recorded a robust growth during 2018-19, with volume and value growing at 54.3 per cent and 14.2 per cent, respectively, on top of an increase of 44.6 per cent and 11.9 per cent, respectively, in 2017-18. The share of electronic transactions in the total volume of retail payments increased to 95.4 per cent in 2018-19, up from 92.6 per cent in the previous year (Table IX.1).

Electronic Payments

IX.5 Amongst the electronic modes of payments, the Real Time Gross Settlement (RTGS) system handled 137 million transactions valued at ₹1,357 trillion in 2018-19, up from 124 million transactions valued at ₹1,167 trillion in

Table IX.1: Payment System Indicators – Annual Turnover

Item	Volume (million)			Value (₹ billion)		
	2016-17	2017-18	2018-19	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
Systemically Important Financial Market Infrastructures (SIFMIs)						
1. RTGS	107.8	124.4	136.6	981,904	1,167,125	1,356,882
Total Financial Markets Clearing (2 to 4)	**3.7**	**3.5**	**3.6**	**1,056,173**	**1,074,802**	**1,165,510**
2. CBLO	0.2	0.2	0.1	229,528	283,308	181,405
3. Government Securities Clearing	1.5	1.1	1.1	404,389	370,364	509,316
4. Forex Clearing	1.9	2.2	2.4	422,256	421,131	474,790
Total SIFMIs (1 to 4)	**111.5**	**127.9**	**140.2**	**2,038,077**	**2,241,927**	**2,522,392**
Retail Payments						
Total Paper Clearing (5+6)	**1,206.7**	**1,170.6**	**1,123.8**	**80,958**	**81,893**	**82,461**
5. CTS	1,111.9	1,138.00	1,111.7	74,035	79,451	81,536
6. Non-MICR Clearing	94.8	32.6	12.1	6,923	2,442	925
Total Retail Electronic Clearing (7 to 12)	**4,222.9**	**6,382.3**	**12,466.7**	**132,324**	**193,113**	**267,515**
7. ECS DR	8.8	1.5	0.9	39	10	12.6
8. ECS CR	10.1	6.1	5.4	144	115	132.35
9. NEFT	1,622.1	1,946.4	2,318.9	120,040	172,229	227,936
10. IMPS	506.7	1,009.8	1,752.9	4,116	8,925	15,903
11 UPI	17.9	915.2	5,353.4	69	1,098	8,770
12. NACH	2,057.3	2,503.3	3,035.2	7,916	10,736	14,762
Total Card Payments (13 to 15)	**5,450.1**	**8,207.6**	**10,781.2**	**7,421**	**10,607**	**14,097**
13. Credit Cards	1,087.1	1,405.2	1,762.6	3,284	4,590	6,033
14. Debit Cards	2,399.3	3,343.4	4,414.3	3,299	4,601	5,935
15. PPIs	1,963.7	3,459.0	4,604.3	838	1,416	2,129
Total Retail Payments (5 to 15)	**10,879.7**	**15,760.5**	**24,371.6**	**220,703**	**285,613**	**364,073**
Grand Total (1 to 15)	**10,991.2**	**15,888.4**	**24,511.9**	**2,258,780**	**2,527,540**	**2,886,465**

Notes: 1. RTGS system includes customer and inter-bank transactions only.
2. Settlement of CBLO, government securities clearing and forex transactions is through the Clearing Corporation of India Ltd. (CCIL). Government Securities include outright trades and both legs of repo transactions and Tri-party repo transactions.
3. CCIL discontinued operations of CBLO from November 5, 2018. Tri-party Repo under Securities segment was operationalised by CCIL on November 5, 2018.
4. The figures for cards are for transactions at point of sale (POS) terminals only which include online transactions.
5. Figures in the columns might not add up to the total due to rounding off of numbers.

Source: RBI.

the previous year. At the end of March 2019, the RTGS facility was available through 142,975 branches of 216 banks. NEFT system handled 2.3 billion transactions valued at around ₹228 trillion in 2018-19, up from 1.9 billion transactions valued at ₹172 trillion in the previous year, registering a growth of 19.1 per cent in terms of volume and 32.3 per cent in terms of value. At the end of March 2019, the NEFT facility was available through 144,927 branches of 209 banks, in addition to a large number of business correspondent (BC) outlets.

IX.6 During 2018-19, the number of card payment transactions carried out through credit cards and debit cards was 1.8 billion and 4.4 billion respectively. Prepaid Payment Instruments (PPIs) recorded a volume of about 4.6 billion transactions valued at ₹2,129 billion.

IX.7 The acceptance infrastructure also witnessed substantial growth, the number of point of sale (POS) terminals increased by 21 per cent to 3.72 million at end-March 2019 from 3.08 million at end-March 2018. However, during the same period, the number of ATMs witnessed a decline from 222,247 to 221,703.

Authorisation of Payment Systems

IX.8 Digital payments were facilitated by 82 authorised payment system operators (decreased from 84 in June 2018) comprising PPI issuers, cross-border money transfer service providers, white label ATM (WLA) operators, Trade Receivables Discounting System (TReDS) operators, ATM networks, instant money transfer service providers, card payment networks and Bharat Bill Payment Operating Units (BBPOUs), besides the Clearing Corporation of India Ltd. (CCIL) and the National Payments Corporation of India (NPCI). The number of non-bank entities authorised for operating PPIs decreased to 47 from 49 in the previous year due to voluntary surrender of authorisation by them. Up to end-June 2019, 61 banks were granted approval to issue PPIs, while 490 banks were permitted to provide mobile banking services.

Agenda for 2018-19: Implementation Status

IX.9 In the ‘Payment and Settlement Systems in India: Vision 2018’, the Department had identified four strategic pillars for achieving its vision.

Responsive Regulation

Regulation of Payment Gateway Service Providers and Payment Aggregators

IX.10 In November 2009, the Reserve Bank had issued directions regarding maintenance of nodal accounts of intermediaries like payment gateway providers and payment aggregators. In the ‘Payment and Settlement Systems:Vision 2018’, the Reserve Bank had indicated that, given the increasing role and importance of such entities, these guidelines would be revised. Accordingly, the Reserve Bank has been examining the need and feasibility of regulating Payment Gateway Service Providers and Payment Aggregators. In the Statement on Developmental and Regulatory Policies of February 7, 2019, it was indicated that a discussion paper on comprehensive guidelines covering payments related activities of these entities will be placed in the public domain for seeking comments and feedback from the stakeholders.

Policy Framework for Central Counterparties (CCPs)

IX.11 In order to ensure that the Central Counterparties (CCPs) function in an efficient and effective manner, the Reserve Bank issued ‘Directions for Central Counterparties’ laying out: (i) directions on governance of domestic CCPs; (ii) directions on net worth requirements and ownership of CCPs; and (iii) directions for recognition of foreign CCPs. The directions are applicable to domestic CCPs authorised to operate in India under the Payment and Settlement Systems Act, 2007, CCPs seeking authorisation from the Reserve Bank and foreign CCPs seeking recognition from the Reserve Bank.

Review of White Label ATMs (WLA) Guidelines

IX.12 In order to address the challenges faced by the White Label ATM (WLA) operators and to work towards smoother WLA operations, a comprehensive review of the WLA guidelines was undertaken, and accordingly, a circular on 'White Label ATMs (WLAs) in India - Review of Guidelines' was issued on March 7, 2019. It permits all White Label ATM Operators (WLAOs) to buy wholesale cash directly from the Reserve Bank (Issue Offices) and Currency Chests, to source cash from any scheduled bank, to offer bill payment and interoperable cash deposit services subject to technical feasibility and certification by NPCI, and display advertisements pertaining to non-financial products/services anywhere within the WLA premises (except the main signboard). Permission granted to WLAOs earlier to source cash from retail outlets has now been repealed. Banks may issue co-branded ATM cards in partnership with the authorised WLAOs and may extend the benefit of 'on-us' transactions to their WLAs as well.

Robust Infrastructure

Adoption of ISO for Messaging in NEFT

IX.13 The Structured Financial Messaging System (SFMS) is used in RTGS and NEFT systems. The Next Generation Real Time Gross Settlement (NG-RTGS) system uses the ISO 20022 messaging standard in SFMS. In line with the vision to build capability to process transaction of one payment system in another payment system, the Reserve Bank is examining the feasibility and timeline to adopt the ISO 20022 standard in the SFMS for NEFT as well. This will enhance resilience by building necessary capability to process NEFT transactions in the RTGS system, and *vice versa*.

Effective Supervision

Framework for Testing Resilience

IX.14 With the introduction of alternate modes of electronic payments, both for financial markets as also businesses and individuals, the resilience of payment systems has gained importance. In this context, a framework to test the resilience of both retail and large value systems in the country is being prepared.

Collection of Data on Frauds in Payment Systems

IX.15 Data on frauds are currently collected from payment system operators. There is a need to monitor the types of frauds that may be taking place in various payment systems in order to further strengthen the confidence in the payment systems and minimise instances of frauds. Accordingly, a comprehensive framework for collection of data on frauds in payment systems would be drawn up in consultation with the industry.

Oversight Framework for Authorised Payment Systems

IX.16 The policy framework for oversight of payment systems was approved by the Board for Regulation and Supervision of Payment and Settlement Systems (BPSS) in September 2009. Following a review of the policy, the draft oversight framework for existing and new payment systems prescribing the intensity of oversight proportionate to the systemic risks, or system-wide risks posed by the payment system or operator or participant, has been prepared. The framework would cover resilience of payment infrastructure and critical service providers. In line with the proposed framework, the Department had streamlined the procedure of inspection of non-bank PPIs, covering, *inter alia,* inspection schedules, frequency, coverage and drafting of inspection reports, and risk categorisation. Furthermore, the frequency of on-site inspection of the CCIL was changed from 2 years to 1 year.

Data Reporting by Payment System Operators (PSOs) in XBRL Format

IX.17 The Department has completed testing of most of the returns developed in eXtensible Business Reporting Language (XBRL). The user credentials were created for bank and non-bank entities and they were advised to test the submission of returns in the XBRL User Acceptance Testing (UAT) platform. The Department is closely engaged in ensuring smooth transition to XBRL reporting. Once the reporting in XBRL platform stabilises, it is envisaged to migrate the submission of all payment system returns to the XBRL platform.

Customer Centricity

Customer Surveys

IX.18 A survey on Retail Payment Habits of Individuals (SRPHi) in six cities, *viz.,* Bengaluru, Chennai, Delhi, Guwahati, Kolkata, and Mumbai, covering around 6,000 respondents, was undertaken by the Department of Statistics and Information Management (DSIM) on behalf of DPSS. The objective of the survey was to gauge the retail payment habits of individuals with a focus on their awareness, usage and understanding of risks of digital payments. Some of the important findings of this survey are - 96.3 per cent of respondents were aware about digital payments; the awareness was higher with higher education level and among those having bank accounts; cash was most preferred mode of payment followed by digital mode mainly debit card; and with reference to risk understanding, it was observed that 8 per cent of respondents shared their passwords with others occasionally, 45 per cent of the participants admitted to have never changed their password / PIN / OTP and another 6 per cent did so only when prompted.

Framework to Limit Customer Liability for Non-bank Authorised PPI Issuers

IX.19 The Reserve Bank had earlier limited customer liability for unauthorised electronic banking transactions carried through Scheduled Commercial Banks (including RRBs), Small Finance Banks, Payment Banks, Co-operative Banks and Non-bank Credit Card Issuers. This framework was extended to unauthorised electronic payment transactions involving PPIs, issued by authorised non-bank PPI issuers with effect from March 1, 2019. These guidelines prescribe the limits up to which a customer may bear liability against contributory frauds, negligence/ deficiency on part of non-bank PPI issuer, third party breach where the deficiency lies with neither the issuer nor the customer, and scenarios in which the loss is due to negligence of customer. It specifies the time limit for reporting unauthorised electronic transactions and prescribes the liability accordingly. These guidelines will strengthen the customer grievance redressal framework and build trust in digital payments.

Other Developments

Tokenisation - Card Transactions

IX.20 In January 2019, the Reserve Bank issued a circular on ‘Tokenisation—Card Transactions’, wherein all authorised card payment networks were permitted to offer tokenisation services (Box IX.1), irrespective of app provider, use case and token storage mechanism, subject to certain conditions.

Box IX.1
Tokenisation

The Reserve Bank has been encouraging innovation in payment systems and simultaneously focusing on the safety and security of individual transactions. Cards constitute an important form of payment: credit and debit cards are used by a large section of public. Enhanced safety and security of transactions performed using these cards is achieved by use of the Additional Factor of Authentication (AFA), generation of transaction alerts *via* SMS/e-mail, and the like.

While performing a card transaction, a customer either enters the card details manually (for e-commerce transactions) or swipes/dips the card at a Point of Sale (POS) terminal. In the process, the card holder's data could be at risk and susceptible to misuse by fraudsters. 'Tokenisation', is a process whereby a card's 16-digit Primary Account Number (PAN) is replaced with a unique alternate code (called as 'token') and a payment transaction is performed using the token, instead of the actual card data being sought or captured at the merchant's end. This enhances safety and security of the card transaction.

On January 8, 2019, the Reserve Bank has permitted all authorised card networks to offer tokenisation services, irrespective of app provider and use case, subject to certain conditions and responsibilities listed therein. There is no relaxation in the extant instructions for AFA. Registration for tokenisation service is purely voluntary for customers and they need not pay any charges for availing this service. For the present, this facility shall be offered through mobile phones/ tablets. The circular provides a framework related to tokenisation, de-tokenisation service; certification of systems of card issuers/acquirers, token requestors and their app, *etc.*; registration by customer; secure storage of tokens; customer service and dispute resolution; and safety and security of transactions.

Review of Master Direction on Issuance and Operation of PPIs in India

IX.21 Based on requests from various stakeholders regarding the problems being faced in undertaking *Aadhaar* based know your customer (KYC), the timeline for KYC completion of minimum detail PPIs has been extended in February 2019 from 12 to 18 months.

Prepaid Payment Instruments (PPIs) - Guidelines for Interoperability

IX.22 Guidelines for PPI interoperability were issued on October 16, 2018 in order to enable the PPIs issued by banks and authorised non-bank entities to be used across merchants on-boarded for other payment systems as also for funds transfer between PPIs and bank accounts. Interoperability for PPIs issued in the form of wallets shall be implemented through UPI while for PPIs issued in the form of cards, interoperability shall be through the authorised card networks.

EMV Chip Cards and their Processing at ATMs/ micro-ATMs

IX.23 The Reserve Bank had given instructions to banks in August 2015 to replace all existing magnetic stripe only cards with Europay, Mastercard and Visa (EMV) Chip and PIN based cards by end-December 2018, and also in May 2016 to enable EMV Chip based processing at ATMs/micro-ATMs. These measures have been prescribed for enhancing safety and security of card transactions. Banks reported significant progress in replacing the magnetic stripe cards. ATMs/micro-ATMs are also being enabled for processing of EMV Chip based transactions.

Guidelines for Trade Receivables Discounting System (TReDS)

IX.24 The TReDS provides an institutional mechanism for facilitating the financing of trade receivables of MSMEs from corporate and other buyers, including Government Departments and Public Sector Undertakings (PSUs), through multiple financiers. Earlier, only banks and NBFC–

Factors were allowed to participate as financiers in TReDS. This pool of financiers was expanded in July 2018 with the addition of other financial institutions as permitted by the Reserve Bank.

National Electronic Toll Collection (NETC)

IX.25 National Electronic Toll Collection (NETC) is an interoperable electronic toll collection system (multiple issuers-multiple acquirers system) which allows customers to use NETC tags to pay toll fares by linking these tags to any of their bank accounts (savings/current/ prepaid account). During 2018-19, the Reserve Bank granted approval to the NPCI for operating NETC.

Policy Paper on Authorisation of New Retail Payment Systems

IX.26 In its Statement on Developmental and Regulatory Policies of June 6, 2018, the Reserve Bank had announced that it would encourage more players to participate and promote pan-India payment platforms and would bring out a policy paper for public consultation. The objective was to minimise concentration risk in the retail payment market from a financial stability perspective and to give a fillip to innovation and competition. Accordingly, on January 21, 2019, the Department placed a policy paper on 'Authorisation of New Retail Payment Systems' on the Reserve Bank's website and invited public comments by February 20, 2019. Based on comments/feedback received, guidelines in this regard shall be released.

Committee on Deepening of Digital Payments

IX.27 On January 8, 2019, the Reserve Bank had constituted a High-Level Committee on Deepening of Digital Payments (Chairman: Shri Nandan Nilekani) with a view to encourage digitisation of payments and enhance financial inclusion through digitisation. The terms of reference of the Committee included suggesting a medium-term strategy for deepening of digital payments. The Committee has submitted its report to the Reserve Bank in May 2019. The Reserve Bank has initiated action on the recommendations of the report.

Real Time Gross Settlement (RTGS) System - Implementation of Positive Confirmation

IX.28 The NEFT system sends confirmation to remitters regarding the completion of funds transfer, providing an assurance to the remitter that the funds have been successfully credited to the beneficiary's account. The Reserve Bank issued guidelines in November 2018 for implementation of positive confirmation in the RTGS system by mid-January 2019 in order to provide the same confidence to customers using the RTGS system for funds transfer. The positive confirmation feature in RTGS is initially available for member banks wherein both the remitter and beneficiary banks access RTGS system through thick client interface/SFMS member interface and the same would subsequently be enabled for member banks accessing RTGS through other channels.

Inspection of CCIL

IX.29 As directed by the BPSS, the Department instituted the process of inspecting the CCIL on an annual basis. Accordingly, the on-site inspection was undertaken in October 2018 against the 24 Principles for Financial Market Infrastructures (PFMI) using the assessment methodology template of Committee on Payments and Market Infrastructures (CPMI) - International Organisation of Securities Commissions (IOSCO) [CPMI – IOSCO]. CCIL was found to have 'Observed' 18 principles and 'Broadly Observed' 4 principles while 2 principles were 'Not Applicable' to it.

Extension of RTGS Customer Cut-off timings

IX.30 In view of the increasing customer demand and keeping in mind the industry preparedness, the Reserve Bank extended the timings for customer transactions in RTGS from 4:30 pm to 6:00 pm with effect from June 1, 2019. The final cut-off timings for RTGS, however, remained unchanged.

Benchmarking India's Payment Systems

IX.31 The Reserve Bank undertook an exercise to benchmark India's Payment Systems against payment systems in a mix of advanced economies, Asian economies and the BRICS nations to highlight the strengths and weaknesses of the payments ecosystem in India relative to comparable payment systems and usage trends in major countries. The analysis was attempted under 41 indicators covering 21 broad areas including regulation, oversight, payment systems, payment instruments, payment infrastructure, utility payments, government payments, customer protection and grievance redressal, securities settlement and clearing systems and cross border personal remittances.

National Electronic Funds Transfer (NEFT) and Real Time Gross Settlement (RTGS) Systems – Waiver of Charges

IX.32 Reserve Bank reviewed the various charges levied by it on the member banks for transactions processed in the RTGS and NEFT systems. In order to provide an impetus to digital funds movement, it has been decided that with effect from July 1, 2019, processing charges and time varying charges levied on banks for outward transactions undertaken using the RTGS system, as also the processing charges levied for transactions processed in the NEFT system, will be waived by the Reserve Bank. The banks have been advised to pass on the benefits to their customers for undertaking transactions using the RTGS and NEFT systems.

Agenda for 2019-20

Revised Framework for ATM Charges and Fees

IX.33 On the basis of requests received from various stakeholders for rationalisation of the number of free ATM transactions as also the charges on usage of ATMs beyond the mandatory free transactions, the Reserve Bank has constituted a Committee in June 2019 to examine the entire gamut of ATM charges and fees.

Framework for Harmonising Turnaround Time (TAT) for Resolution of Customer Complaints and Compensation

IX.34 Retail electronic payment transactions have been showing a healthy growth over the years. With increasing use of electronic products, there is also a spurt in customer complaints. It is observed that the time limit in resolving customer complaint varies across payment systems. However, very few payment systems have a penal provision that forces entities to offer prompt redressal of the customer complaints. In order to improve customer services, it is necessary to have harmonisation of the response time for reversal of a failed transaction. To begin with, the Reserve Bank will examine the Turnaround Time (TAT) for failed transactions across various payment systems so as to ensure reversal of failed transactions within a specified time and to create a framework for compensation to customer for delay in reversal of failed transactions, with or without complaint from the customer.

Availability of NEFT on a 24x7 Basis

IX.35 The Reserve Bank is the owner and operator of the NEFT system that operates in half-hourly batches facilitating fund transfers. In order to enhance the usage of the payment systems and improve customer convenience, the Reserve Bank would examine availability of NEFT on a 24x7 basis to facilitate fund transfer needs beyond the banking hours.

Global Outreach of Payment Systems

IX.36 There is scope for enhancing global outreach of the payment systems, including remittance services, through active participation and co-operation in international and regional fora by collaborating and contributing to standard setting. In this connection, the Reserve Bank will facilitate in establishing network-to-network connectivity between financial switches and ensuring smooth transaction flows, security certification, *etc*. between Royal Monetary Authority of Bhutan and the NPCI.

System Capacity and Scalability

IX.37 Payment systems have come a long way, and there is an increasing expectation that the systems should be robust and resilient. Keeping this in mind, a framework for an ongoing assessment of the performance of retail payment systems would be designed. The Reserve Bank will also explore the need for prescribing explicit exit criteria of payment systems and payment system operators based on a transparent point-of-arrival metrics.

E-Mandates / Standing Instructions

IX.38 The Reserve Bank will consider implementation of e-mandates / standing instructions for retail payment systems, subject to customer protection and adequate safeguards like authenticating payment instrument registration, mandating transaction limits, segments, *etc*.

Security Standards and Information System (IS) Audit

IX.39 In view of the requirement for further strengthening the integrity of payment systems, the Reserve Bank will examine the need for framing security benchmarks for mobile banking and broadening the scope of IS Audit of regulated entities.

3. DEPARTMENT OF INFORMATION TECHNOLOGY (DIT)

IX.40 The Department of Information Technology (DIT) continued its endeavour to channelise information and communication technology (ICT), in an efficient and cost-effective manner to ensure smooth functioning of the critical and systemically important payment and settlement systems in the country. It also strove to adopt the best global practices in the area for developing effective and efficient IT solutions for the Reserve Bank.

IX.41 In a situation in which product life cycles are becoming shorter, robust technology platforms for ensuring faster computation, efficient storage and also faster communication bandwidth are essential. Effective IT control practices and monitoring systems need to be in place to avoid breakdowns in internal control and oversight, to manage internal and external threats, and to increase the effectiveness of IT processes in the Reserve Bank.

Agenda for 2018-19: Implementation Status

IX.42 In last year's Annual Report, the DIT had undertaken certain objectives in pursuit of its mission. Key among them were improvement in the currency management system, smooth reconciliation of GST transactions, enhanced enterprise access management system, and concerted efforts to strengthen cyber security.

e-Kuber for Goods and Services Tax (GST)

IX.43 During the year, the Memorandum of Errors (MoE) - an automated reconciliation mechanism for Goods and Services Tax (GST) transactions was tested to pave the way for no reconciliation errors.

Currency Management System

IX.44 The Regional Office (RO) module - Currency Management (CyM) in e-Kuber replaced the prevailing Integrated Computerised Currency Operations and Management System (ICCOMS). The enhancement to e-Kuber allows real time accounting of notes and coins in circulation. As the Department of Currency Management (DCM), Regional Offices, Link Offices (LOs) and Currency Chests (CCs) are now on a single platform, integrated workflow management with single point of entry reduces reconciliation issues with real time accounting and inventory management. The new system allows the Reserve Bank to have a near real time view of the balances in currency chests and facilitates an efficient management of the currency through automation of its processes. Going forward, the system would also have a linkage with note printing presses and provision to track currency in transit.

Migration of Real Time Gross Settlement (RTGS) to the Latest Technology Platform

IX.45 Real Time Gross Settlement (RTGS), a systemically significant payment system and critical Financial Market Infrastructure (FMI), has exponentially grown, in terms of the number of participants and the volume of transactions. The system caters to around 220 participants and is processing, on an average, 0.45 million transactions worth ₹10 trillion each day. RTGS was migrated to the latest technology platform along with state-of-the-art software stack to be in sync with the change in business needs and to equip the system with up-to-date technology. This has ensured future proofing of the application in the form of higher scalability, performance and security. The migration of financial messaging infrastructure of the country *i.e.,* Structured Financial Messaging System (SFMS) to a robust platform has ensured resilience and has enhanced security in the payment and settlement ecosystem. Currently, SFMS is managed by Indian Financial Technology and Allied Services (IFTAS). The Department had undertaken organisational restructuring of IFTAS during the year (Box IX.2).

Enterprise Access Management System (EAMS)

IX.46 A new enhanced Enterprise Access Management System (EAMS), including visitor and vendor management, is in the advanced stage of implementation at all the offices of the Reserve Bank. The system will also be integrated with *Samadhan* for marking attendance of its employees.

ISO 27001 Information Security Management System (ISMS) Certification

IX.47 The introduction of IT based applications has facilitated the running of business operations in a smooth and efficient manner but at the same time, it has also brought in a whole new set of challenges on security, availability, confidentiality

Box IX.2

Organisational Restructuring of Indian Financial Technology and Allied Services (IFTAS)

Indian Financial Technology and Allied Services (IFTAS) was set up by the Institute for Development and Research in Banking Technology (IDRBT) in February 2015 as a non-profit company under Section 8 of the Companies Act, 2013 in pursuance of the recommendation of the Rangarajan Committee (2009). IFTAS provides critical infrastructure services (such as INFINET and SFMS for Inter-bank/GST/ governments (central and states payment and receipt transactions)) to the Reserve Bank, other banks and co-operative societies. IFTAS also functions as service provider for NEFT applications developed by the Tata Consultancy Services (TCS). The Reserve Bank has acquired 100 per cent equity shares of IFTAS through its authorised representatives.

and integrity of the information stored within the information systems. To address these challenges, the Reserve Bank has undertaken several initiatives, ensuring that the core elements of convenience and efficiency are balanced with safety and security of the IT systems. ISO 27001 Certification ensures administration and protection of key ICT infrastructure of the Reserve Bank in consonance with globally accepted norms and instils confidence in the information system (IS) architecture developed within the Reserve Bank. The Department and three data centers of the Reserve Bank are ISO 27001:2013 certified effective from August 6, 2019.

e-Kuber for Custom Duties and Cess

IX.48 The Reserve Bank has undertaken integration of e-Kuber with Indian Custom's Electronic Commerce/Electronic Data Interchange (EC/EDI) Gateway - Indian Custom EDI Gateway (ICEGATE) - of Central Board of Indirect Taxes and Customs (CBIC). The integration ensures automatic reconciliation through Common Portal Identification Number (CPIN) matching and is live from July 1,2019.

Cyber Resilience and Development of Cyber-Security Culture

IX.49 Cyber resilience is the ability to prepare for respond to and recover from cyber-attacks. In this context, a Cyber Security Playbook (CSP) provides a clear understanding of the incident response plan and responsibilities of key persons towards cyber-security standards and accepted practices before, during, and after a cyber-security incident. CSP aims to align IT and business continuity plan (BCP) and define specific communication touch points, including periodic situation updates, response options to proactively mitigate impacts of any attempted/successful exploits. The Department has been undertaking several steps to foster a culture of cyber-security within the Reserve Bank.

Agenda for 2019-20

IX.50 The Reserve Bank will integrate and consolidate the upgraded enterprise architecture application. The Enterprise Platform as a strategy leads to consolidation and integration of multiple applications in the IT landscape of the Reserve Bank. This will lead to efficient use of IT infrastructure ensuring optimisation of operations, and a closer alignment between ICT deliverables and business requirements. The Reserve Bank will endeavour for IT security based on adopting a zero-trust framework.

e-Kuber for Defence Pensioners

IX.51 The Reserve Bank will integrate a Comprehensive Pension Package (CPP) for defence pensioners with e-Kuber and facilitate automatic credit of monthly pension through the standardised version of e-payment module in e-Kuber. The initiative would benefit around 30 lakh defence pensioners, with an addition of 80,000 new pensioners each year.

Next-Gen National Electronic Fund Transfer (NEFT)

IX.52 NEFT, a systemically significant payment system and critical Financial Market Infrastructure (FMI) of the country, is operated and maintained by the Reserve Bank since its inception. The next generation NEFT will lead to higher degree of automation and state-of-the-art features ensuring conformity to global standards. Introduction of ISO 20022 messaging format in NEFT would standardise messages across the payment and settlement systems and ensure interoperability between payment systems. The Reserve Bank will consolidate its network and storage for easier manageability and monitoring.

X COMMUNICATION, INTERNATIONAL RELATIONS, RESEARCH AND STATISTICS

The Reserve Bank strengthened its communication channels, improved research, statistics and information management and deepened international relations during the year. Efforts were also made for effective cash management on behalf of state governments and the management of foreign exchange reserves. Legislative initiatives/ amendments, were also pursued during the year to fortify the legal framework for a sound and efficient financial sector in the economy.

X.1 This chapter discusses the implementation status of the annual agenda of 2018-19 and other important developments in the areas of research, statistics, communication, international relations, banking services, forex reserves management, and the legal infrastructure for the financial system. It also outlines the agenda set for 2019-20 in these functional areas. Section 2 presents major initiatives of the Reserve Bank with regard to its communication strategy and processes. Section 3 covers the activities of the Strategic Research Unit. Section 4 discusses the Reserve Bank's international relations, including with international organisations and multilateral bodies. Section 5 dwells on the activities of the Reserve Bank as the banker to governments and banks. Section 6 reviews the conduct of foreign exchange reserves management with focus on safety, liquidity and returns. Section 7 sets out research activities of the Reserve Bank, including statutory reports and frontline research publications. Section 8 profiles the activities of the Department of Statistics and Information Management. Section 9 presents the activities of the Legal Department.

2. COMMUNICATION PROCESSES

X.2 The Reserve Bank's Department of Communication (DoC) strengthened two-way communication with the public, anchored by transparency, timeliness and credibility. These strategic objectives guided the dissemination of policy developments/initiatives and their rationale through multiple tools and channels as well as tried to obtain continuous feedback on the policies and initiatives.

Agenda for 2018-19: Implementation Status

The Website

X.3 In its continuous endeavour to make the Reserve Bank's website (www.rbi.org.in) user-friendly, the search functionality on the website was strengthened to facilitate user access. Areas about research on the website were streamlined and placed in a single 'Research' tab. Mail box clarification services were also rationalised. Up to June 30, 2019, the Reserve Bank's app available for Android and iOS platforms enabled 190,580 downloads on the Play Store and 19,550 downloads on the App Store. The Reserve Bank's Twitter account had 430,000 followers and its YouTube channel had 30,000 subscribers by that date.

Monetary Policy Communication

X.4 Under the new monetary policy framework introduced in October 2016, the Reserve Bank communicated the bi-monthly resolutions of the monetary policy committee (MPC) through a press release, followed by a press conference which was disseminated through YouTube as well as by live streaming on the Reserve Bank's website and business television channels. During the year, three press conferences were also broadcast live on Twitter. Teleconferences with researchers and analysts are also conducted on the day of the policy announcement, with audio recording feeds and transcripts uploaded on the Reserve Bank's website. The minutes of MPC meetings are uploaded on the website on the 14th day after every meeting of the MPC, in pursuance of Section 45ZL of the RBI Act, 1934.

Mint Street Memos (MSMs)

X.5 MSMs initiated on August 11, 2017 are in the form of brief reports and analyses on contemporary and relevant topics for public consumption. Twelve MSMs were published on the website by June 2018. In the current year, since July 2018 seven MSMs were published (till June 2019).

Workshops for Regional Media

X.6 During the year, the DoC conducted four workshops at Ahmedabad, Kolkata, Ranchi and Bhopal as a part of its awareness programme for regional media across the country. Structured in the form of interactive sessions on central banking functions, the range of topics covered in the workshops included monetary policy, regulation and supervision of banks, customer education and protection, currency management, payment and settlement systems, structure of the Reserve Bank's website, the data warehouse of the Reserve Bank called 'Database on Indian Economy (DBIE)', foreign exchange management, press releases and media relations, and local issues of relevance.

Public Awareness Campaign

X.7 During 2018-19, the Reserve Bank undertook a multi-media multilingual public awareness initiative called *RBI Kehta Hai* to educate the public about banking regulations and practices (Box X.1).

The RBI Museum

X.8 The RBI Museum located at 6, Council House Street, Kolkata was opened to the public on March 11, 2019. It evinced considerable public interest as was evident from the steady

Box X.1

Public Awareness Campaign

The public awareness campaign of the Reserve Bank started in 2017 and gathered steam in 2018. Advertisements on Basic Savings Bank Deposit Account (BSBDA), Safe Digital Banking, Limited Liability and Ease of Banking for Senior Citizens were released in popular events such as the Indian Premier League (IPL), the 2018 FIFA World Cup, Asian Games, Kaun Banega Crorepati (KBC), Pro Kabbadi League, Pro Badminton League and India-New Zealand One Day International.

A film on BSBDAs explains how opening of this account obviates the requirement of minimum balance. A film on Safe Digital Banking cautions the public about sharing card and PIN details while carrying out digital transactions. Another film on Limited Liability explains the recourse available in the event of card fraud. A film on 'Ease of Banking for Senior Citizens' elucidates facilities like doorstep banking available for senior citizens. These films, using cricketers and badminton players, who are employees of the Reserve Bank, were widely disseminated in media advertisements.

A unique feature of the public awareness campaign is the missed call element: upon giving a missed call to the number 14440, the caller will receive information through a pre-recorded Interactive Voice Response System (IVRS), avoiding the miscommunication or over-communication of a call centre approach. In the non-Hindi speaking regions, mobile phone subscribers receive messages in English and regional languages (Table 1).

(Contd...)

Table 1: The Campaign Reach (SMSs sent during the year)

(in million)

Details	SMS 1 (June 14 to July 9, 2018)	SMS 2 (August 1 to August 18, 2018)	SMS 3 (August 30 to September 13, 2018)	Ease of Banking for Senior Citizens (February 17 to March 19, 2019)	SMS 4: Banking Ombudsman Scheme (June 10 to June 28, 2019)	Total
1	2	3	4	5	6	7
Total Messages Sent	553.57	575.50	606	-	682.31	2,417.38
Total Messages Delivered	408.79	420.84	425.66	-	412.63	1,667.92
Total Missed Calls Received	5.22	3.31	2.58	0.25	2.71	14.07
Total Successful Call Backs	3.69	2.32	1.79	0.15	1.14	9.09

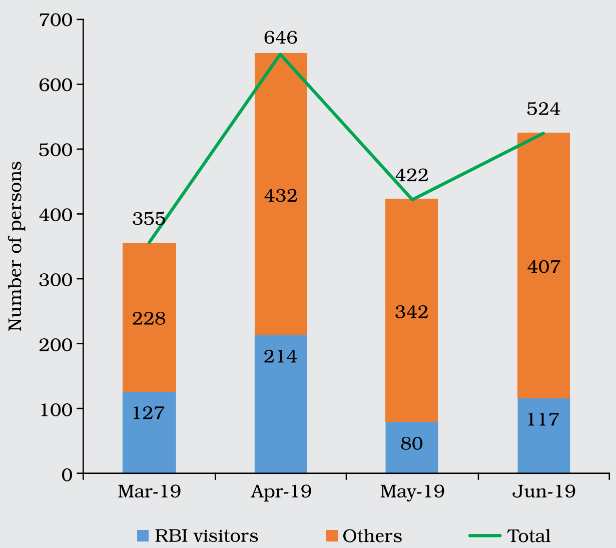
- : No SMS was sent

Note:
1. SMS 1: Fraudulent transactions in your bank account? Limit your loss. Notify your bank immediately. For more details, give a missed call to 14440.
2. SMS 2: Banking electronically? Register yourself for SMS/email alerts and immediately inform your bank in case of any fraud. To know more, give a missed call on 14440.
3. SMS 3: Online Banking? Only use sites with https; avoid banking on free networks; regularly change and do not share password/PIN. For more, give missed call on 14440.
4. SMS 4: Complaint for deficiency in service by bank unresolved for a month? Visit Banking Ombudsman/ bankingombudsman@rbi.org.in for help. Give a miss call to 14440.

Source: RBI.

flow of visitors (Chart X.1). The museum[1] is replete with fascinating stories of money, gold and the genesis of the Reserve Bank, succinctly told through artefacts and interactive exhibits. The mezzanine floor of the museum houses an interactive gaming zone, which purveys financial learning messages to the younger visitors through simple games, like 'snakes and ladders' and 'carrom'.

Chart X.1: RBI Museum Visitors



Source: RBI.

Agenda for 2019-20

X.9 The DoC will continue to hold workshops for national and regional media on important regulatory and banking-related issues in regional centres not covered in the previous year, and in metropolitan centres like Mumbai and Delhi. The website will be made more informative and easy to navigate by modifying certain features and by adding new ones.

X.10 The public awareness campaign is expected to grow further during 2019-20, using 360 degree mass media awareness programmes.

[1] Website of RBI Museum (https://therbimuseum.rbi.org.in/).

Going forward, popular social media channels such as Twitter and Facebook will be used for two-way communication to ensure wider dissemination, lengthening of the life of each campaign and to engage with the youth.

X.11 Town Hall events in which economic editors meet with the top management will be conducted during 2019-20. The Reserve Bank's Communication Policy would also be revised during the course of the year.

3. STRATEGIC RESEARCH UNIT

X.12 The Strategic Research Unit (SRU), which was set up in February 2016, is vested with the responsibility of conducting research across various verticals of the Reserve Bank. During the year, SRU studied key macroeconomic indicators, conducted research on various issues relevant to the Reserve Bank, and presented their findings to the top management. Researchers from this unit also made regular presentations of their research findings in national and international seminars and published in reputed journals.

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X.13 SRU regularly presents a bi-monthly economic monitor in the Monetary Policy Strategy (MPS) meetings. This monitor covered a coincident economic indicator for India and provided inputs on financial markets and external sector. The Unit also initiated short-term research in various areas that was published as box items in the Reserve Bank's Annual Report and MSMs. Some of the MSMs were, 'The Impact of Crude Price Shock on India's Current Account Deficit, Inflation and Fiscal Deficit' and 'What Drives Automobile Sales? It's not Credit'.

X.14 SRU also conducted several mid-term projects on issues related to the Union Budget, effect of minimum support price on inflation, external sector vulnerability, the effects of global headwinds on trade and foreign investments, price deficiency payment on crop prices, dynamics of asset accumulation of households, effect of inflation targeting on financial markets, GDP nowcasting, and tracking food price inflation using high frequency data. The findings of these research studies were presented to the top management. Some of these studies were also presented in national and international conferences. For example, 'Farm Support and Market Distortions' was presented at the Indian Statistical Institute's Annual Conference in December 2018, and 'Do Households Care about Cash?' was presented at the ADB Seminar on Asia and Pacific Economies in Suzhou, China in June 2019.

X.15 Researchers from this unit are constantly striving to publish their research in reputed academic journals. For instance, a paper titled, 'Tax Policy and Food Security' has been published in *Macroeconomic Dynamics* in 2019. Also, there are papers, such as 'Cash and the Economy' and 'Divisia Monetary Models of Exchange Rate Determination', which are under review in reputed journals.

X.16 SRU has been coordinating with other departments/groups in undertaking research activities and its dissemination. During 2018-19, officers from SRU actively collaborated/ contributed in Inter-departmental Working Groups (IDWG) research relating to Basel III Implementation and Operational Risk Modelling. They were also involved with research relating to construction of a Financial Vulnerability Index for India.

X.17 With an aim to deepen research capability, SRU organised a Research Orientation Program in August 2018, where researchers from SRU, along with external eminent academicians, presented their ongoing research. SRU is also organising a monthly seminar series from January 2019 wherein external academicians from reputed institutions are invited to present papers on topics relevant to the Reserve Bank. The topics covered so far relate to New Keynesian Model, Financial Networks, Plant Level Productivity, Credit Misallocation and Productivity Loss, *etc*. Feedback reports for all such seminars are also submitted to the top management for policy purposes. SRU has initiated an outreach program to disseminate relevant information about some of the recent research activities within the Reserve Bank. Under this, SRU officers visited a university during June 2019 and conducted a one-day workshop to interact with young students and researchers. In order to deepen research collaboration and promote in-house research, SRU had jointly organised a series of brown-bag seminars with CAFRAL. A few of the papers presented in the brown-bag series of 2018-19 were, 'Household Finance in Developing Countries', 'Gains from Trade with Heterogeneous Agents under Financial Constraints', and 'Congestion and Commute Scheduling in a Monocentric City'.

Agenda for 2019-20

X.18 In the year ahead, the SRU is expected to address policy research questions, continue to monitor macroeconomic developments, take deep dives into contemporary issues of importance, and provide relevant policy inputs. In terms of its long-term agenda, SRU intends to use state-of-the-art data-intensive policy research and disseminate research outcomes through internal and external presentations and publication in peer-reviewed international journals.

4. INTERNATIONAL RELATIONS

X.19 During 2018-19, the Reserve Bank strengthened its international relations, especially with international organisations and multilateral bodies through its International Department (ID). It also engaged in several bilateral and multilateral dialogues, focusing on central bank cooperation and regional initiatives undertaken by the Reserve Bank.

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G20 and its Working Groups

X.20 Representing the Reserve Bank, the ID coordinated with the central government and participated in various G20 Working Groups such as the International Financial Architecture (IFA), the Framework Working Group (FWG) and the Infrastructure Working Group (IWG). It provided inputs on India's position in the Finance Ministers and Central Bank Governors and the Deputies Meetings of the G20 under the Argentinian Presidency, culminating in the G20 Leaders Declaration in November 2018. The issues included the future of work, development of infrastructure as an asset class, risks related to crypto-assets, taxonomy of macroprudential measures (MPM), capital flow management (CFM) measures, digital economy, financial inclusion, and observations on the Report of G20 Eminent Persons Group (EPG) on Global Financial Governance.

X.21 Under the Japanese Presidency of the G20 that followed, the department provided inputs on issues such as global current account imbalances, aging and its policy implications, quality infrastructure investment, market fragmentation, and financial innovation. The G20 Osaka Leaders' Declaration welcomed India associating voluntarily with the Paris Club to cooperate in its work on a case-by-case basis. All the six Inter-Departmental Working Groups (IDWGs) on G20/FSB/BIS-related regulatory issues set up by the ID completed their reports during 2018-19. These related to (i) FinTech and Digital Innovations; (ii) Basel III implementation and finalisation of remaining elements of Basel III; (iii) Effects of Global Financial Regulatory Reforms; (iv) Resolution and Deposit Insurance Framework for Financial Firms; (v) Over-the-Counter (OTC) Derivative Reforms; and (vi) Institutionalising Macroeconomic Framework in

India. The work of the IDWG on FinTech which followed the Report of the Working Group on FinTech and Digital Banking (Chairman: Shri Sudarshan Sen), 2017, also included a companion paper on 'Draft Regulatory Framework on FinTech Regulatory Sandbox'. The Department of Banking Regulation of the Reserve Bank worked out the final, 'Enabling Framework for Regulatory Sandbox', and placed it in public domain in August 2019. In addition, the department had also set up an IDWG to examine issues related to foreign direct investment (FDI) in India, which has completed its work.

International Financial Architecture Issues

X.22 The department continued to work on the IFA issues relating to the IMF and the World Bank, including the IMF's 2018 Article IV mission. With respect to the 15th General Review of Quotas (GRQ) of the IMF, requisite progress could not be made in the absence of necessary support in terms of voting shares needed as the US expressed the view at the IMF Spring 2019 meetings that they did not see a need for a quota increase. As for the architecture relating to capital flows, the OECD Codes have since been revised, particularly with respect to use of macro-prudential measures (MPMs).

Bank for International Settlements (BIS) Meetings

X.23 On taking over as RBI Governor, Shri Shaktikanta Das, accepted the offer of a position on the 18-member Board of the BIS. The BIS has 60 central banks as its members. The department provided analytical inputs for the Governors' bi-monthly meetings of the BIS and other meetings such as those of the Committee on the Global Financial System (CGFS) on topics such as unconventional monetary policy, banknote counterfeiting risks and procurement issues, the future of Legal Entity Identifier (LEI), monitoring fast-paced electronic markets, and benefits and risks of emergence of BigTech. The department provided Indian perspectives on key risk factors and associated challenges for the Asia-Pacific region. It also coordinated the Reserve Bank's contributions to surveys conducted by the BIS under the aegis of the Central Bank Governance Group (CBGG). The ID actively contributed to the CGFS's second Working Group on 'Establishing Viable Capital Markets' (Co-chair: Dr. Viral V. Acharya) (Box X.2).

Financial Stability Issues

X.24 Deputy Governor, Shri N. S. Vishwanathan took over as a Co-chair of the Financial Stability Board (FSB) Regional Consultative Group (RCG) for Asia, mandated with exchanging views amongst financial authorities from FSB member and non-member countries on vulnerabilities affecting financial systems and initiatives to promote financial stability in the Asian region. The department prepared inputs for formulating India's stance on the issues deliberated in FSB meetings and conference calls. It provided inputs to FSB surveys such as Implementation of Monitoring Network (IMN) for FSB/G20 reforms, evaluation of effects of financial regulatory reforms on SME financing, progress in implementing OTC derivatives market reforms, and compensation monitoring.

X.25 The department also contributed to the ongoing FSB thematic peer review on implementation of resolution planning standards in relation to global and domestic systemically important banks and provided information on progress relating to the LEI implementation.

X.26 The department contributed to the FSB's annual monitoring exercise to assess global trends and risks from non-bank financial intermediation (NBFI) and provided data/inputs for its 2018 report.

Box X.2
Capital Market Convergence across Emerging and Advanced Economies

The Committee on Global Financial System's (CGFS's) Working Group on Establishing Viable Capital Markets set up in 2018 published its report in January 2019. The report compared metrics on market size (Chart 1), access, liquidity and resilience of emerging and matured capital markets. In emerging market economies (EMEs), menu choices of instruments have improved, while government securities markets have gathered depth and liquidity. EME corporate securities markets have experienced a broad deepening. However, they remain, on average, smaller than those in advanced economies (AEs) and face issues of corporate governance and minority shareholder rights, especially in case of state-owned firms. The access to longer-maturity local currency debt securities is relatively smaller compared with AEs and fewer small firms access EME equity markets. In some countries, paternalistic management of stock prices through initial public offering quotas was seen to be a constraining factor. EME markets also face issues of vulnerability to volatility spillovers.

The report recognises that openness can increase sensitivity of domestic capital markets to global spillovers. Deeper complementary markets, such as those for derivative, repo, and securities lending spur liquidity and broader participation by facilitating hedging and funding of capital market positions. Robust and efficient market infrastructures boost liquidity and make trading safer and cheaper.

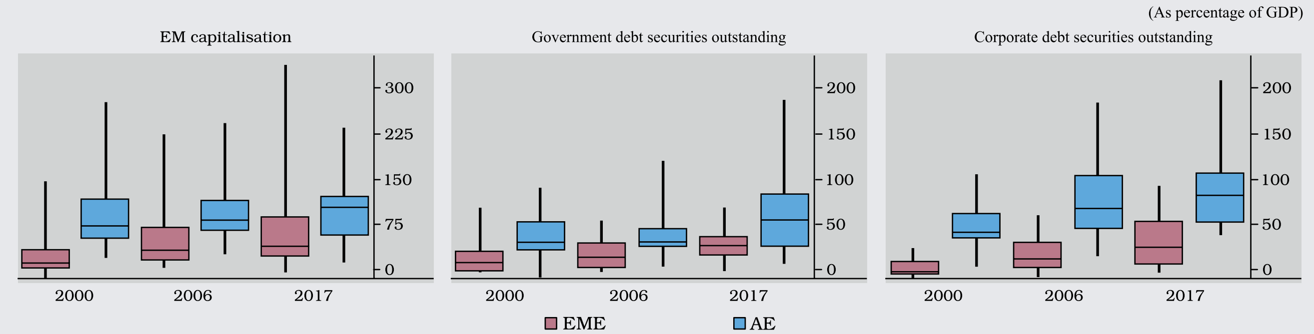
The report concludes with six broad policy recommendations: (i) greater market autonomy; (ii) strengthening legal and judicial systems for investor protection; (iii) enhancing regulatory independence and effectiveness; (iv) increasing the depth and diversity of the domestic institutional investor base; (v) broad and bi-directional opening of capital markets; and (vi) developing deep complementary markets for derivative, repo and securities lending.

The report suggests that despite substantial catch-up, differences remain between AE and EM equity markets. EM's share of investable global equity capitalisation (10.8 per cent) is materially smaller than their share of global GDP (40 per cent) (Bekeart and Harvey, 2017). EM Sharpe ratios (the measure of risk-adjusted return of a financial portfolio) were generally more than 50 per cent higher than AE Sharpe ratios. However, EM equities, that were once uncorrelated with global equities, now have a higher beta of about 1.25 (implying EME stock volatilities are higher than global stock market volatilities) and their cycles have aligned with AE equities. EM currency returns are positively correlated with EM equity returns, with correlations varying between 0.1 and 0.5. In contrast, on average for AEs, local currency equity returns and currency returns are uncorrelated, implying that currency risk is relevant for EM equities investors. Governance indicators have generally improved for EMs, but remain below those for AE markets. Openness has increased *de jure* but is not complete. Segmentation has declined significantly for EMs and is now close to where the AEs were 25 years ago. The report notes that mitigation of financial repression has played an important role in the development of the Indian bond markets. The bid-ask spreads and estimates of the price impact of trade are similar in some EMEs to those in the most liquid AE government bond markets. Though the bid-ask spreads are higher in most EMEs, those for 10-year benchmark government bonds in India were just 2 basis points, comparable to major AEs.

References:

1. CGFS (2019), 'Establishing Viable Capital Markets', CGFS Papers No. 62, Available at https://www.bis.org/publ/cgfs62.pdf
2. Bekaert, Greet and Campbell R. Harvey (2017), 'Emerging Equity Markets in a Globalising World', Available at SSRN: https://ssrn.com/abstract=2344817

Chart 1: Box & Whisker Plots of the Size of the Securities Markets



Source: CGFS Paper No. 62, BIS.

BRICS, SAARC & Bilateral Cooperation

X.27 The BRICS Presidency changed over from South Africa to Brazil in January 2019. The department continued to contribute towards the BRICS agenda through their Presidencies. As part of the deliverables under the South African Presidency, BRICS central banks successfully conducted the first Contingent Reserve Arrangement (CRA) test-run in July 2018 involving the delinked liquidity instrument with an actual transfer of funds that were reversed at the end of the test run. A stocktaking exercise was undertaken by BRICS central banks on FinTech and crypto-assets over July to early October 2018, for assessing the degree of convergence thereon as well as the scope for further collaboration.

X.28 Under the South Asian Association for Regional Cooperation (SAARC), the Reserve Bank provided liquidity support to some SAARC central banks and contributed significantly to their capacity building. With the approval of the Government of India, an addendum on the Standby Swap Arrangement was also incorporated in the framework for providing additional swap amounts aggregating up to US$ 400 million, with the approval of the Finance Minister, beyond the specified limits for individual countries, by operating on the unutilised balance available within the overall size of the facility of US$ 2 billion.

X.29 During the year, the following SAARCFINANCE collaborative studies were undertaken - (i) infrastructure financing in the SAARC region; (ii) regulatory regimes in the SAARC region; and (iii) reducing the cost of cross-border remittances across SAARC region. SAARCFINANCE scholarships were offered to two officials from Da Afghanistan Bank and Bangladesh Bank to pursue M.Phil./ doctorate studies in India. The fifth seminar and third meeting of the Working Group on SAARCFINANCE database was organised jointly by Nepal Rastra Bank and Reserve Bank on May 15-16, 2019 at Kathmandu.

X.30 The Reserve Bank and European Central Bank conducted a joint seminar on ‘Financial Stability and Global Spillovers’ in Mumbai on November 20, 2018 as a part of their Memorandum of Understanding (MoU). A seminar was held under *Mimansa*, ID Seminar Series, on ‘Fintech and Global Financial Regulation’ on June 14, 2019. During the year 2018-19, the ID organised 45 exposure visits/ attachments for capacity building for foreign central banks/ regulatory authorities/ foreign ministries and universities of repute at the Reserve Bank. The ID also continued to maintain increasing interaction with the SEACEN Centre. Further, the ID provided pro-active support to the IMF SARTTAC in its capacity building and technical assistance mission requirements.

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X.31 The ID would continue to strengthen international cooperation in the area of finance track under G20. During 2019-20, it will focus on issues on the agenda of international financial architecture. It will also ensure successful completion of Article IV 2019 discussions with the IMF.

X.32 In the area of global financial regulatory reforms, the department will continue contributing its inputs for the FSB’s annual monitoring exercise in 2019 to assess global trends and risks from NBFIs in coordination with various departments and regulators. It will also follow-up on FSB’s market fragmentation update that are likely to be available in October 2019.

X.33 The department will continue to provide analytical policy briefs at BIS and CGFS meetings. Regarding BRICS, macroeconomic research capacity of the BRICS CRA would be strengthened further. The second CRA test run will be conducted while incorporating certain elements that were not tested in the first test run. With India acquiring the SAARCFINANCE Chair in October 2019, the department would organise (in collaboration with the Department of External Investments and Operations) the SAARCFINANCE-ACU Governors' Symposium. As the current Framework on Currency Swap Arrangement for SAARC countries expires in November 2019, a revised framework for the period 2019-22 will be considered in consultation with other SAARC central banks and the Government of India. The department would continue to carry forward the agenda under the SAARCFINANCE roadmap in terms of capacity building, providing technical support, undertaking collaborative studies, and developing a robust and comprehensive database for the SAARC region.

5. GOVERNMENT AND BANK ACCOUNTS

X.34 The Department of Government and Bank Accounts (DGBA) oversees the functions of the Reserve Bank as banker to banks and banker to governments, besides formulating internal accounting policies of the Reserve Bank.

Agenda for 2018-19: Implementation Status

Integration of State Governments' System with e-Kuber

X.35 During the year, four state governments got newly integrated with the Reserve Bank's core banking solution portal (e-Kuber) for e-payments and one state government for e-receipts. As on June 30, 2019, 16 states out of 28 states for which the Reserve Bank is the banker were integrated with e-Kuber for standardised e-receipts and 16 states for standardised e-payments. Further, four state governments also migrated to enhanced versions of e-payment. The remaining state governments are in different levels of technological preparedness for integration with RBI's e-Kuber. The Reserve Bank is actively pursuing with the remaining state governments for integration of their systems with e-Kuber for enabling e-receipts and e-payments.

Paper to Follow (P2F) Arrangement

X.36 The Reserve Bank is impressing upon state governments to discontinue the use of cheques for P2F arrangements and so far, 13 states have expressed their willingness to discontinue P2F. In consultation with the National Payments Corporation of India (NPCI), a solution has been arrived at whereby discontinuation of P2F for state government cheques can be implemented in phases without waiting for readiness from all state governments. Necessary instructions in this regard have been issued to banks.

X.37 The recommendations of the Committee on Cost of Government Banking as well as the recommendations of the Working Group on Business Process Re-engineering of Government Banking have been examined internally for feasibility of their implementation, and a circular has been issued on revised rates of agency commission.

Agenda for 2019-20

X.38 The department would continue to pursue with the central government as well as remaining state governments/UTs for integrating their systems with e-Kuber and also to enhance the coverage of their transactions currently being processed through e-Kuber (Box X.3). Oversight on agency banks will be revamped and they will also be integrated with e-Kuber for online reporting of government receipts collected by them to the Reserve Bank. The Goods and Services Tax (GST) framework will be further

Box X.3
Leveraging Technology for Direct Handling of Government Transactions by the Reserve Bank of India

In its statutory role of banker to central and state governments, the Reserve Bank facilitates government payments and collection of government receipts, either at its own offices or through agency banks appointed by it under the RBI Act, 1934.

In this context, the Reserve Bank leverages on the growing adoption of technology to provide faster and efficient accounting for and settlement of government funds. This involves straight-through-processing (STP) based systems offering standardised models for transaction reporting and processing. Besides, direct handling of government transactions done in electronic mode, it enables the government to optimally use the funds it holds with the Reserve Bank by way of making just-in-time payments and direct collection of receipts on near real-time basis. These requirements are being met through end-to-end integration of various government systems with e-Kuber system of the Reserve Bank using standardised communication protocols and data security.

On the payments side, the standardised e-payments model has been rolled out for both central government departments and ministries, and various state governments, enabling STP-based payments using ISO 20022 formats for data exchange as well as reporting of transaction status and accounting information. The Reserve Bank is using the National Electronic Funds Transfer (NEFT) system in making payments directly to the beneficiaries. Various central civil ministries are using the e-payments through e-Kuber integration with Public Funds Management System (PFMS), working under the aegis of the Office of Controller General of Accounts. Treasury systems of 16 state governments are currently integrated with e-Kuber for direct processing of their e-payments.

On the receipts side, the standardised e-receipts model integrates government systems with e-Kuber on the one hand, and agency banks' systems with e-Kuber on the other. This facilitates standardised online reporting of government receipts by these banks in an efficient manner so that consolidated inputs of these transactions can be provided to the concerned government departments. Treasury systems of 16 state governments are integrated with e-Kuber for e-receipts model.

The Reserve Bank's e-Kuber system plays a critical role in collection of government receipts under the Goods and Services Tax (GST) system. It functions as the 'aggregator' for pan-India collections of GST and is integrated with the central government, state governments, Union Territories and GST Network (GSTN). On the receipts side, it enables direct collection of government receipts into their account with the Reserve Bank using the NEFT/RTGS payment options. With this, customers can make payments directly to the government account with the Reserve Bank using NEFT or RTGS from any of the participating bank branches, including online remittance. This NEFT/RTGS-based payment option has been successfully rolled out to GST framework and for *Bharat Kosh* or Non-Tax Receipt Portal (NTRP) of the central government. Three state governments have also integrated their e-receipts systems with e-Kuber and provided the NEFT/RTGS payment option on their respective receipt portals for this.

On the agenda for the future are the operationalisation of the Treasury Single Account framework for payments of Autonomous Bodies through PFMS for facilitating just-in-time payments to and by these entities; integration of pension system of Ministry of Defence for facilitating direct payments to defence pensioners; standardised protocols for sending of Inter-Government Adjustment Advices; integration with government systems for direct collection of residual indirect taxes; and extension of online Memorandum of Errors for GST to all state governments.

strengthened by extending the current online Memorandum of Error process of the central government to all state governments. The P2F arrangement for state governments will be discontinued in a phased manner.

6. MANAGING FOREIGN EXCHANGE RESERVES

X.39 The Department of External Investments and Operations (DEIO) manages the country's foreign exchange reserves (FER) with safety, liquidity and returns, in that order, as its strategic objectives. During the year under review, FER increased by 5.9 per cent in June 2019 as against an increase of 5.0 per cent in the corresponding period of the previous year, and gold was added to the FER in line with the broad diversification objectives followed in the management of FER (Box X.4).

Box X.4
Gold in Foreign Exchange Reserves – Recent Trends

The stock of global foreign exchange reserves (FER) stood at US$ 11.4 trillion in December 2018. In recent years, central banks have diversified their FER into different asset classes. Consequently, there has been a steady decline in the share of the US dollar, although with approximately 62 per cent of the allocated resources in Q4: 2018, it continues to dominate the currency composition of international reserves followed by the euro, sterling and yen. Gold remains an important constituent of the FER (Table 1). At the end of June 2018, central banks collectively owned US$ 1.36 trillion worth of gold, constituting around 10 per cent of global FER (WGC, 2018).

The quantity of gold purchased in the world economy was steadily falling before the Global Financial Crisis (GFC) period. However, that trend has reversed and gold purchases have increased thereafter (Chart 1). The recent expansion in gold holding has been driven mainly by emerging market economies (EMEs), attributed to: (a) the general increase in the level of reserves in the aftermath of GFC; (b) diversification strategy that moved away from the US dollar; and (c) the use of gold as an alternative asset by those countries on which economic sanctions have been imposed (Amundi, 2019).

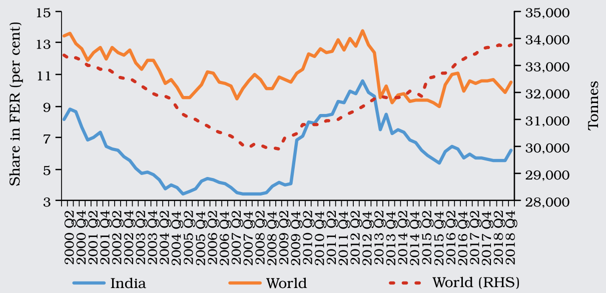
The increase in the share of gold in foreign reserves has (Chart 2), mainly been on account of the steep increase in gold prices during 2009-12 (Chart 3). In terms of tonnage of

Table 1: Top Ten Countries in terms of World Official Gold Holdings

		Tonnes	Share in Foreign Reserves (Per cent)
1	United States	8,133.5	74.9
2	Germany	3,369.7	70.6
3	Italy	2,451.8	66.9
4	France	2,436.0	61.1
5	Russian Federation	2,150.5	19.1
6	China, P.R.: Mainland	1,874.3	2.5
7	Switzerland	1,040.0	5.5
8	Japan	765.2	2.5
9	Netherlands	612.5	65.9
10	India	608.7	6.4

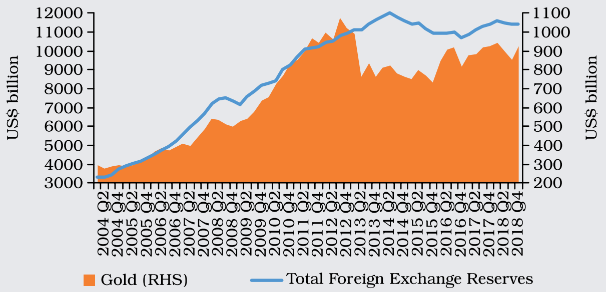
Source: International Financial Statistics, April 2019, WGC.

Chart 1: Gold holdings: Pre and Post Global Financial Crisis



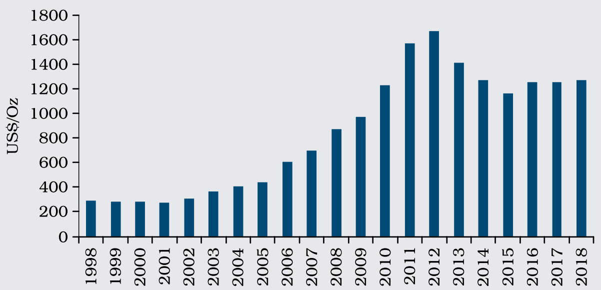
Source: World Gold Council.

Chart 2: International Forex Reserves and Gold



Source: IMF, CEIC.

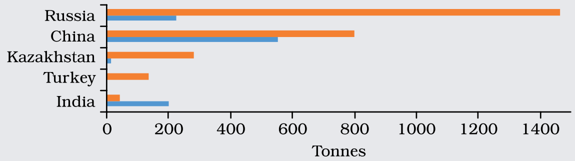
Chart 3: International Gold Price



Source: World Gold Council.

(Contd...)

Chart 4: Top Five Net Buyers of Gold: 2010-2018



	India	Turkey	Kazakhstan	China	Russia
2010-18	42.7	137.4	280.0	798.4	1464.0
2002-09	200.0	0.0	13.2	553.3	226.1

2010-2018 2002-2009

Source: World Gold Council.

gold purchased, the increase was, however, gradual from around 30,000 metric tonnes in 2009 to around 32,000 metric tonnes in 2012. In terms of gold purchase, the top five countries are – Russia, China, Kazakhstan, Turkey and India (Chart 4).

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1. Market Update: 'Central Bank Buying Activity', *World Gold Council (WGC),* September, 2018.
2. Amundi Asset Management (2019), 'Gold in Central Banks' Asset Allocation, Investment Insights Blue Paper, March 2019.

Agenda for 2018-19: Implementation Status

X.40 The department took proactive steps to bolster IT security and protection against cyber risks in line with international best practices. A system for undertaking interest rate futures was developed to an advanced stage and is expected to be completed in 2019-20. Repo transactions were carried out on a regular basis for enhancing the returns on foreign reserves.

Agenda for 2019-20

X.41 The department would undertake a review of risk management practices, which would include, *inter alia*, exploring alternate methods for measuring credit risk. Efforts will also be undertaken to enhance the repo and forex swap capabilities. Enhancement of IT infrastructure and security measures for cyber risks will also continue.

7. ECONOMIC AND POLICY RESEARCH

X.42 As the knowledge centre of the Reserve Bank focussing on issues relating to the economy and the financial system, the Department of Economic and Policy Research (DEPR) strives to provide high quality research inputs and management information system (MIS) services for policy making. The department also generates important primary national level data, prepares the Reserve Bank's statutory reports and frontline research publications, promotes collaborative policy-oriented research with external experts, and provides technical support to various operational departments and to technical groups/ committees constituted by the Reserve Bank.

Agenda for 2018-19: Implementation Status

X.43 During the year, the department brought out several flagship publications[2], *viz*., the *Annual Report*, *Report on Trend and Progress of Banking in India*, *Reserve Bank of India Bulletin*, and the fourth edition of the *Handbook of Statistics on Indian States* in a timely manner while ensuring the highest quality of standards. The department also published '*State Finances: A Study of Budgets of 2017-18 and 2018-19'* - an annual publication that provides information and analysis of the finances of state governments - and eliminated the time lag by covering budget estimates for 2018-19, besides the actual outcomes for 2015-16, 2016-17 and revised estimates of 2017-18. The monthly data of the Comptroller and Auditor General of India (CAG) on state finances were consolidated and published for the first time this year, with half yearly fiscal position of

[2] The statutory reports of the Reserve Bank (*Annual Report* and *Report on Trend and Progress of Banking in India*) and monthly *Reserve Bank of India Bulletin* are published in bilingual form in compliance with the Official Language Policy of the Government of India.

24 states for 2018-19. The department also brought out two issues of the *RBI Occasional Papers (Volume 38 & 39)*, the peer-reviewed research journal of the Reserve Bank. Compilation and dissemination of primary statistics on monetary aggregates, balance of payments, external debt, effective exchange rates, combined government finances, household financial savings and flow of funds on established timelines and quality standards engaged the department during the year.

X.44 During 2018-19, the department published 45 research papers/articles, of which 16 were published outside the Reserve Bank in domestic and international journals. In addition, five working papers were published during the year. Furthermore, the DEPR Study Circle, an in-house discussion forum, organised 40 seminars/presentations during the year on diverse research themes.

X.45 The Central Library and the Reserve Bank of India Archives (RBIA) are the two key units of DEPR that provide necessary reference material on various subjects for conducting research and publishing reports, including the Reserve Bank's history. The Library has a comprehensive collection of books/e-books including some of the rare books, journals/e-journals, and online databases on banking, economics and finance. The Library shifted all 200 print journals/23 magazines to an electronic version to facilitate easy access pan India. It has also digitised and scientifically preserved all RBI publications prior to 1997, *viz*., Committee Reports, Annual Reports, Bulletins, and other rare books for preservation and easy access. The RBIA is responsible for implementation of the Archival and Records Management Policy in the Reserve Bank. It also provides research facilities to scholars coming from different parts of the country and abroad.

X.46 The department organised a number of events during the year, including four memorial lectures. The 2nd Suresh Tendulkar Memorial Lecture was delivered by Prof. Roberto Rigobon, Massachusetts Institute of Technology on August 2, 2018; the 5th P. R. Brahmananda Memorial Lecture was delivered by Prof. Devesh Kapur, Johns Hopkins University on October 19, 2018; the 16th L. K. Jha Memorial Lecture was delivered by Prof. Hélène Rey, London Business School on December 14, 2018 and the 17th C. D. Deshmukh Memorial Lecture was delivered by Mr. Agustín Carstens, General Manager, BIS on April 25, 2019.

X.47 The other major events organised by the department during the year includes talks by Mr. Claudio Borio, head of the Monetary and Economic Department, BIS on 'Monetary Policy in the Grip of a Pincer Movement'; Prof. Ramesh Chand, Member, NITI Aayog on 'Current Issues in Agriculture Sector and the Outlook'; and Shri Rajeev Kher, Distinguished Fellow, Research and Information System for Developing Countries, New Delhi on 'India's Trade Policy: Emerging Challenges and Opportunities'. The department organised a workshop on India-KLEMS [capital (K), labour (L), energy (E), material (M) and services (S)] research project, in which presentations were made on studies using the KLEMS database.

X.48 The annual research conference of the department was held at Jaipur during March 1-3, 2019. The conference included a panel discussion on 'GDP Back-Series' chaired by Prof. B. N. Goldar, Member, National Statistical Commission. Mr. David Lubin, Managing Director and head of emerging markets economics at Citi Bank, addressed the participants on 'Is capital account fundamentalism dead?'. The fourth edition of the *Handbook of Statistics on Indian States* was also released at the conference.

Agenda for 2019-20

X.49 Besides the standard statutory and non-statutory publications, and compilation and dissemination of primary and secondary data, focussed analysis and research during 2019-20 will follow the DEPR Vision 2022. The department will explore big data applications for improving inflation and growth projections. It will take up studies in the areas of contemporary relevance, for example, role of capital in bank's lending behaviour; bank dependency of non-financial firms; payments system innovations and currency demand; global liquidity and impact of trade policy measures on exports; measures of financial cycles; determinants of total factor productivity in India; supply chain and food inflation dynamics; performance and implications of UDAY/UDAY bonds; and implication of guarantees for debt sustainability. The department will also generate new analytical information on the Indian economy such as economic and political uncertainty index, external vulnerability and a composite high frequency indicator of economic activity.

X.50 The History of the Reserve Bank, Volume-V, for the period spanning 1997 to 2008, will be completed during 2019-20. The Central Library has planned to extend accessibility of digitised contents. The RBIA would establish an Archival Museum on the first floor of RBI Museum, Kolkata during the year ahead.

8. STATISTICS AND INFORMATION MANAGEMENT

X.51 The Department of Statistics and Information Management (DSIM) is driven by two overarching goals, *viz.*, to collect, process and disseminate national-level macroeconomic and financial statistics of the highest quality, with a focus on banking, monetary, corporate and external sectors; and to provide statistical and analytical support to all functions of the Reserve Bank through forward looking surveys, data management and applied statistical research. In pursuit of these objectives, DSIM maintains a centralised database for the Reserve Bank at par with international standards, manages the centralised submission of returns through the eXtensible Business Reporting Language (XBRL) platform, and provides a range of information management related support services. The department also actively engages in statistical and analytical research for meeting the policy and operational goals of the Reserve Bank.

Agenda for 2018-19: Implementation Status

X.52 During the year, the department brought out its regular publications, *viz.*, *Handbook of Statistics on the Indian Economy, 2017-18; Statistical Tables Relating to Banks in India, 2017-18; Basic Statistical Returns of SCBs in India, March 2018; Quarterly Outstanding Credit of SCBs (BSR 1);* and *Quarterly Statistics on Deposits and Credit of SCBs (BSR 7) for 2018-19*. The Weekly Statistical Supplement (WSS) and the 'Current Statistics' portion of the Reserve Bank's Bulletin were generated from the Database on Indian Economy (DBIE), the existing data warehouse, as per the prescribed frequency. Surveys used as inputs in monetary policy formulation were conducted as per schedule. Under the guidance of the Technical Advisory Committee on Surveys (TACS), testing the efficiency of weighted net responses (WNR), using size of the responding units and the sampling proportion as weights, was initiated to refine the analysis of the survey results. Two-stage probability sampling was introduced in place of quota sampling for Inflation Expectations Survey of Households (IESH) from the September 2018 round. City-wise sample size for IESH and Consumer Confidence Survey (CCS) were revised based on proportion of number of households in the city, leading to revision of estimation procedures. An Expert Group on IESH was formed to review the existing IESH questionnaire and suggest ways to expand the survey to rural and semi-urban areas in a phased manner. Pilot rounds of (i) Survey on Indian Start-up Sector (SISS) and (ii) Survey on Retail Payment Habits of Individuals (SRPHi) were conducted.

X.53 A monitoring system for housing and personal loans on a quarterly basis was established using account level data (BSR 1). Information on (i) salary accounts maintained by select banks; (ii) tax deducted at source (TDS) data submitted by the employers; and (iii) salary payments made through National Electronic Funds Transfer (NEFT) and National Automated Clearing House (NACH) were used for creating an Employment Index on an exploratory basis.

X.54 The implementation of the Centralised Information Management System (CIMS), the next generation data warehouse got underway. The Central Information System for Banking Infrastructure (CISBI) was web-deployed after vulnerability assessment and penetration testing and adequate risk assessment. A prototype for a geographic information system that plots banking units on India's map has been developed for internal use.

X.55 Under the guidance of the Implementation Task Force (ITF) for setting up a Public Credit Registry (PCR), the business requirements, information structure and high-level technical design were finalised. The selection of an agency to develop the technical platform, drafting of a comprehensive PCR Act and consultation with the Ministry of Corporate Affairs (MCA) and Central Board of Indirect Taxes and Customs (CBIC) towards linking of corporate database and GST data under the ambit of the PCR are in progress.

X.56 Exploratory work on assessing food inflation behaviour using quantile regression; developing risk profile of the listed non-government non-financial companies based on suitably chosen stress scenarios; studies on Indian corporate sectors; and sentiment analysis of media articles (newsfeeds) using big data analytics and related statistical and machine learning techniques were also carried out.

X.57 The SAARCFINANCE Database (SFDB) is hosted in the DBIE with a view to promote research and analysis on SAARC economies. A new web-portal, which also facilitates dynamic dashboards, was developed for timely submission of data by the member countries with quality checks as per the Data Release Calendar.

X.58 In its efforts towards strengthening India's external account statistics, a system to collect information on financial flows relating to trade in services as per the original source/ultimate destination country was introduced, which would facilitate compilation of the related estimates as per the place of origin/final delivery of services. The reporting of annual census on Foreign Liabilities and Assets (FLA) has been further refined with the development of a web-based submission platform.

Agenda for 2019-20

X.59 The implementation of CIMS will be taken forward towards its full operationalisation through system-to-system integration, data migration from the existing database and creation of element-based data repository. A metadata driven data maintenance and dissemination system, following the Statistical Data and Metadata eXchange (SDMX) standards would be implemented as part of the CIMS architecture. A Granular Data Access Lab (GDAL) (Box X.5) and a regulatory sandbox environment will also be made available through the CIMS.

X.60 The coverage of the CISBI will be expanded by including cooperative banks along with their geographical locations. System development for creation of a PCR would be taken up in modular

Box X.5
Granular Data Access Lab (GDAL)

An additional service proposed to be provided by the Centralised Information Management System (CIMS) is a Granular Data Access Lab (GDAL), to facilitate research on granular level data (with masking of identity particulars for protection of privacy/confidentiality), within a secure computing environment. A Standing Committee has been formed by the Reserve Bank to streamline and control this process. It will identify the data series which could be released/shared through the GDAL environment.

The motivation for the GDAL initiative is rooted in the 2009 G20 meeting of Finance Ministers and Central Bank Governors which endorsed the first Data Gaps Initiative (DGI-1) to promote actions to close data gaps related to the financial crisis. The Data Gaps Initiative II (DGI-2) (2015) aims to promote the exchange of data as well as metadata and access to granular data.

Such facilities are already provided by the Deutsche Bundesbank's Research Data and Service Centre (RDSC), the Banco de Portugal, and the International Network for Exchanging Experience on Statistical Handling of Granular Data (INEXDA) - launched by five central banks in 2017 *viz.*, Banca d' Italia, Banco de Portugal, Bank of England, Banque de France, and Deutsche Bundesbank. The latter was joined by the European Central Bank, Banco de España, Banco Central de Chile, and Central Bank of the Republic of Turkey in 2018. Granular data research will provide policy inputs backed by data.

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4. Members of the INEXDA Network (2018). *IFC Working Papers* No 18: INEXDA – the Granular Data Network. Available at: https://www.bis.org/ifc/publ/ifcwork18.pdf

and phased manner. For streamlining flow of data pertaining to the annual financial statement of companies, the department is coordinating with the Ministry of Corporate Affairs for automating the transfer of data to the Reserve Bank. The project is expected to be completed by early 2019-20.

X.61 A web-based reporting platform for enterprise surveys will be implemented. The historical unit-level data of CCS prior to March 2015 will be disseminated through the DBIE to encourage research. An Expert Group is examining the issue of extending the coverage of IESH to rural and semi-urban areas. Under the guidance of the TACS, further rationalisation of existing surveys and estimation procedures will be reviewed for enhancing the precision of survey outcomes.

X.62 Implementation of Digital Signature for the statutory returns submitted through the XBRL platform would be rolled out. Data collection system for Non-Banking Financial Intermediaries (DCS-NBFI) and Central Fraud Registry (CFR) database for urban cooperative banks would be developed, leveraging on the DBIE's infrastructure. Efforts will also be made to archive GST receipts data in the Reserve Bank's data warehouse for analytical purpose.

X.63 The department will continue to refine the methodologies used for nowcasting, forecasting, and assessment of macroeconomic developments towards policy input on an ongoing basis. Research and analysis using big data analytics and machine learning techniques to carry out sentiment analysis for macro-economic indicators, would be further strengthened.

9. LEGAL ISSUES

X.64 The Legal Department is an advisory department established for examining and advising on legal issues, and for facilitating the management of litigation on behalf of the Reserve Bank. The department vets circulars, directions, regulations and agreements for various departments of the Reserve Bank with a view to ensuring that the decisions of the Reserve Bank are legally sound. The department provides the secretariat to the First Appellate Authority under the Right to Information Act and represents in the hearing of cases before the Central Information Commission, with the assistance of operational departments. The department also extends legal support and advice to the Deposit Insurance and Credit Guarantee Corporation (DICGC), CAFRAL, and other RBI-owned institutions on legal issues, litigation and court matters.

Agenda for 2018-19: Implementation Status

X.65 Several important legislations/regulations concerning the financial sector were brought in/ amended during the year. The Fugitive Economic Offenders Act, 2018, which came into force on April 21, 2018, provides measures to deter fugitive economic offenders from evading the process of law in India by staying outside the jurisdiction of Indian courts. The Act would be applicable to a person involved in economic offences involving at least ₹100 crores and who has fled from India to escape legal action. The Banning of Unregulated Deposit Schemes Ordinance, 2019 was promulgated on February 21, 2019 to provide for a comprehensive mechanism to ban unregulated deposit schemes and to protect the interest of depositors.

X.66 The Insolvency and Bankruptcy Code (IBC, 2016) provides a time-bound process for resolution of insolvency among corporate persons, partnership firms and individuals. This Act was amended in 2018 to clarify that allottees under a real estate project should be treated as financial creditors. Section 12 of IBC, 2016 was also amended to change the voting threshold from 75 per cent to 66 per cent for extension of corporate insolvency resolution process period by the committee of creditors. The central government is also empowered to direct by notification in public interest that any provisions of IBC, 2016 shall not apply or apply with modifications to micro, small and medium enterprises.

X.67 The Reserve Bank has notified the Ombudsman Scheme for Digital Transactions, 2019 under Section 18 of the Payment and Settlement Systems Act, 2007 to provide for a mechanism of Ombudsman for redressal of complaints against deficiency in services related to digital transactions.

X.68 The Supreme Court by majority upheld the constitutional validity of the Aadhaar Act 2016, subject to certain limitations.

Agenda for 2019-20

X.69 In 2019-20, the Legal Department will continue to advise various departments of the Reserve Bank on legal matters and furnish specific legal opinions whenever sought. It will also continue its efforts at managing litigation on behalf of the Reserve Bank and function as a secretariat to the Appellate Authority under the Right to Information Act. Amendments to various acts administered by the Reserve Bank will be pursued during the year, taking note of the country's international commitments and to provide clarity to the existing provisions.

XI GOVERNANCE, HUMAN RESOURCES AND ORGANISATIONAL MANAGEMENT

During the year, the Reserve Bank continued to focus on building its human resources skills through both in-house and external training programmes as also cater to the general well-being of its staff. An Expert Committee constituted in consultation with the Government of India to review the extant Economic Capital Framework has submitted its report to the Reserve Bank. A comprehensive Strategic Framework viz., Utkarsh 2022 setting out the Reserve Bank's medium-term outlook and strategy was rolled out. In recognition of its work relating to Rajbhasha, the Reserve Bank's Hindi Journal received an accolade from the Association of Business Communicators of India.

XI.1 This chapter summarises achievements in the areas of governance, human resource, risk monitoring and corporate strategy during 2018-19, and also sets out an agenda for 2019-20. These achievements relate to efforts to strengthen human resources by upgrading skills through several initiatives such as in-house and external trainings, incentive schemes and e-learning modules, hiring new talent to bridge skill gaps in the organisation, initiatives such as leadership and executive education programmes and mid-career development programmes and an Equal Opportunity Policy for facilitating differently abled employees.

XI.2 Risk management and audit operations of the Reserve Bank emphasised a holistic approach to ensure business continuity. Under the Enterprise-Wide Risk Management (ERM) framework, the focus during the year was on risk reporting, risk modelling and risk analysis. Furthermore, the middle office in the Department of External Investments and Operations (DEIO) and the Chief Information and Security Officer responsible for managing IT and Cyber risks were integrated with the Risk Monitoring Department (RMD) for synergy and better risk management. The risk tolerance limits reviewed in the context of the coverage of financial risks and a web-based Integrated Risk Monitoring and Incident Reporting System (IRIS) is being implemented. The process of automation of the audit process got further impetus with the rolling out of the Concurrent Audit Functionality in Audit Management and Risk Monitoring System (AMRMS) across all Central Office Departments (CODs)/Regional Offices (ROs)/ Training Establishments of the Reserve Bank from January 2019.

XI.3 A comprehensive review of the Vision, Mission and Core Purpose of the Reserve Bank was undertaken during the year, and a medium-term strategy document "*Utkarsh 2022*" was prepared. A comprehensive Business Continuity Management (BCM) system for the Reserve Bank has been implemented since December 2018 to recover time-sensitive critical operations during disruptions/crises.

XI.4 In compliance with the statutory provisions of the Official Language Act 1963, the Rajbhasha Department organised several training programmes and workshops during 2018-19 to promote the use of Hindi. The Premises Department endeavoured to create, maintain and upgrade the Reserve Bank's infrastructure. The Indian Green Building Council (IGBC) conferred the Reserve Bank with the "GREEN CHAMPION AWARD" in recognition of the measures undertaken for making the new and existing buildings of Reserve Bank 'Green Compliant'.

XI.5 Against this backdrop, the chapter is organised as follows. The immediately following section details the governance structure of the Reserve Bank. Section 3 mentions the initiatives undertaken by the Human Resource Management Department (HRMD) during the year. The risk management measures carried out by the

Reserve Bank are described in section 4. The activities of the Inspection Department during the year are discussed in section 5. The functioning of Corporate Strategy and Budget Department (CSBD) which coordinates and develops strategies and annual action plans for the Reserve Bank are narrated in section 6. The activities of the Department of Corporate Services, that act as a facilitator in providing internal corporate services to the entire organisation are described in section 7. The activities and accomplishment of the Rajbhasha and Premises Departments are detailed in sections 8 and 9, respectively. Apart from the accomplishments during the year, these departments also set their agenda for 2019-20.

2. GOVERNANCE STRUCTURE

XI.6 The Central Board of Directors is the apex body in the governance structure of the Reserve Bank. It comprises the Governor as the Chairperson, Deputy Governors, Directors nominated by the Central Government and Government Directors. There are four Local Boards for the northern, southern, eastern and western regions of the country, which focus on local issues. The Government of India (GoI) nominates/appoints Directors of the Central Board and Members of the Local Boards in accordance with the Reserve Bank of India Act, 1934.

XI.7 The Central Board is assisted by three Committees: the Committee of the Central Board (CCB); the Board for Financial Supervision (BFS); and the Board for Regulation and Supervision of Payment and Settlement Systems (BPSS). These Committees are headed by the Governor. In addition, the Central Board also has four Sub-Committees: the Audit and Risk Management Sub-Committee (ARMS); the Human Resource Management Sub-Committee (HRM-SC); the Building Sub-Committee (BSC); and the Information Technology Sub-Committee (IT-SC). These sub-committees are typically headed by an external Director.

Meetings of the Central Board and CCB

XI.8 The Central Board held six meetings during July-June, 2018-19 in Patna, Mumbai (three meetings), New Delhi and Chennai. The Finance Minister of India addressed the post-Budget meeting held in New Delhi on February 18, 2019. The Finance Minister of India also addressed the Board at its meeting held in New Delhi on July 8, 2019 after presentation of final Budget by the Government of India.

XI.9 The CCB held 45 meetings during the year, 33 of which were held through electronic mode. The CCB attended to the current business of the Reserve Bank, including approval of its Weekly Statement of Affairs. External Directors are invited to the CCB meetings by rotation.

XI.10 The Western, Eastern and Northern Area Local Board held five, four and three meetings, respectively, and Southern Area Local Board held one meeting during the year.

XI.11 The Standing Committee of the Central Board was set up in 2014-15 to examine issues relating to Urban Cooperative Banks (UCBs), Non-Banking Financial Companies (NBFCs), currency management and other issues relevant to the regions where meeting of the Local Boards could not be convened. The Standing Committee, in lieu of Northern and the Southern areas, held one meeting each, during the year.

Attendance of Directors

XI.12 The details of participation of Directors/ Members in meetings of the Central Board, its Committees and Sub-Committees are given in the Annex (Tables 1 to 4). The details of participation of Members in the meetings of Local Boards are given in Annex Table 5.

Central Board/Local Boards: Changes

XI.13 On December 11, 2018, the Central Government accepted the resignation of Dr. Urjit R. Patel as Governor, Reserve Bank of India and appointed Shri Shaktikanta Das, former Secretary, Department of Economic Affairs, as Governor, for a period of three years under Section 8(1)(a) of the Reserve Bank of India Act, 1934.

XI.14 On June 26, 2019, the Central Government accepted the resignation of Dr. Viral V. Acharya as Deputy Governor, Reserve Bank of India with effect from July 23, 2019.

XI.15 The Central Government, on July 2, 2019, reappointed Shri N.S. Vishwanathan as Deputy Governor, Reserve Bank of India till July 3, 2020, or until further orders, whichever is earlier.

XI.16 Shri Atanu Chakraborty, Secretary, Department of Economic Affairs, Ministry of Finance, Government of India was nominated as a Director on the Central Board of Directors of the Reserve Bank of India under section 8(1)(d) of the Reserve Bank of India Act 1934 with effect from July 29, 2019 and until further orders *vice* Shri Subhash Chandra Garg.

XI.17 Shri Satish Kashinath Marathe and Shri Swaminathan Gurumurthy were nominated as Directors for a period of four years under Section 8(1)(c) of the Reserve Bank of India Act, 1934 with effect from August 7, 2018.

XI.18 Ms. Revathy Iyer was appointed as a Member of the Northern Area Local Board for a period of four years under Section 9(1) of the Reserve Bank of India Act, 1934 and was nominated as a Director on the Central Board of Directors of the Reserve Bank of India for a period of four years under Section 8(1)(b) of the Reserve Bank of India Act, 1934 with effect from September 19, 2018.

XI.19 Prof. Sachin Chaturvedi was appointed as a Member of the Eastern Area Local Board for a period of four years under Section 9(1) of the Reserve Bank of India Act, 1934 and was nominated as a Director on the Central Board of Directors of the Reserve Bank of India *vice* Dr. Nachiket M. Mor for a period of four years under Section 8(1) (b) of the Reserve Bank of India Act, 1934 with effect from September 19, 2018.

XI.20 The Central Government appointed Shri Raghvendra Narayan Dubey and Shri Rakesh Jain as Members of Northern and Southern Local Boards, respectively, under Section 9(1) of the Reserve Bank of India Act, 1934 with effect from September 19, 2018.

XI.21 The Central Board accepted the resignation of Dr. Nachiket M. Mor from the Eastern Area Local Board with effect from October 13, 2018 and of Shri Rakesh Jain from the Southern Area Local Board with effect from March 11, 2019.

Executive Directors - Changes

XI.22 Shri A. K. Misra, Executive Director, retired on July 31, 2018. Shri Deepak Singhal and Shri Sudarshan Sen, Executive Directors retired on January 31, 2019. Smt. Rosemary Sebastian and Smt. Parvathy V. Sundaram were promoted as Executive Directors with effect from August 14, 2018. Shri E. E. Karthak and Smt. Lily Vadera were promoted as Executive Directors, effective February 1, 2019. Smt. Rosemary Sebastian, Executive Director, retired on May 31, 2019. Dr. Rabi N. Mishra was promoted as Executive Director with effect from June 14, 2019. Shri E. E. Karthak, Executive Director, retired on June 30, 2019 while Smt. Surekha Marandi retired on July 31, 2019. Smt Nanda S. Dave and Shri Anil Kumar Sharma were promoted as Executive Directors, effective July 1, 2019 and August 1, 2019, respectively.

Governance Deliberations in the Central Board during 2018-19

XI.23 A meeting of the Members of the Local Boards with Deputy Governors was convened on January 21, 2019 to review the roles and responsibilities of the Local Boards. Based on the deliberations of the meeting, it was decided by the Central Board that Local Boards are an important governance structure in the Reserve Bank and to enable them play a more meaningful role, further improvements in the information provided to the Local Boards should be made.

XI.24 As part of the Department's strategy to automate internal workflows and thereby reduce the usage of paper, a software solution was implemented for the conduct of all meetings of the Central Board and its Committees as well as Committees of the Top Management of the Reserve Bank. It is proposed to automate the conduct of the meetings of all the four Local Boards during 2019-20.

3. HUMAN RESOURCE INITIATIVES

XI.25 The pursuit of individual and organisational excellence is a constant endeavour. Careful management of human resource plays a vital role in not only tapping the existing potential but also in laying down the framework for a sustained movement along the learning curve. The Human Resource Management Department (HRMD) encourages a holistic approach to the development of the Reserve Bank's human resources.

Major Developments

In-house Training

XI.26 In the endeavour to impart knowledge and skill upgradation for development of technical and behavioural skills of its employees, the training establishments of the Reserve Bank, *viz*., RBI Academy; Reserve Bank Staff College (RBSC), Chennai; College of Agricultural Banking (CAB), Pune; and four Zonal Training Centres in Mumbai, New Delhi, Kolkata and Chennai catered to training requirements (Table XI.1).

Training at External Institutions

XI.27 The Reserve Bank deputes its employees to attend specific programmes in order to tap expertise available in external institutes. During 2018-19, 952 officers were deputed in external institutions. Class III and Class IV employees were also deputed for trainings in external institutions in India during the year. In addition, the Reserve Bank also deputed 378 officers to attend training courses, seminars, conferences and workshops conducted by banking and financial institutions and multilateral institutions in different countries (Table XI.2).

Table XI.1: Reserve Bank Training Establishments - Programmes Conducted

Training Establishment	2016-17 (July-June)		2017-18 (July-June)		2018-19 (July-June)	
	Number of Programmes	Number of Participants	Number of Programmes	Number of Participants	Number of Programmes	Number of Participants
1	2	3	4	5	6	7
RBI Academy	9	317 (20)	18	620 (24)	22	546 (38)
RBSC, Chennai	129	3,346 (172)	147	3,583 (281)	152	3,125 (499)
CAB, Pune	173	5,788 (56)	184	6,448 (42)	179	5,542 (51)
ZTCs (Class I)	101	1,934	115	2,271	116	2,227
ZTCs (Class III)	104	2,130	100	2,109	76	1,877
ZTCs (Class IV)	33	758	36	802	46	1,158

Note: Figures in parentheses pertain to foreign participants and/or participants from external institutions.
Source: RBI.

Table XI.2: Number of Officers Trained in External Training Institutions in India and Abroad

Year	Trained in India (External Institutions)	Trained Abroad
1	2	3
2016 – 17	816	506
2017 – 18	1,041	410
2018 – 19	952	378

Source: RBI.

Study Leave Schemes and Golden Jubilee Scholarship

XI.28 Nine officers of the Reserve Bank availed of schemes for pursuing higher studies overseas (other than the Reserve Bank's Golden Jubilee Scheme) during the year. A total of 318 employees pursued select part-time/distance education courses under the Reserve Bank's incentive scheme. Under the Golden Jubilee Scholarship Scheme, 8 officers were selected during the year to pursue higher studies in reputed universities abroad.

Other Initiatives

XI.29 A number of initiatives were taken during the year, reinforcing the Reserve Bank's commitment towards training and development of its employees (Box XI.1).

Box XI.1
Training and Development in the Reserve Bank: Recent Initiatives

Some of the recent measures taken by the Reserve Bank to provide adequate opportunities for learning to all employees include:

i) Leadership and Executive Education Programme (LEEP)

The Reserve Bank deputes officers in Grade 'F' with proven track record of exceptional performance and leadership skills to Leadership and Executive Education Programme (LEEP) conducted by select reputed Business Schools/Universities with a view to providing appropriate exposure. Ten CGMs selected for the year 2018-19 have secured admission for the courses that they propose to pursue under the scheme. During the year, shortlisted CGMs have opted for courses offered by Wharton, Columbia and Stanford Universities, commencing during April-June 2019.

ii) Mid-Career Mandatory Training Programme (MCMTP)

Mid-Career Mandatory Training Programme - Level I has been introduced by the Reserve Bank for the Middle Management. It seeks to prepare officers in Grade 'C' (Assistant General Managers) - who have completed 10 years in the Reserve Bank and at least 3 years in Grade 'C'- to take up higher responsibilities as a senior officer of the Reserve Bank. The Programme was rolled out for approximately 80 officers during the month of August 2018 and was successfully completed in three batches. Mid-Career Mandatory Training Programme - Level II for eligible officers in Grade 'E' (General Managers) is under consideration.

iii) Incentive Scheme for Higher Education - Bridging the Skill Gaps

(a) In its constant endeavour to bridge various skill gaps, the Reserve Bank encourages its employees to take up higher and specialised educational courses and reimburses the fees. Employees are allowed to enrol for trainings/courses in new and emerging fields so that they remain abreast with market developments that are of relevance to the Reserve Bank. Increasingly, the focus has shifted to cyber security and safe banking habits with the Reserve Bank including courses from reputed international institutions in the areas of cyber security and anti-money laundering.

(b) The Reserve Bank has a tie-up with the Chartered Financial Analyst (CFA) Institute for offer of CFA Regulator scholarships for its employees. Keeping in view the increasing interest shown by the staff in availing these scholarships, the CFA Institute has, on a request from the Reserve Bank, increased the scholarships from 20 to 25. Every year the total number of applications received is in excess of the scholarships available and the remaining number of employees are allowed to register under the normal registration process. During the year, 103 applications were received from employees for appearing in the CFA examination to be held in June and December 2019.

Structured e-learning

XI.30 The Reserve Bank has structured e-learning courses targeted at larger groups of staff members on its Learning Management System. At present, 23 e-learning modules are being offered by RBSC, Chennai on the Reserve Bank's intranet. Officers are also encouraged to undertake online certificate courses such as those offered by the IMF's Institute for Capacity Development.

Internship Scheme

XI.31 During the course of the year, 158 students were selected and provided internship in the Reserve Bank as part of its summer internship scheme.

Grants and Endowments

XI.32 In order to promote research, training and consultancy in the banking and financial sector, the Reserve Bank provided financial support amounting to ₹272.82 million to the Indira Gandhi Institute of Development Research (IGIDR), Mumbai; ₹105.3 million to the Centre for Advanced Financial Research and Learning (CAFRAL), Mumbai; ₹10.70 million to the National Institute of Bank Management (NIBM), Pune; ₹8.76 million to the Indian Institute of Bank Management (IIBM), Guwahati; and ₹6.84 million to the London School of Economics (LSE) India observatory and the IG Patel Chair.

Industrial Relations

XI.33 Industrial relations in the Reserve Bank remained cordial during the year. The Reserve Bank continued to hold periodic meetings with recognised Associations/Federations of officers and employees/workmen on various matters related to service conditions and welfare measures for employees.

The RBI Policy Challenge

XI.34 The fourth edition of the RBI Policy Challenge, a national level competition designed to enhance knowledge regarding monetary policy making amongst students pursuing undergraduate/post-graduate courses, got underway in October 2018. More than 300 entries from educational institutions across the country were received. Teams from the Indian Institute of Technology, Kanpur (North Zone); Sarla Anil Modi School of Economics, Mumbai (West Zone); T. A. Pai Management Institute, Manipal (South Zone); and Xavier Institute of Management, Bhubaneswar (East Zone) qualified for the National Finals held at Central Office, Mumbai on April 22, 2019, with the students from Indian Institute of Technology, Kanpur emerging as the winners. The winners are given a cash prize of ₹1 lakh along with a trophy and also offered an option to do an internship with the Reserve Bank for a period of three months.

Recruitments and Staff Strength

XI.35 During 2018 (January-December), the Reserve Bank recruited a total of 543 employees in various cadres (Table XI.3).

Table XI.3: Recruitments by the Reserve Bank in 2018*

Category of Recruitment	Category-wise Strength						
	Total	*of which*			Per cent of Total		
		SC	ST	OBC	SC	ST	OBC
1	2	3	4	5	6	7	8
Class I	152	19	11	44	12.50	7.24	28.95
Class III	27	-	-	6	-	-	22.22
Class IV							
(a) Office Attendant	364	25	33	106	6.87	9.07	29.12
(b) Maintenance Attendant	-	-	-	-	-	-	-
(c) Others	-	-	-	-	-	-	-
Total	**543**	**44**	**44**	**156**	**8.10**	**8.10**	**28.73**

***:** January to December 2018. **-:** Nil.
Source: RBI.

Table XI.4: Staff Strength of the Reserve Bank*

Category	Total Strength		Category-wise Strength						Percent to Total Strength		
			SC		ST		OBC		SC	ST	OBC
	2017	2018	2017	2018	2017	2018	2017	2018	2018		
1	2	3	4	5	6	7	8	9	10	11	12
Class I	6,955	6,522	1,052	988	444	415	850	949	15.15	6.36	14.55
Class III	3,831	3,497	572	537	211	195	892	840	15.36	5.58	24.02
Class IV	3,999	3,774	1,190	1,027	328	321	573	635	27.21	8.51	16.83
Total	**14,785**	**13,793**	**2,814**	**2,552**	**983**	**931**	**2,315**	**2,424**	**18.50**	**6.75**	**17.57**

***:** End December.
Source: RBI.

XI.36 The total staff strength of the Reserve Bank as on December 31, 2018 was 13,793 as compared with 14,785 a year ago, reflecting a reduction of 6.70 per cent (Table XI.4).

XI.37 During 2018 (January-December), four meetings were held between the management and representatives of the All India Reserve Bank Scheduled Castes/Scheduled Tribes and the Buddhist Federation to discuss issues relating to the implementation of the Reserve Bank's reservation policy. Two meetings were also held with representatives of Other Backward Class (OBC) Association.

XI.38 The total strength of ex-servicemen in the Reserve Bank stood at 921 at end December 2018 while the total number of employees with disabilities stood at 347 (Table XI.5). A total of 52 ex-servicemen and 43 persons with disabilities (PWD) were recruited during the year (Table XI. 6).

XI.39 As on June 30, 2019, the number of full-time employees in the Reserve Bank stood at 13,012. Of these, 6,434 were in Class I, 3,075 in Class III and 3,503 in Class IV.

Staff Welfare

XI.40 The Reserve Bank formulated an Equal Opportunity Policy in October 2018 following the enactment of the Rights of Persons with Disabilities Act, 2016 as part of its continued efforts to facilitate differently abled employees (Box XI.2).

Table XI.5: Total Strength of Ex-Servicemen and PWD*

Category	Total Strength	Ex-Service-men (ESM)	PWD (Persons with Disabilities)			
			Visually Impaired (VI)	Hearing Impaired (HI)	Ortho-pedically Handicap (OH)	Intel-lectual Disabili-ties (ID)
1	2	3	4	5	6	7
Class I	6,522	211	30	10	124	-
Class III	3,497	186	29	12	60	4
Class IV	3,774	524	10	8	60	-

***:** End December 2018. **-:** Nil.
Source: RBI.

Table XI.6: Recruitment of Ex-Servicemen and Persons with Disabilities during 2018*

Category	Ex-Servicemen (ESM)	PWD (Persons with Disabilities)			
		Visually Impaired (VI)	Hearing Impaired (HI)	Ortho-pedically Handicap (OH)	Intellectual Disabilities (ID)
1	2	3	4	5	6
Class I	2	1	1	1	-
Class III	-	7	6	8	4
Class IV	50	7	2	6	-

***:** January to December. **-:** Nil.
Source: RBI.

Box XI.2
Equal Opportunity Policy

The policy has provisions for assistive devices, barrier-free accessibility, post-recruitment and pre-promotion training, matters related to transfer and posting, special leave, allotment of residential accommodation among other facilities for persons with disabilities to assist them in effectively discharging their official duties. The policy also provides for a grievance redressal mechanism.

Prevention of Sexual Harassment of Women at the Workplace

XI.41 The formal grievance redressal mechanism for prevention of sexual harassment of women at the workplace, which has been in place since 1998, was further strengthened with the issue of a new comprehensive set of guidelines in 2014-15 in accordance with the Sexual Harassment of Women at Workplace (Prohibition, Prevention and Redressal) Act and Rules, 2013. During the period January to December 2018, two complaints were received and both were resolved. Several awareness programmes were organised at various Regional Offices (ROs) for sensitising the staff regarding these matters. Workshops on awareness on prevention of sexual harassment were conducted for the staff, including those newly recruited, vendors and contractual employees. The RBSC also conducted a programme for Counsellors posted at various Offices of the Reserve Bank.

Right to Information (RTI)

XI.42 The Reserve Bank received 15,526 requests for information and 1,512 appeals under the RTI Act during 2018-19. During the year, one training programme was conducted on the RTI Act by the Reserve Bank Staff College, Chennai.

Superannuation Benefits

XI.43 The Government of India has approved a proposal of the Reserve Bank to allow updation of pension for the Reserve Bank's retired employees.

Organisational Change

XI.44 In the context of the growing diversity, complexities and interconnectedness within the Indian financial sector and with a view to strengthening the supervision and regulation of commercial banks, urban cooperative banks and Non-Banking Financial Companies, it has been decided to create a specialised supervisory and regulatory cadre within the Reserve Bank.

Agenda for 2018-19: Implementation Status

XI.45 The Reserve Bank introduced mid-career mandatory training programme for eligible Officers in Middle Management (Grade 'C') in August 2018.

XI.46 The Reserve Bank also released a well-defined comprehensive policy on succession planning in April 2019 with a view to setting up a formal accountable system to facilitate seamless succession, particularly in the case of critical functions requiring substantial hands-on experience.

Agenda for 2019-20

XI.47 The Reserve Bank proposes to introduce a 'Wellness Policy' aimed at taking care of the health and general well-being of employees in a holistic manner. With the objective of improving the skill set of officers for higher roles, the scheme for Mid-Career Mandatory Training Programme Level II (MCMTP-II) for eligible officers in Grade 'E' shall be drafted. The base work to facilitate setting up of the specialised supervisory and regulatory cadre would be taken up. Internal processes would be simplified to maximise efficiency and effectiveness without diluting checks and balances. Further steps would be taken towards having a paperless, presence less and cashless mode of a comprehensive HR interface within the Reserve Bank.

4. ENTERPRISE-WIDE RISK MANAGEMENT (ERM)

XI.48 The Risk Monitoring Department (RMD) is the nodal Department for the formulation and operationalisation of enterprise-wide risk management (ERM) in the Reserve Bank. During the year, the focus of the Department has been on building up risk reporting, risk modelling and risk analysis in the Reserve Bank.

Expert Committee on Economic Capital Framework

XI.49 The Expert Committee to review the Economic Capital Framework of the Reserve Bank was constituted in consultation with the Government of India (Chairman: Dr. Bimal Jalan). The Committee has submitted its report to the Reserve Bank. Major recommendations of the Committee with regard to risk provisioning and surplus distribution are set out in Box XI.3

Box XI.3
Expert Committee to review the extant Economic Capital Framework of the Reserve Bank of India – Recommendations and Implementation

The Reserve Bank had developed the Economic Capital Framework (ECF) between 2014-15 and 2015-16 as an objective, rule-based, transparent methodology for determining the appropriate level of risk provisions to be made under the provisions of Section 47 of the RBI Act, 1934. The framework operated almost concurrently with the Malegam Committee's recommendations which were valid for a three-year period, *i.e.,* 2013-14 to 2015-16. Subsequent to the meeting of the Reserve Bank's Central Board held on November 19, 2018, the Reserve Bank, in consultation with the Government, constituted an Expert Committee to review the extant ECF of the Reserve Bank under the Chairmanship of Dr. Bimal Jalan, former Governor. Dr. Rakesh Mohan, former Deputy Governor was the Vice Chairman with Shri Bharat Doshi, Central Board Director, Shri Sudhir Mankad, Central Board Director, Shri Subhash Chandra Garg, Finance Secretary, Government of India and Shri N.S. Vishwanathan, Deputy Governor as members. On Shri Garg's transfer, Shri Rajiv Kumar, Finance Secretary, Government of India was appointed as member to the Committee.

The Committee was in complete agreement that the Reserve Bank forms the primary bulwark for monetary, financial and external stability. Hence, the resilience of the Reserve Bank needs to be commensurate with its public policy objectives and must be maintained above the level of peer central banks as would be expected of a central bank of one of the fastest growing large economies of the world.

The Committee's recommendations were based on the consideration of the role of central banks' financial resilience, cross-country practices, statutory provisions and the impact of the Reserve Bank's public policy mandate and operating environment on its balance sheet and the risks involved. The Committee concluded that among central banks, given the considerable variation in their roles and responsibilities, the environment they operate in, their financial relationship with the sovereign and their accounting frameworks, there is no internationally laid down risk capital framework for central banks. Central banks, therefore, develop and adapt risk management/capital frameworks to suit their own specific conditions and requirements. This also means that international comparisons will only reveal global trends and averages, but not a generally agreed international norm.

Major recommendations of the Committee with regard to risk provisioning and surplus distribution

Reserve Bank's Economic Capital: The Committee reviewed the status, need and justification of the various reserves, risk provisions and risk buffers maintained by the Reserve Bank and recommended their continuance. A clearer distinction between the two components of economic capital (realised equity and revaluation balances) was also recommended by the Committee as realised equity could be used for meeting all risks/losses as they were primarily built up from retained earnings, while revaluation balances could be reckoned only as risk buffers against market risks as they represented unrealised valuation gains and hence were not distributable. Further, there was

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only a one-way fungibility between them which implies that while a shortfall, if any, in revaluation balances *vis-à-vis* market risk provisioning requirements could be met through increased risk provisioning from net income, the reverse, *i.e.,* the use of surplus in revaluation balances over market risk provisioning requirements for covering shortfall in provisions for other risks is not permitted. The Committee recommended revising the presentation of the liabilities side of the Reserve Bank balance sheet to reflect this distinction.

Risk provisioning for Market Risk: The Committee has recommended the adoption of Expected Shortfall (ES) methodology under stressed conditions (in place of the extant Stressed-Value at Risk) for measuring the Reserve Bank's market risk on which there was growing consensus among central banks as well as commercial banks over the recent years. While central banks are seen to be adopting ES at 99 per cent confidence level (CL), the Committee has recommended the adoption of a target of ES 99.5 per cent CL keeping in view the macroeconomic stability requirements. In view of the cyclical volatility of the Reserve Bank's revaluation balances, a downward risk tolerance limit (RTL) of 97.5 per cent CL has also been articulated. Both levels were stress-tested for their adequacy by the Committee.

Size of Realised Equity: The Committee recognised that the Reserve Bank's provisioning for monetary, financial and external stability risks is the country's savings for a 'rainy day' (a monetary/ financial stability crisis) which has been consciously maintained with the Reserve Bank in view of its role as the Monetary Authority and the Lender of Last Resort. Realised equity is also required to cover credit risk and operational risk. These risk provisions, made primarily from retained earnings, is cumulatively referred to as the Contingent Risk Buffer (CRB) and has been recommended to be maintained within a range of 6.5 per cent to 5.5 per cent of the Reserve Bank's balance sheet, comprising 5.5 to 4.5 per cent for monetary and financial stability risks and 1.0 per cent for credit and operational risks. Further, any shortfall in revaluation balances *vis-à-vis* the market risk RTL would add to the requirement for realised equity. The Committee also recommended the development of methodologies for assessing the concentration risk of the forex portfolio as well as jointly assessing the Reserve Bank's market-credit risk.

Surplus Distribution Policy: The Committee has recommended a surplus distribution policy which targets the level of realised equity to be maintained by the Reserve Bank, within the overall level of its economic capital *vis-à-vis* the earlier policy which targeted total economic capital level alone. Only if realised equity is above its requirement, will the entire net income be transferable to the Government. If it is below the lower bound of requirement, risk provisioning will be made to the extent necessary and only the residual net income (if any) transferred to the Government. Within the range of CRB, *i.e.,* 6.5 to 5.5 percent of the balance sheet, the Central Board will decide on the level of risk provisioning.

Other observations/recommendations

Opportunity Cost of Reserve Bank's capital: The Committee recognised that the opportunity cost of Reserve Bank's capital is minimal as a major part of the interest on the G-sec held against its realised equity is returned to the Government as a part of surplus transfer. Further, the composition and size of Reserve Bank's balance sheet is determined by public policy considerations and its resilience generates positive externalities for the economy.

Alignment of Reserve Bank*'s financial year with Government's Fiscal Year and Interim dividend:* The Committee recommended alignment of the financial year of Reserve Bank with the fiscal year of the Government for greater cohesiveness in various projections and publications brought out by Reserve Bank. Further, in the following years, interim dividend to the Government may be paid only under exceptional circumstances.

Review of the Framework: The Committee recommended that the framework may be periodically reviewed every five years. Nevertheless, if there is a significant change in the Reserve Bank's risks and operating environment, an intermediate review may be considered.

Application of the Committee's recommendations

The Central Board accepted all the recommendations of the Committee and finalised the Reserve Bank's accounts for 2018-19 using the revised framework to determine risk provisioning and surplus transfer. The implications of this decision are given below:

(i) Realised Equity: Given that the available realised equity stood at 6.8 per cent of balance sheet, while the requirement recommended by the Committee was 6.5 per cent to 5.5 per cent of balance sheet, there was excess of risk provisioning to the extent of ₹116.08 billion at the upper bound of CRB and ₹526.37 billion at the lower bound of CRB. The Central Board decided to maintain the realised equity level at 5.5 per cent of balance sheet and

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the resultant excess risk provisions of ₹526.37 billion were written back.

(ii) Economic Capital Levels: While the revised framework technically would allow the Reserve Bank's economic capital levels as on June 30, 2019 to lie within the range of 24.5 per cent to 20.0 per cent of balance sheet (depending on the level of realised equity maintained and availability of revaluation balances), the economic capital as on June 30, 2019 stood at 23.3 per cent of balance sheet.

As financial resilience was within the desired range, the entire net income of ₹1,234.14 billion for the year 2018-19, of which an amount of ₹280 billion has already been paid as interim dividend, will be transferred to the Government of India. This is in addition to the ₹526.37 billion of excess risk provisions which has been written back and consequently will be transferred to the Government.

As on June 30, 2019, the Reserve Bank stands as a central bank with one of the highest levels of financial resilience globally.

Agenda for 2018-19: Implementation Status

Integration of Risk Management of Foreign Exchange Reserves, IT and Cyber Risks

XI.50 With the maturing of the risk function in the Reserve Bank, the middle office in the Department of External Investments and Operations (DEIO) responsible for risk management of Foreign Exchange Reserves and Chief Information and Security Officer responsible for monitoring IT and Cyber risks were integrated with RMD, for synergy and better risk management.

Risk Tolerance Framework

XI.51 An Internal Committee was constituted for overseeing the implementation of the pilot project for roll out of a Risk Tolerance Framework in the DEIO and the FMOD to cover financial risks of the Reserve Bank. The Committee reviewed the existing risk tolerance limits in these business areas in line with the internally articulated risk tolerance stance. For operational risks, action plans were prepared by concerned business areas for the identified 'High' and 'Significant' risk processes.

Web-based Integrated Risk Monitoring and Incident Reporting System (IRIS)

XI.52 An enterprise solution, Integrated Risk Monitoring and Incident Reporting System (IRIS), which is a web-based self-service portal to report, manage and track all incidents and risks is being implemented. This system would codify risks escalated by the process of incident reporting and Risk Registers. It would then enable preparation of Risk Dashboards on identified risk areas, which will improve Risk Reporting to the top management.

Agenda for 2019-20

Modelling Credit Risk and Operational Risk in the Reserve Bank

XI.53 Internal Committees were set up in the Reserve Bank for developing models for assessing the overall Credit Risk and Operational Risk. For the Credit Risk assessment, the Internal Committee examined utility of various models to quantify credit risk, while for operational risk assessment, the utility of New Standardised Approach was examined.

Risk Dashboards for Risk Reporting

XI.54 With the objective of improving risk reporting to the top management to enable better risk monitoring, dashboards for the important risk areas would be prepared during 2019-20.

5. INTERNAL AUDIT/INSPECTION

XI.55 The Inspection Department of the Reserve Bank examines, evaluates and reports on internal control and governance processes and provides adequate risk assurance to the top management and the Central Board under Risk Based Internal Audit (RBIA) framework. The Department is also the Secretariat to the Audit and Risk Management Sub-Committee (ARMS) of the Central Board and also to the Executive Directors' Committee (EDC) overseeing the internal audit function. The Department monitors the functioning of the Concurrent Audit (CA) system and Control Self-Assessment Audit (CSAA) in the Reserve Bank. The automation of CSAA will facilitate processing and compliance submission which would result in better risk management with easier access to a repository of information for analytics and efficient monitoring (Box XI.4).

Agenda for 2018-19: Implementation Status

XI.56 The process of automation of various audit processes was galvanised with the rolling out of a Concurrent Audit Functionality in Audit Management and Risk Monitoring System (AMRMS) across all CODs/Regional Offices/ Training Establishments in the Reserve Bank from January 2019. The main functionalities of AMRMS *viz*., RBIA is already live and being extensively used across the Reserve Bank. The development of the CSAA functionality in AMRMS has been completed and the User Acceptance Test (UAT)

Box XI.4
Management of Operational Risk: Importance of Self-Assessment

Control Self-Assessment (CSA) plays a vital role as a first line of defence in the management of operational risk. It is defined as a process through which internal control effectiveness is assessed with the objective of providing reasonable assurance that all business objectives would be met.

The concept of CSA was developed by Bruce Mc Cuaig in 1987 for Gulf Canada (an oil company). Methodologies have since evolved and are extensively practised across industries, including the banking sector in the US, European Union and other countries. The three approaches to CSA which are commonly practised are facilitating meetings, using questionnaires and management-produced analysis. CSA is conducted by the operating staff in the business units themselves, also referred to as the first line of defence.

The CSA process:

- improves the internal control environment of an organisation by increasing awareness of organisational objectives and the role of internal control in achieving goals and objectives;
- creates a clear line of accountability for controls, and reinforced governance regime, leading to a better understanding of business operations (by both management and operational staff);
- motivates personnel to carefully design and implement control processes and continually improve operating control processes;
- helps management to reduce the costs of oversight activities while expanding their coverage; and
- assists internal auditors in gathering relevant information about risks and controls; focuses audit work on high risk and unusual areas, and forges greater collaboration with operating managers and work teams.

CSA audit was introduced in the Reserve Bank in 1999 and is conducted at half yearly intervals. The preventive and remedial measures are undertaken at the office level itself and reported to the audit sub-Committee of the Central Board, and macro level monitoring is done at the central office level.

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2. Professional Practices pamphlet 98-2 A, A Perspective on Control Self-Assessment (Institute of Internal Auditors: Alamante, Florida, 1998).
3. Control Self-assessment- Good Practice Note by CGIAR Internal Audit Unit (July 2017).

process has commenced. The same is expected to be rolled out on a pilot basis by end of October 2019 after successful UAT and extensive user awareness and training across all the offices of Reserve Bank. The Vulnerability Assessment and Penetration Testing (VA-PT) exercise of the IT assets of the Reserve Bank, which was hitherto handled by the Department, is now managed by the Risk Monitoring Department (RMD). The Project Audit Guidelines have been prepared for the management of Project Risk in the Reserve Bank.

Agenda for 2019-20

XI.57 The Department will focus on knowledge and capacity building across the Reserve Bank after the successful roll-out of RBIA, CA and CSAA functionalities in the AMRMS application, leveraging the latter's benefits through data mining, analytics and MIS reports for effective Risk Assurance to the top management. In order to ensure the quality, adequacy and sustenance of the compliance of RBIA observations, compliance audit of few select offices would be conducted. The newly formulated Project Audit Guidelines would be implemented across the Reserve Bank. The risk rating and scoring methodology adopted for RBIA would also be reviewed during the year. The Department would endeavour to achieve 80 per cent convergence of risk-rating as per Risk Assessment Methodology for Operational Risk (RAM-OR) and Inspection Department Methodology with respect to RBIA.

6. CORPORATE STRATEGY AND BUDGET MANAGEMENT

XI.58 The Corporate Strategy and Budget Department (CSBD) coordinates and develops strategies and annual action plans for the Reserve Bank; formulates its annual budget by adopting activity-based budgeting; and acts as a nodal point for the Business Continuity Management Framework of the organisation through Business Continuity Plans (BCPs). The Department oversees the functioning of External Funded Institutes (EFIs) to ensure that they are working in an effective and efficient manner.

Agenda for 2018-19 – Implementation Status

XI.59 During the year, a comprehensive review of the current strategic framework of the Reserve Bank was undertaken, and a medium-term strategy document for the period 2019-22 to be known as '*Utkarsh* 2022' was prepared, which on approval by the Central Board in its meeting held on July 8, 2019 at New Delhi, has been released for implementation (Box XI.5).

XI.60 During the year, smooth conduct of meetings of the Governing Boards and its sub-committees of the external funded institutions (EFIs) was ensured. Other activities included, the selection process of the Director for Indian Institute of Bank Management (IIBM) and monitoring the implementation of Review Committees' recommendations for the Centre for Advanced Financial Research and Learning (CAFRAL), Indira Gandhi Institute of Development Research (IGIDR) and IIBM. Furthermore, a review committee to assess the performance and the development of future plans for the National Institute of Bank Management (NIBM) was constituted.

XI.61 In-principle approval was granted for opening of a Tier III office at Itanagar, Arunachal Pradesh.

Agenda for 2019-20

XI.62 While formulating the Budget for 2019-20, the endeavour will be to strive towards establishing linkages between the strategic action points of Central Office Departments (CODs) and their budgets. Enhancing internal control functions in order to further minimise the gap between targets and actual realisation–both

Box XI.5
Utkarsh 2022 – RBI's Medium-Term Strategy

While Strategic Management has always been an important tool of governance in RBI, a formal strategic management framework was launched in April 2015 to rearticulate the core purpose, values and vision statement of the Reserve Bank so as to delineate its strategic objectives in contemporary terms, to provide a framework and backdrop within and against which its policies would be formulated. These core purpose (reflecting the Reserve Bank's commitments to the nation) and values (Public Interest, Integrity and Independence, Responsiveness and Innovation, Diversity and Inclusiveness, and Introspection and Pursuit of Excellence) still remain relevant and valid; however, a need has been felt to have a medium-term dynamic Vision statement reflecting the Reserve Bank's responses to emerging challenges and ultra-fast changes in the economic, social and technological environment in which we operate. '*Utkarsh* 2022', the Reserve Bank's Medium-term Strategy Framework is in line with the evolving macroeconomic environment. The strategic framework of an organisation enables it to prioritise its functions and optimally utilise its resources in order to position it for the opportunities ahead.

'*Utkarsh* 2022' has been prepared in a Top-down approach with active involvement of the Reserve Bank's Top Management and Central Office Departments. Its framework contains, *inter alia,* the Reserve Bank's Mission, as its *raison d'être*, to which all its stakeholders can subscribe, a revised Core Purpose, Values and Vision Statements, reiterating the Reserve Bank's commitment to the Nation.

The Medium-term Vision Statements set out the following:

Vision 1: Excellence in performance of statutory and other functions

Vision 2: Strengthened trust of citizens and other Institutions in the RBI

Vision 3: Enhanced relevance and significance in national and global roles

Vision 4: Transparent, accountable and ethics-driven internal governance

Vision 5: Best-in-class and environment friendly digital as well as physical infrastructure

Vision 6: Innovative, dynamic and skilled human resources

These vision statements are mutually reinforcing and will drive the Reserve Bank during the medium-term period (2019-22) through various strategies. The strategies are nothing but the well thought-out actions to exploit emerging opportunities and meet challenges of the future for the betterment of the Reserve Bank.

The desired outputs will be realised in terms of achievement of strategic goals through one or more tangible and time-bound milestones as shown in the following flow chart:

Vision Statements ⇨ Strategies ⇨ Goals ⇨ Milestones

The Top Management of the Reserve Bank will periodically monitor implementation and progress of '*Utkarsh* 2022' through a Sub-committee of the Central Board.

in terms of strategy and budget - is an ongoing pursuit, as also enhancing the effectiveness of the Annual Strategy formulation and implementation.

XI.63 In order to have an apex level monitoring of strategy implementation, a sub-committee of the Central Board shall be set up and a Dashboard will be developed which will also facilitate early warnings for potential non-achievement of Strategic Goals.

Internal Financial Controls Exercise

XI.64 Financial Control functions are established in an organisation with a view to reinforcing the internal governance framework and to rationalise expenditures so that budgeting and expenditure processes ultimately lead to achievement of organisational goals and objectives.

XI.65 Internal Financial controls in the Reserve Bank are exercised through the following channels:

a. **Expenditure Rules, 2018**: The Central Board of the Reserve Bank has laid down detailed Expenditure Rules (ER), prescribing Budget heads for various expenditures broadly categorised into two categories, *viz*., capital and revenue. These rules also prescribe various sanctioning and approving authorities for expenditures to be incurred. These rules establish a hierarchical structure for financial sanctions and ensure that budgeting and expenditure activities are in sync with organisational goals.

b. **Centralised IT based Accounting Module:** The budgeting process of the Reserve Bank is largely automated and centralised through its Core Banking Solution (CBS), E-Kuber. The Reserve Bank is striving towards automation of the accounting process and information system with the objective of strengthening financial controls, improving MIS and reducing scope of manual errors.

c. **Annual Budget Exercise:** The annual budget of the Reserve Bank is approved by the Central Board in the month of July. The Reserve Bank follows activity driven, zero-based budgeting.

d. **Annual/Quarterly Budget Review:** Expenditures of all accounting units are reviewed quarterly and annually by the Committee of Central Board (CCB) and Central Board of the Reserve Bank, respectively, where significant divergences are analysed and directions given for corrective steps.

e. **Framework for Promoting Robust Budget Management:** The Reserve Bank is striving to promote budgetary discipline among various internal units by proposing a rating framework. Under this framework, all the units shall be rated on the basis of parameters for efficiency and effectiveness of budget preparation and utilisation.

7. CORPORATE SERVICES (DCS)

XI.66 The objective of the Department of Corporate Services (DCS) is to coordinate and facilitate delivery of internal corporate services for catering to the needs of various Central Office Departments/Regional Offices of the Reserve Bank.

Agenda for 2018-19: Implementation Status

XI.67 With regard to the Electronic Documents Management System (EDMS) project by the Department of Information Technology (DIT), timelines for preservation of records was put in place by Central Office Departments for their core function areas.

Agenda for 2019-20

XI.68 The Department's agenda for the coming year includes addressing the weaknesses in the record management system in the Reserve Bank and creating an institutional memory by strengthening existing record management systems. Identification and destruction of all outdated records in all Regional Offices/ Central Office Departments would be completed by January 2020. However, in terms of Administrative Circular dated July 10, 2019, DCS stands wound up and consequent upon that the above agenda for 2019-20 stands transferred to DIT and HRMD, Central Office.

8. RAJBHASHA

XI.69 During 2018-19, the Reserve Bank continued its efforts to ensure compliance with statutory provisions of the Official Language Act to promote the use of Hindi in its working.

Agenda for 2018-19: Implementation Status

XI.70 During the year, 162 staff members passed the *Pragya*[1] and 189 passed the *Parangat*[2]

[1] The examination is conducted for those who do not have working knowledge of Hindi.

[2] The highest examination to acquire proficiency in Hindi.

examination. In order to enhance the use of Hindi on computers, staff members were trained to work in Hindi on computers. To increase the use of Hindi in noting and correspondence, 153 (July 2018 - June 2019) workshops were conducted across the Reserve Bank, which included Hindi workshops conducted for senior officers at CODs and RO levels. ‘Hindi Fortnight’ was celebrated in all the regional offices and central office departments and several Hindi competitions were conducted.

XI.71 For learning Hindi through regional languages, teaching material was prepared in Punjabi during the year. Such material has already been prepared in ten other languages (*viz.,* Tamil, Malayalam, Kannada, Telugu, Odia, Bangla, Assamese, Konkani, Gujarati and Marathi).

Training

XI.72 Two batches of Rajbhasha officers were imparted training under the Management Development Programme. A translation workshop was also conducted at the RBSC regarding translation of legal documents, financial and banking terminologies.

XI.73 For two of its articles, the Reserve Bank’s Hindi journal, *Banking Chintan Anuchintan* was awarded a Silver and Bronze medals from the Association of Business Communicators of India (ABCI). The statutory publications of the Reserve Bank, *viz*., *Annual Report, Report on Trend and Progress of Banking in India,* the *Financial Stability Report*, *Weekly Statistical Supplement* and monthly *Reserve Bank of India Bulletin* were also published in bilingual form and are available on the Reserve Bank’s website. *Rajbhasha Samachar,* covering the progressive use of Hindi in the Reserve Bank, was published. An e-Cartoon Booklet was published to disseminate information about the Rajbhasha Policy amongst staff members.

Incentives

XI.74 An incentive scheme for writing outstanding books in Hindi on banking, with an award of ₹1.25 lakh is in place to encourage writing in Hindi. During the year, an All India Hindi essay writing competition was held for the staff members of the Reserve Bank, public sector banks and financial institutions.

Agenda for 2019-20

XI.75 An annual work plan for 2019-20 has been prepared, keeping in view the requirements of the Annual Programme published by the Government of India and the issues raised by the Committee of the Parliament on Official Language. Implementation of the remaining modules of the new *Rajbhasha Reporting System* is also on the agenda for 2019-20.

9. PREMISES DEPARTMENT

XI.76 The mandate of the Premises Department is creation, maintenance and up-gradation of the Reserve Bank’s physical infrastructure. During 2018-19, significant developments have taken place in this direction, including initiation of new activities.

Agenda for 2018-19: Implementation Status

Construction Projects

XI.77 During the year, the approval of CCB was received for acquisition of land for construction of office buildings at Aizawl where the Reserve Bank is functioning from the rented premises. On the construction front, senior officers’ quarters, along with common amenities, have been completed and allotted to officers’ at Mumbai and partially occupied at Chennai. Construction of residential quarters for officers at New Delhi and Mumbai; and Centre for Advanced Financial Research and Learning (CAFRAL) at Mumbai are under progress.

Green Initiative

XI.78 With a view to sustaining environment and conserving energy, water and other non-renewable resources, considerable emphasis is placed on promoting use of renewable natural resources like solar energy and water. Grid interactive solar power generation facilities have been installed in various office premises for enhancing capacity and the total power generation capacity has reached a level of 1,440 kwp. Rain water harvesting and sewage treatment plants have been installed in various premises of the Reserve Bank for conservation of water and their efficient use. Organic waste convertors have also been installed in many office and residential premises of the Reserve Bank.

XI.79 The Reserve Bank was conferred with the "Green Champion Award" under the category of 'Government Organisation Leading the Green Building Movement in India' by the Indian Green Building Council in recognition of the initiatives taken to make the new and existing buildings green compliant.

Major Policy Guidelines

XI.80 Guidelines on structural stability and safety of Reserve Bank's office and residential buildings, including retrofitting measures, have been issued to Regional Offices and Training Establishments of the Reserve Bank for implementation.

Agenda for 2019-20

XI.81 The process of land acquisition for the proposed office building and residential quarters at Amaravati has been initiated. Construction of new office buildings at Dehradun and Raipur and residential quarters at Dehradun is expected to commence and construction of quarters at New Delhi and Chennai is expected to be completed during 2019-20. Construction of a residential colony at Jammu is on the drawing board. The Department has set the following goals and milestones for the year 2019-20 under *Utkarsh* 2022 - (a) to get the relevant green ratings from IGBC/GRIHA for at least two existing residential buildings; (b) at least 1.5 per cent* of power consumed by all Reserve Bank premises to be from renewable sources; (c) at least 1.25 per cent* of energy savings; and (d) at least 2.5 per cent* water conservation/savings.

* consumption as on June 2018 is basis for targets.

Annex

Table 1: Attendance in the Meeting of the Central Board of Directors during July 1, 2018- June 30, 2019

Name of the Member	Appointed/Nominated under RBI Act, 1934	No. of Meetings Held	No. of Meetings Attended
1	2	3	4
Urjit R. Patel*	8(1)(a)	3	3
Shaktikanta Das**	8(1)(a)	3	3
N. S. Vishwanathan	8(1)(a)	6	6
Viral V. Acharya	8(1)(a)	6	6
B. P. Kanungo	8(1)(a)	6	6
Mahesh Kumar Jain	8(1)(a)	6	6
Nachiket M. Mor^	8(1)(b)	2	2
Prasanna Kumar Mohanty	8(1)(b)	6	5
Dilip S. Shanghvi	8(1)(b)	6	5
Revathy Iyer@	8(1)(b)	4	4
Sachin Chaturvedi@	8(1)(b)	4	4
Natarajan Chandrasekaran	8(1)(c)	6	3
Bharat N. Doshi	8(1)(c)	6	6
Sudhir Mankad	8(1)(c)	6	6
Ashok Gulati	8(1)(c)	6	2
Manish Sabharwal	8(1)(c)	6	6
Satish Kashinath Marathe#	8(1)(c)	5	5
Swaminathan Gurumurthy#	8(1)(c)	5	5
Subhash Chandra Garg	8(1)(d)	6	6
Rajiv Kumar	8(1)(d)	6	4

* Relinquished charge as Governor on December 11, 2018.

** Took charge as Governor on December 12, 2018.

^ Director till September 19, 2018.

@ Director with effect from September 19, 2018.

Director with effect from August 7, 2018.

Table 2: Attendance in the Meeting of the Committees of the Central Board during July 1, 2018-June 30, 2019

Name of the Member	Appointed/Nominated under RBI Act,1934	No. of Meetings Held	No. of Meetings Attended
1	2	3	4
I. Committee of the Central Board (CCB)			
Urjit R. Patel*	8(1)(a)	19	17
Shaktikanta Das**	8(1)(a)	26	23
N. S. Vishwanathan	8(1)(a)	45	34
Viral V. Acharya	8(1)(a)	45	33
B. P. Kanungo	8(1)(a)	45	31
Mahesh Kumar Jain	8(1)(a)	45	35
Nachiket M. Mor*	8(1)(b)	4	2
Prasanna Kumar Mohanty	8(1)(b)	15	13
Dilip S. Shanghvi	8(1)(b)	12	10
Revathy Iyer@	8(1)(b)	9	7
Sachin Chaturvedi@	8(1)(b)	7	2
Natarajan Chandrasekaran	8(1)(c)	14	4
Bharat N. Doshi	8(1)(c)	24	24
Sudhir Mankad	8(1)(c)	14	11
Ashok Gulati	8(1)(c)	15	7
Manish Sabharwal	8(1)(c)	17	13
Satish Kashinath Marathe#	8(1)(c)	12	9
Swaminathan Gurumurthy#	8(1)(c)	10	1
Subhash Chandra Garg	8(1)(d)	23	23
Rajiv Kumar	8(1)(d)	2	2

* Relinquished charge as Governor on December 11, 2018.
** Took charge as Governor on December 12, 2018.
^ Director till September 19, 2018.
@ Director with effect from September 19, 2018.
# Director with effect from August 7, 2018.

II. Board for Financial Supervision (BFS)			
Urjit R. Patel	Chairman	4	4
Shaktikanta Das	Chairman	6	6
N. S. Vishwanathan@	Vice-Chairman	10	10
Mahesh Kumar Jain#	Vice-Chairman	10	10
Viral V. Acharya	Member	10	9
B. P. Kanungo	Member	10	8
Nachiket M. Mor*	Member	1	1
Bharat N. Doshi	Member	10	9
Sudhir Mankad	Member	10	6
Ashok Gulati	Member	10	7
Satish Kashinath Marathe^	Member	8	8

*Member till September 19, 2018.
^ Member from October 17, 2018.
@ Vice-Chairman till February 18, 2019.
# Vice-Chairman from February 18, 2019.

(Contd...)

Table 2: Attendance in the Meeting of the Committees of the Central Board during July 1, 2018-June 30, 2019

Name of the Member	Appointed/Nominated under RBI Act,1934	No. of Meetings Held	No. of Meetings Attended
1	2	3	4
III. Board for Regulation and Supervision of Payment and Settlement Systems (BPSS)			
Shaktikanta Das*	Chairman	1	1
Urjit R. Patel**	Chairman	1	1
B. P. Kanungo	Vice-Chairman	2	2
N. S. Vishwanathan	Member	2	1
Viral V. Acharya	Member	2	1
Mahesh Kumar Jain	Member	2	2
Natarajan Chandrasekaran	Member	2	2
Manish Sabharwal	Member	2	2

* Took charge as Governor on December 12, 2018.

** Relinquished charge as Governor on December 11, 2018.

Table 3: Attendance in the Meeting of the Sub-Committees of the Board during July 1, 2018 - June 30, 2019

Name of the Member	Appointed/Nominated under RBI Act, 1934	No. of Meetings Held	No. of Meetings Attended
1	2	3	4
I. Audit & Risk Management Sub-Committee (ARMS)			
Bharat N. Doshi	Chairman	7	7
Sudhir Mankad	Member	7	6
Nachiket M. Mor^	Member	2	1
Revathy Iyer	Member	5	5
N. S. Vishwanathan	Member	7	7
Viral V. Acharya	Invitee	7	7
B. P. Kanungo	Invitee	7	7
Mahesh Kumar Jain	Invitee	7	7

^ Member till September 19, 2018.

II. Building Sub-Committee (BSC)			
Dilip S. Shanghvi	Chairman	NIL	NIL
B. P. Kanungo	Member	NIL	NIL
III. Human Resource Management Sub-Committee (HRM-SC)			
Manish Sabharwal	Chairman	6	6
Dilip Shanghvi	Member	6	3
Viral Acharya	Member	6	6
N S Vishwanathan	Invitee	1	1
B P Kanungo	Invitee	1	1
M K Jain	Invitee	1	1
IV. Information Technology Sub-Committee (IT-SC)			
Manish Sabharwal	Chairman	4	4
Sachin Chaturvedi	Member	2	2
B. P. Kanungo	Member	4	4

Table 4: Attendance in the Meeting of Standing Committee of the Central Board of Directors during July 1, 2018 - June 30, 2019

Name of the Member	No. of Meetings Held	No. of Meetings Attended
1	2	3
B. P. Kanungo, Chairman	2	2
Ashok Gulati, Northern Area	1	1
Prasanna Kumar Mohanty, Southern Area	1	1

Table 5: Attendance in the Meetings of Local Boards during July 1, 2018 - June 30, 2019

Name of the Member	Appointed/Nominated under RBI Act, 1934	No. of Meetings Held	No. of Meetings Attended
1	2	3	4
Nachiket M. Mor, EALB^	Section 9(1)	1	1
Sachin Chaturvedi, EALB	Section 9(1)	3	3
Sunil Mitra, EALB	Section 9(1)	4	4
Dilip S. Shanghvi, WALB	Section 9(1)	5	5
V. R. Bhanshali, WALB	Section 9(1)	5	5
Revathy Iyer, NALB	Section 9(1)	3	3
R. N. Dubey, NALB	Section 9(1)	3	3
P. K. Mohanty, SALB	Section 9(1)	1	1
Rakesh Jain, SALB#	Section 9(1)	1	1

^ Member till October 13, 2018.
# Member till March 11, 2019.
EALB: Eastern Area Local Board.
WALB: Western Area Local Board.
NALB: Northern Area Local Board.
SALB: Southern Area Local Board.

XII THE RESERVE BANK'S ACCOUNTS FOR 2018-19

The balance sheet size of the Reserve Bank increased by 13.42 per cent for the year ended June 30, 2019. While income for the year 2018-19 increased by 146.59 per cent, the expenditure decreased by 39.72 per cent. The year ended with an overall surplus of ₹1,759.87 billion as against ₹500 billion in the previous year, representing an increase of 251.97 per cent.

XII.1 The balance sheet of the Reserve Bank plays a critical role in the functioning of the country's economy largely reflecting the activities carried out in pursuance of its currency issue function as well as monetary policy and reserve management objectives. The key financial results of the Reserve Bank's operations during the year 2018-19 (July - June) are set out in the following paragraphs.

XII.2 There was an increase in the size of the Bank's balance sheet during 2018-19. The balance sheet increased by ₹4,853.11 billion, *i.e.* 13.42 per cent from ₹36,175.94 billion as on June 30, 2018 to ₹41,029.05 billion as on June 30, 2019. The increase on the asset side was due to increase in domestic and foreign investments by 57.19 per cent and 5.70 per cent, respectively and increase in gold by 16.30 per cent. On the liability side, the increase was due to increase in Notes issued, Other Liabilities and Provisions, and Deposits by 13.43 per cent, 11.10 per cent and 17.21 per cent, respectively. Domestic assets constituted 28.03 per cent while the foreign currency assets and gold (including gold held in India) constituted 71.97 per cent of total assets as on June 30, 2019 as against 23.18 per cent and 76.82 per cent, respectively as on June 30, 2018.

XII.3 The Bank had developed the Economic Capital Framework (ECF) between 2014-15 and 2015-16 as an objective, rule-based, transparent methodology for determining the appropriate level of risk provisions to be made under the provisions of Section 47 of the RBI Act, 1934. Subsequent to the meeting of the Reserve Bank's Central Board held on November 19, 2018, the Reserve Bank, in consultation with the Government of India, constituted an Expert Committee to review the extant ECF of the Reserve Bank under the Chairmanship of Dr. Bimal Jalan, the former Governor. The Committee has since submitted its report to the Governor of the Reserve Bank. The Central Board in its meeting held on August 26, 2019, after deliberating on the report, accepted all the recommendations of the Committee and finalised the Reserve Bank's accounts for 2018-19 using the revised framework to determine risk provisioning and surplus transfer. As the Reserve Bank's financial resilience was within the desired range, the excess risk provision amounting to ₹526.37 billion was written back from Contingency Fund (CF) to income.

XII.4 Further, provision was made towards Asset Development Fund (ADF) amounting to ₹0.64 billion on account of fresh investments by the Reserve Bank in National Centre for Financial Education (NCFE) and Indian Financial Technology and Allied Services (IFTAS).

XII.5 The surplus before the above adjustments amounted to ₹1,234.14 billion. Consequent to the said adjustments, the surplus transferable to Government of India was ₹1,759.87 billion (including ₹280 billion already transferred to the Government of India during the year).

Table XII.1: Trends in Income, Expenditure and Net Disposable Income

(₹ billion)

Item	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
a) Income	792.56	808.70	618.18	782.81	1,930.36
b) Total Expenditure[1]	133.56[2]	149.90[3]	311.55[4]	282.77[5]	170.45[6]
c) Net Disposable Income (a-b)	659.00	658.80	306.63	500.04	1,759.91
d) Transfer to funds[7]	0.04	0.04	0.04	0.04	0.04
e) Surplus transferred to the Government (c-d)	658.96	658.76	306.59	500.00	1,759.87

Note:
1. Since June 30, 2015, transfers to CF and ADF are being made through provisions head in Income Statement.
2. Includes a provision of ₹10 billion towards additional capital contribution in NHB.
3. Includes a provision of ₹10 billion towards additional capital contribution in BRBNMPL.
4. Includes a provision of ₹0.50 billion towards capital contribution in the Reserve Bank's subsidiary Reserve Bank Information Technology (P) Ltd. (ReBIT) and a provision of ₹131.40 billion towards transfer to CF.
5. Includes a provision of ₹141.90 billion towards transfer to CF.
6. Includes a provision of ₹0.64 billion towards transfer to ADF.
7. An amount of ₹10 million each has been transferred to the National Industrial Credit (Long Term Operations) Fund, the National Rural Credit (Long Term Operations) Fund, the National Rural Credit (Stabilisation) Fund and the National Housing Credit (Long Term Operations) Fund during each of the five years.

XII.6 The trends in income, expenditure, net disposable income and the surplus transferred to the Government of India are given in Table XII.1.

XII.7 The balance sheet and the Income Statement for the year 2018-19 along with the schedules, statement of Significant Accounting Policies and supporting Notes to Accounts are as follows:

RESERVE BANK OF INDIA
BALANCE SHEET AS ON JUNE 30, 2019

(Amount in ₹ billion)

Liabilities	Schedule	2017-18	2018-19	Assets	Schedule	2017-18	2018-19
Capital		0.05	0.05	**Assets of Banking Department (BD)**			
Reserve Fund		65.00	65.00	Notes, Rupee Coin, Small Coin	5	0.09	0.09
Other Reserves	1	2.28	2.30	Gold Coin and Bullion	6	696.74	882.98
Deposits	2	6,525.97	7,649.22	Investments-Foreign-BD	7	7,983.89	6,964.53
Other Liabilities and Provisions	3	10,463.04	11,624.51	Investments-Domestic-BD	8	6,297.45	9,898.77
				Bills Purchased and Discounted		0.00	0.00
				Loans and Advances	9	1,638.55	931.87
				Investment in Subsidiaries	10	33.70	19.64
				Other Assets	11	405.92	643.20
Liabilities of Issue Department				**Assets of Issue Department (ID)**			
Notes issued	4	19,119.60	21,687.97	Gold Coin and Bullion (as backing for Note issue)	6	743.49	792.04
				Rupee Coin		9.26	8.28
				Investments-Foreign-ID	7	18,366.85	20,887.65
				Investments-Domestic-ID	8	0.00	0.00
				Domestic Bills of Exchange and other Commercial Papers		0.00	0.00
Total Liabilities		**36,175.94**	**41,029.05**	**Total Assets**		**36,175.94**	**41,029.05**

Nirmal Chand Chief General Manager-in-Charge	M. K. Jain Deputy Governor	B.P. Kanungo Deputy Governor	N. S. Vishwanathan Deputy Governor	Shaktikanta Das Governor

RESERVE BANK OF INDIA
INCOME STATEMENT FOR THE YEAR ENDED JUNE 2019

(Amount in ₹ billion)

INCOME	Schedule	2017-18	2018-19
Interest	12	738.71	1,068.37
Other income	13	44.10	861.99
	Total	**782.81**	**1,930.36**
EXPENDITURE			
Printing of Notes		49.12	48.11
Expenditure on Remittance of Currency		1.15	0.88
Agency Charges	14	39.03	39.10
Employee Cost		38.48	68.51
Interest		0.01	0.01
Postage and Telecommunication Charges		0.87	1.03
Printing and Stationery		0.23	0.22
Rent, Taxes, Insurance, Lighting, *etc.*		1.27	1.26
Repairs and Maintenance		1.03	0.98
Directors' and Local Board Members' Fees and Expenses		0.02	0.02
Auditors' Fees and Expenses		0.06	0.05
Law Charges		0.09	0.17
Miscellaneous Expenses		8.08	7.97
Depreciation		1.43	1.50
Provisions		141.90	0.64
	Total	**282.77**	**170.45**
Available Balance		**500.04**	**1,759.91**
Less:			
(a) Contribution to:			
i) National Industrial Credit (Long Term Operations) Fund		0.01	0.01
ii) National Housing Credit (Long Term Operations) Fund		0.01	0.01
(b) Transferable to NABARD:			
i) National Rural Credit (Long Term Operations) Fund[1]		0.01	0.01
ii) National Rural Credit (Stabilisation) Fund[1]		0.01	0.01
(c) Others Amount transferred to Central Government during the year		100.00	280.00
	Surplus payable to the Central Government	**400.00**	**1,479.87**

1. These funds are maintained by the National Bank for Agriculture and Rural Development (NABARD).

Nirmal Chand Chief General Manager-in-Charge	M. K. Jain Deputy Governor	B.P. Kanungo Deputy Governor	N. S. Vishwanathan Deputy Governor	Shaktikanta Das Governor

SCHEDULES FORMING PART OF BALANCE SHEET AND INCOME STATEMENT

(Amount in ₹ billion)

		2017-18	2018-19
Schedule 1:	**Other Reserves**		
	(i) National Industrial Credit (Long Term Operations) Fund	0.27	0.28
	(ii) National Housing Credit (Long Term Operations) Fund	2.01	2.02
	Total	**2.28**	**2.30**
Schedule 2:	**Deposits**		
	(a) Government		
	(i) Central Government	1.01	1.01
	(ii) State Governments	0.42	0.42
	Sub total	***1.43***	***1.43***
	(b) Banks		
	(i) Scheduled Commercial Banks	4,744.18	5,129.26
	(ii) Scheduled State Co-operative Banks	35.20	39.98
	(iii) Other Scheduled Co-operative Banks	84.01	90.29
	(iv) Non-Scheduled State Co-operative Banks	19.15	24.91
	(v) Other Banks	188.41	209.64
	Sub total	***5,070.95***	***5,494.08***
	(c) Financial Institutions outside India		
	(i) Repo borrowing - Foreign	0.00	0.00
	(ii) Reverse Repo Margin - Foreign	0.00	0.00
	Sub total	***0.00***	***0.00***
	(d) Others		
	(i) Administrators of RBI Employee PF A/c	46.81	46.38
	(ii) Depositors' Education and Awareness Fund	195.67	257.47
	(iii) Balances of Foreign Central Banks	18.80	19.05
	(iv) Balances of Indian Financial Institutions	2.40	2.13
	(v) Balances of International Financial Institutions	3.20	3.38
	(vi) Mutual Fund	0.01	0.01
	(vii) Others	1,186.70	1,825.29
	Sub total	***1,453.59***	***2,153.71***
	Total	**6,525.97**	**7,649.22**
Schedule 3:	**Other Liabilities and Provisions**		
	(i) Contingency Fund (CF)	2,321.08	1,963.44
	(ii) Asset Development Fund (ADF)	228.11	228.75
	(iii) Currency and Gold Revaluation Account (CGRA)	6,916.41	6,644.80
	(iv) Investment Revaluation Account-Foreign Securities (IRA-FS)	0.00	157.35
	(v) Investment Revaluation Account-Rupee Securities (IRA-RS)	132.85	494.76
	(vi) Foreign Exchange Forward Contracts Valuation Account (FCVA)	32.62	13.04
	(vii) Provision for Forward Contracts Valuation Account (PFCVA)	0.00	0.00
	(viii) Provision for payables	27.88	22.81
	(ix) Gratuity and Superannuation Fund	175.13	206.10
	(x) Surplus Transferable to the Government of India	500.00	1,759.87
	(xi) Bills Payable	0.05	0.08
	(xii) Miscellaneous	128.91	133.51
	Total	**10,463.04**	**11,624.51**

			2017-18	2018-19
Schedule 4:	**Notes Issued**			
	(i) Notes held in the Banking Department		0.09	0.09
	(ii) Notes in circulation		19,119.51	21,687.88
		Total	**19,119.60**	**21,687.97**
Schedule 5:	**Notes, Rupee Coin, Small Coin (with RBI)**			
	(i) Notes		0.09	0.09
	(ii) Rupee Coin		0.00	0.00
	(iii) Small Coin		0.00	0.00
		Total	**0.09**	**0.09**
Schedule 6:	**Gold Coin and Bullion**			
	(a) Banking Department			
	(i) Gold Coin and Bullion		696.74	882.98
	(ii) Gold deposit		0.00	0.00
		Sub Total	***696.74***	***882.98***
	(b) Issue Department (as backing for Notes issued)		743.49	792.04
		Total	**1,440.23**	**1,675.02**
Schedule 7:	**Investments- Foreign**			
	(i) Investments-Foreign –BD		7,983.89	6,964.53
	(ii) Investments- Foreign-ID		18,366.85	20,887.65
		Total	**26,350.74**	**27,852.18**
Schedule 8:	**Investments- Domestic**			
	(i) Investments –Domestic -BD		6,297.45	9,898.77
	(ii) Investments-Domestic-ID		0.00	0.00
		Total	**6,297.45**	**9,898.77**
Schedule 9:	**Loans and Advances**			
	(a) Loans and Advances to :			
	(i) Central Government		554.35	265.31
	(ii) State Governments		14.93	26.66
		Sub total	***569.28***	***291.97***
	(b) Loans and Advances to:			
	(i) Scheduled Commercial Banks		1,006.90	572.00
	(ii) Scheduled State Co-operative Banks		0.00	0.00
	(iii) Other Scheduled Co-operative Banks		0.00	0.00
	(iv) Non-Scheduled State Co-operative Banks		0.00	0.00
	(v) NABARD		0.00	0.00
	(vi) Others		62.37	67.90
		Sub total	***1,069.27***	***639.90***
	(c) Loans and Advances to Financial Institutions outside India:			
	(i) Repo Lending – Foreign		0.00	0.00
	(ii) Repo Margin - Foreign		0.00	0.00
		Sub total	***0.00***	***0.00***
		Total	**1,638.55**	**931.87**
Schedule 10:	**Investment in Subsidiaries/Associates**			
	(i) Deposit Insurance and Credit Guarantee Corporation(DICGC)		0.50	0.50
	(ii) National Housing Bank (NHB)		14.50	0.00
	(iii) National Bank for Agriculture and Rural Development (NABARD)		0.20	0.00
	(iv) Bharatiya Reserve Bank Note Mudran (P) Ltd.(BRBNMPL)		18.00	18.00
	(v) Reserve Bank Information Technology (P) Ltd.(ReBIT)		0.50	0.50
	(vi) National Centre for Financial Education (NCFE)		0.00	0.30
	(vii) Indian Financial Technology & Allied Services (IFTAS)		0.00	0.34
		Total	**33.70**	**19.64**

			2017-18	2018-19
Schedule 11:	**Other Assets**			
	(i) Fixed Assets (net of accumulated depreciation)		4.41	6.51
	(ii) Accrued income (a + b)		232.99	330.81
	a. on loans to employees		*3.16*	*3.27*
	b. on other items		*229.83*	*327.54*
	(iii) Swap Amortisation Account		23.10	0.00
	(iv) Revaluation of Forward Contracts Account (RFCA)		32.62	13.04
	(v) Miscellaneous		112.80	292.84
		Total	**405.92**	**643.20**
Schedule 12:	**Interest**			
	(a) Domestic Sources			
	(i) Interest on holding of Rupee Securities		479.68	583.43
	(ii) Net Interest on LAF Operations		-95.41	10.46
	(iii) Interest on MSF Operations		1.25	1.35
	(iv) Interest on Loans and Advances		7.79	14.98
		Sub total	***393.31***	***610.22***
	(b) Foreign Sources			
	(i) Interest Income from Foreign Securities		234.28	278.11
	(ii) Net Interest on Repo / Reverse Repo transaction		0.00	-0.04
	(iii) Interest on Deposits		111.12	180.08
		Sub total	***345.40***	***458.15***
		Total	**738.71**	**1,068.37**
Schedule 13:	**Other Income**			
	(a) Domestic Sources			
	(i) Exchange		0.00	0.00
	(ii) Discount		0.00	0.00
	(iii) Commission		20.35	22.72
	(iv) Rent Realised		0.05	0.07
	(v) Profit/Loss on sale and redemption of Rupee Securities		60.36	0.40
	(vi) Depreciation on Rupee Securities inter portfolio transfer		-0.08	-0.27
	(vii) Amortisation of premium/discount of Rupee Securities		31.13	21.45
	(viii) Profit / Loss on sale of Bank's property		0.01	0.01
	(ix) Provision no longer required and Miscellaneous Income		3.67	526.18
		Sub total	***115.49***	***570.56***
	(b) Foreign Sources			
	(i) Amortisation of premium/discount of Foreign Securities		-36.08	-15.31
	(ii) Profit/Loss on sale and redemption of Foreign Securities		5.36	16.76
	(iii) Exchange gain/loss from Foreign Exchange transactions		-40.67	289.98
		Sub total	***-71.39***	***291.43***
		Total	**44.10**	**861.99**
Schedule 14:	**Agency Charges**			
	(i) Agency Commission on Government Transactions		37.60	38.17
	(ii) Underwriting Commission paid to the Primary Dealers		1.13	0.74
	(iii) Sundries (Handling charges and turnover commission paid to banks for Relief / Savings Bonds subscriptions; SBLA *etc.*)		0.08	0.02
	(iv) Fees paid to the External Asset Managers, custodians, etc.		0.22	0.17
		Total	**39.03**	**39.10**

INDEPENDENT AUDITORS' REPORT

To

The President of India

Report on Audit of Financial Statements

Opinion

We, the undersigned Auditors of the Reserve Bank of India (hereinafter referred to as the "Bank"), do hereby report to the Central Government upon the Balance Sheet of the Bank as on June 30, 2019 and the Income Statement for the year ended on that date (hereinafter referred to as "financial statements"), which have been audited by us.

In our opinion and to the best of our information and according to explanations given to us and as shown by the books of account of the Bank, the Balance Sheet read with Significant Accounting Policies is a full and fair Balance Sheet containing all necessary particulars and is properly drawn up in accordance with the requirements of the provisions of the Reserve Bank of India Act, 1934 and Regulations framed there under so as to exhibit true and correct view of the state of affairs of the Bank.

Basis for Opinion

We conducted our audit in accordance with the Standards on Auditing (SAs) issued by the Institute of Chartered Accountants of India (ICAI). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the entity in accordance with the ethical requirements that are relevant to our audit of the financial statements, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Information Other than the Financial Statements and Auditor's Report Thereon

The Management is responsible for the other information. The other information comprises the information included in the Notes to the accounts, but does not include the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management and those Charged with Governance for the Financial Statements are responsible for the preparation of these financial statements that give a true and correct view of the state of affairs and results of operations of the Bank in accordance with the requirements of the provisions of the Reserve Bank of India Act, 1934 and Regulations framed thereunder and the accounting policies and practices followed by the Bank. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation and presentation of the financial statements that give a true and correct view and are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the entity's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the entity to cease to continue as a going concern.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Other Matters

We report that we have called for information and explanations from the Bank considered necessary for the purpose of our audit and such information and explanations have been given to our satisfaction.

We also report that the financial statements include the accounts of twenty-two accounting units of the Bank which have been audited by Statutory Branch Auditors and we have relied on their report in this regard.

For Chhajed & Doshi
Chartered Accountants
(ICAI Firm Registration No. 101794W)

Aruna Dhanesha
Partner
Membership No. 107863

For G. P. Kapadia & Co.
Chartered Accountants
(ICAI Firm Registration No. 104768W)

Nimesh Bhimani
Partner
Membership No. 30547

Place: Mumbai
Date: August 26, 2019

STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES FOR THE YEAR ENDED JUNE 30, 2019

(a) General

1.1 Among other things, the Reserve Bank of India was established under the Reserve Bank of India Act, 1934 (the Act) "to regulate the issue of Bank notes and the keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage".

1.2 The main functions of the Bank are:-

a) Issue of Bank notes.

b) Management of the monetary system.

c) Regulation and supervision of banks and Non–Banking Financial Companies (NBFCs).

d) Acting as the lender of last resort.

e) Regulation and supervision of the payment and settlement systems.

f) Maintaining and managing the country's foreign exchange reserves.

g) Acting as the banker to banks and the governments.

h) Acting as the debt manager of the governments.

i) Regulation and development of foreign exchange market.

j) Developmental functions including the areas of rural credit and financial inclusion.

1.3 The Act requires that the issue of Bank notes should be conducted by the Bank in an Issue Department which shall be separate and kept wholly distinct from the Banking Department and the assets of the Issue Department shall not be subject to any liability other than the liabilities of the Issue Department. The Act requires that the assets of the Issue Department shall consist of gold coins, gold bullion, foreign securities, rupee coins and rupee securities to such aggregate amount as is not less than the total of the liabilities of the Issue Department. The Act requires that the liabilities of the Issue Department shall be an amount equal to the total of the amount of the currency notes of the Government of India and Bank notes for the time being in circulation.

(b) Significant Accounting Policies

2.1 Convention

The financial statements are prepared in accordance with the Reserve Bank of India Act, 1934 and the notifications issued thereunder and in the form prescribed by the Reserve Bank of India General Regulations, 1949. These are based on historical cost except where it is modified to reflect revaluation. The accounting policies followed in preparing the financial statements are consistent with those followed in the previous year unless otherwise stated.

2.2 Revenue Recognition

(a) Income and expenditure are recognised on accrual basis except penal interest charged from the banks which is accounted for only when there is certainty of realisation. Dividend income on shares is recognised on accrual basis when the right to receive the same is established.

(b) Balances unclaimed and outstanding for more than three clear consecutive accounting years in certain transit accounts including Drafts Payable Account, Payment

Orders Account, Sundry Deposits Account-Miscellaneous, Remittance Clearance Account, Earnest Money Deposit Account and Security Deposit Account are reviewed and written back to income. Claims, if any, are considered and charged against income in the year of payment.

(c) Income and expenditure in foreign currency are recorded at the exchange rates prevailing on the last business day of the week/ month/ year as applicable.

2.3 Gold & Foreign Currency Assets and Liabilities

Transactions in gold and foreign currency assets and liabilities are accounted for on settlement date basis.

a) Gold

Gold, including the Gold Deposits placed abroad, is revalued on the last business day of the month at 90 per cent of the average of the gold price, quoted daily by the London Bullion Market Association for the month. The rupee equivalent is determined on the basis of the exchange rate prevailing on the last business day of the month. Unrealised gains/ losses are credited/ debited to the Currency and Gold Revaluation Account (CGRA).

b) Foreign Currency Assets and Liabilities

All foreign currency assets and liabilities (excluding foreign currency received under the swaps that are in the nature of repos and contracts where the rates are fixed contractually) are translated at the exchange rates prevailing on the last business day of the week/ month/ year as applicable. Unrealised gains and losses arising from such translation of foreign currency assets and liabilities are accounted for in CGRA.

Foreign securities, other than Treasury Bills, Commercial Papers and certain "held to maturity" securities (such as investments in notes issued by the International Monetary Fund and bonds issued by India Infrastructure Finance Company (IIFC), UK which are valued at cost) are marked to market (MTM) as on the last business day of each month. Unrealised gains/ losses on revaluation are recorded in the 'Investment Revaluation Account- Foreign Securities (IRA-FS)'. Credit balance in IRA-FS is carried forward to the subsequent year. Debit balance, if any, at the end of the year in IRA-FS is charged to the Contingency Fund and the same is reversed on the first working day of the following accounting year.

Foreign treasury bills and commercial papers are carried at cost as adjusted by amortisation of discount/ premium. Premium or discount on foreign securities is amortised daily. Profit/ loss on sale of foreign currency assets is recognised with respect to the book value. On sale/ redemption of foreign dated securities, valuation gain/ loss in relation to the securities sold/ redeemed, lying in IRA-FS, is transferred to Income Account.

c) Forward/Swap Contracts

Forward contracts entered into by the Bank are revalued on a half yearly basis. While mark to market gain is credited to the 'Foreign Exchange Forward Contracts Valuation Account' (FCVA) with contra debit to 'Revaluation of Forward Contracts Account' (RFCA), mark to market loss is debited to FCVA with contra credit to the 'Provision for Forward Contracts Valuation Account' (PFCVA). On maturity of the contract, the actual gain or loss is recognised in the Income Account and the unrealised gains/ losses previously recorded in the FCVA, RFCA and PFCVA are reversed. At the time of half yearly revaluation, the balance in FCVA and RFCA or PFCVA as on that day is reversed and fresh revaluation is done for all the outstanding forward contracts.

Debit balance in FCVA, if any, on June 30, is charged to the Contingency Fund and reversed on the first working day of the following year. The balance in the RFCA and PFCVA represents the net unrealised gains and losses respectively on valuation of the forward contracts.

In the case of swaps at off-market rates that are in the nature of repo, the difference between the future contract rate and the rate at which the contract is entered into is amortised over the period of the contract and recorded in the income account with contra in 'Swap Amortisation Account' (SAA). The amounts recorded in the SAA are reversed on maturity of the underlying contracts. Further, the amounts received under these swaps are not subject to periodic revaluation.

While FCVA and PFCVA form part of 'Other Liabilities', RFCA and SAA form part of 'Other Assets'.

2.4 Transactions in Exchange Traded Currency Derivatives (ETCD)

The ETCD transactions undertaken by the Bank as part of its intervention operations are marked to market on daily basis and the resultant gain/ loss is booked in income account.

2.5 Domestic Investments

(a) Rupee securities and oil bonds except those mentioned in (d) below are marked to market as on the last business day of each month. The unrealised gains/ losses on revaluation is booked in 'Investment Revaluation Account - Rupee Securities (IRA-RS)'. Credit balance in IRA-RS is carried forward to the following accounting year. Debit balance, if any, at the end of the year in IRA-RS is charged to the Contingency Fund and the same is reversed on the first working day of the following accounting year. On sale/ redemption of rupee securities/ oil bonds, valuation gain/ loss thereof, lying in IRA-RS, is transferred to income account. Rupee securities and oil bonds are also subjected to daily amortization.

(b) Treasury Bills are valued at cost.

(c) Investments in shares of subsidiaries are valued at cost.

(d) Oil bonds and rupee securities earmarked for various staff funds (like Gratuity and Superannuation, Provident Fund, Leave Encashment, Medical Assistance Fund) and Depositors Education and Awareness Fund (DEA Fund) are treated as 'Held to Maturity' and are held at amortised cost.

(e) Transactions in domestic investment are accounted for on settlement date basis.

2.6 Liquidity Adjustment Facility (LAF) Repo/ Reverse Repo and Marginal Standing Facility (MSF)

Repo transactions under LAF and MSF are treated as lending and are accordingly being shown under 'Loans and Advances' whereas Reverse Repo transactions under LAF are being treated as deposits and shown under 'Deposit-Others'.

2.7 Fixed Assets

(a) Fixed Assets are stated at cost less depreciation except art and paintings and freehold land which are held at cost.

(b) Depreciation on Fixed Assets, other than land and buildings, acquired and capitalised during the year (from July 01 to June 30) would be reckoned on a monthly pro-rata basis from the month of capitalisation and effected on a half yearly basis at prescribed rates depending upon the useful life of the assets applied.

(c) Depreciation on the following fixed assets (costing more than ₹0.10 million) is provided on a straight-line basis depending on the useful life of an asset in the following manner:

Asset Category	Useful life (Rate of Depreciation)
1	2
Electrical installations, UPS, Motor vehicles, furniture, fixture, CVPS/ SBS Machines, *etc*.	5 years (20 per cent)
Computers, Servers, Micro-processors, Printers, Software, Laptops, e-book reader/ i-Pad, *etc*.	3 years (33.33 per cent)

(d) Fixed Assets, costing up to ₹0.10 million (except easily portable electronic assets like Laptop/ e-book reader) are charged to income in the year of acquisition. Easily portable electronic assets, such as laptops, etc. costing more than ₹10,000 are capitalised and depreciation is calculated on monthly pro-rata basis at the applicable rate.

(e) Individual items of computer software costing ₹0.10 million and above are capitalised and depreciation is calculated on monthly pro-rata basis at applicable rates.

(f) Depreciation is provided on half year-end balances of Fixed Assets on monthly pro-rata basis. In case of additions /deletions of assets other than land and building, depreciation is provided for on monthly pro-rata basis including the month of addition/ deletion of such assets.

(g) Depreciation on subsequent expenditure:

i. Subsequent expenditure incurred on an existing fixed asset which has not been fully depreciated in the books of accounts, is depreciated over the remaining useful life of the principal asset;

ii. Subsequent expenditure incurred on modernization/ addition/ overhauling of an existing fixed asset, which has already been fully depreciated in the books of accounts, is first capitalised and thereafter depreciated fully in the year in which the expenditure is incurred.

(h) Land and building: The accounting treatment in respect of land and building is as follows:

Land

i. Land acquired on leasehold basis for a period of more than 99 years is treated as if it is on a perpetual lease basis. Such leases are considered as freehold properties and accordingly not subjected to amortization.

ii. Land acquired on lease up to 99 years is amortized over the period of the lease.

iii. Land acquired on a freehold basis is not subject to any amortisation.

Buildings

i. The life of all buildings is assumed as thirty years and depreciation is charged on a 'straight-line' basis over a period of thirty years. In respect of buildings constructed on lease hold land (where the lease period is less than 30 years) depreciation is charged on a 'straight-line' basis over the lease period of the land.

ii. Impairment of buildings: For assessment of impairment, buildings are classified into two categories, as under:

a. *Buildings which are in use but have been identified for demolition in future or will be discarded in future*: The value in use of such buildings is the aggregate of depreciation for the future period up to the date it is expected to be discarded/ demolished. The difference between the book value and aggregate of depreciation so arrived at is charged as depreciation.

b. *Buildings which have been discarded/ vacated*: These buildings are shown at realisable value (net selling price-if the asset is likely to be sold in future) or scrap value less demolition cost (if it is to be demolished). If the resultant amount is negative, then the carrying value of such buildings is shown at ₹1. The difference between the book value and realisable value (net selling price)/ scrap value less demolition cost is charged as depreciation.

2.8 Employee Benefits

The liability on account of long term employee benefits is provided based on an actuarial valuation under the 'Projected Unit Credit' method.

NOTES TO ACCOUNTS

XII.8 LIABILITIES OF THE RESERVE BANK

XII.8.1 LIABILITIES OF BANKING DEPARTMENT

i) Capital

The Reserve Bank was constituted as a private shareholders' bank in 1935 with an initial paid-up capital of ₹0.05 billion. The Bank was nationalised with effect from January 1, 1949 and its entire ownership remains vested with the Government of India. The paid-up capital continues to be ₹0.05 billion in terms of section 4 of the RBI Act, 1934.

ii) Reserve Fund

The original Reserve Fund of ₹0.05 billion was created in terms of Section 46 of the RBI Act, 1934 as contribution from the central government for the currency liability of the then sovereign government taken over by the Reserve Bank. Thereafter, an amount of ₹64.95 billion was credited to this fund from out of gains on periodic revaluation of gold up to October 1990, taking it to ₹65 billion. The fund has been static since then as the unrealised gain/loss on account of valuation of gold and foreign currency is since being booked in the Currency and Gold Revaluation Account (CGRA) which appears under 'Other Liabilities and Provisions'.

iii) Other Reserves

This includes National Industrial Credit (Long Term Operations) Fund and National Housing Credit (Long Term Operations) Fund.

a) *National Industrial Credit (Long Term Operations) Fund*

This fund was created in July 1964, in terms of Section 46C of the RBI Act, 1934 with an initial corpus of ₹100 million. The fund witnessed annual contributions from the Reserve Bank for financial assistance to eligible financial institutions. Since 1992-93, a token amount of ₹10 million is being contributed each year to the fund from the Bank's income. The balance in the fund stood at ₹0.28 billion as on June 30, 2019.

b) *National Housing Credit (Long Term Operations) Fund*

This fund was set up in January 1989 in terms of Section 46D of the RBI Act, 1934 for extending financial accommodation to the National Housing Bank (NHB). The initial corpus of ₹500 million has been enhanced by annual contributions from the Reserve Bank thereafter. From the year 1992-93, only a token amount of ₹10 million is being contributed each year from the Bank's income. The balance in the fund stood at ₹2.02 billion as on June 30, 2019.

Note: Contribution to other Funds

There are two other Funds constituted in terms of Section 46A of the RBI Act, 1934 *viz*., National Rural Credit (Long Term Operations) Fund and National Rural Credit (Stabilisation) Fund which are maintained by National Bank for Agriculture and Rural Development (NABARD) for which a token amount of ₹10 million each is set aside and transferred to NABARD every year.

iv) Deposits

These represent the balances maintained with the Reserve Bank, by banks, the Central and state governments, All India Financial Institutions, such as, Export Import Bank (EXIM Bank), NABARD *etc*., Foreign Central Banks, International Financial Institutions, balances in Administrator of RBI Employees' Provident Fund, Depositor Education and Awareness (DEA) Fund, amount outstanding against Reverse Repo, Medical Assistance Fund (MAF) etc.

Total deposits increased by 17.21 per cent from ₹6,525.97 billion as on June 30, 2018 to ₹7,649.22 billion as on June 30, 2019.

a. *Deposits – Government*

The Reserve Bank acts as the banker to the central government in terms of Sections 20 and 21 and as banker to the state governments by mutual agreement in terms of Section 21A of the RBI Act, 1934. Accordingly, the Central and the state governments maintain deposits with the Reserve Bank. The balances held by the central and state governments were ₹1.01 billion and ₹0.42 billion, respectively as on June 30, 2019 and June 30, 2018.

b. *Deposits – Banks*

Banks maintain balances in their current accounts with the Reserve Bank to provide for the Cash Reserve Ratio (CRR) requirements and for working funds to meet payment and settlement obligations. The deposits held by banks increased by 8.34 per cent from ₹5,070.95 billion as on June 30, 2018 to ₹5,494.08 billion as on June 30, 2019.

c. *Deposits – Others*

'Deposits - Others' consists of balances of Administrator of RBI Employees Provident Fund, balance in Depositors'

Education and Awareness Fund (DEA Fund), balances of Foreign Central Banks, Indian and International Financial Institutions, Medical Assistance Fund, amount outstanding under Reverse Repo etc. The amount under 'Deposits-Others' increased by 48.16 per cent from ₹1,453.59 billion as on June 30, 2018 to ₹2,153.71 billion as on June 30, 2019 primarily due to increase in reverse repo deposits with the Reserve Bank.

v) Other Liabilities and Provisions

The major components of 'Other Liabilities and Provisions' are provisions and revaluation heads. The Contingency Fund (CF) and Asset Development Fund (ADF) represent provisions made for unforeseen contingencies and amount set aside for investment in subsidiaries and internal capital expenditure respectively. The unrealised marked to market gains/losses are recorded in the revaluation heads viz. Currency and Gold Revaluation Account (CGRA), Investment Revaluation Accounts (IRA) - Foreign and Rupee Securities and Foreign Exchange Forward Contracts Valuation Account (FCVA). 'Other Liabilities and Provisions' increased by 11.10 per cent from ₹10,463.04 billion as on June 30, 2018 to ₹11,624.51 billion as on June 30, 2019, primarily due to increase in Investment Revaluation Accounts - Foreign and Rupee Securities and Surplus Transferable to the Government of India.

a. *Contingency Fund (CF)*

Contingency Fund represents the provision made by the Bank on year-to-year basis. This is specific provision meant for meeting unexpected and unforeseen contingencies, including depreciation in the value of securities, risks arising out of monetary/exchange rate policy operations, systemic risks and any risk arising on account of the special responsibilities enjoined upon the Bank. As on June 30, 2019, an excess risk provision of ₹526.37 billion was written back from CF.

Based on the above, the balance in CF as on June 30, 2019 was ₹1,963.44 billion as compared to ₹2,321.08 billion as on June 30, 2018.

b. *Asset Development Fund (ADF)*

The Asset Development Fund was created in 1997-98 and the balance therein represents provision specifically made till date towards investments in subsidiaries and associate institutions and meet internal capital expenditure. Provision of ₹0.64 billion was made towards new investments in National Centre for Financial Education (NCFE) and Indian Financial Technology and Allied Services (IFTAS). Based on the above, the balance in ADF as on June 30, 2019 was ₹228.75 billion as compared to ₹228.11 billion as on June 30, 2018 (Table XII.2).

c. *Currency and Gold Revaluation Account (CGRA)*

The major sources of market risk faced by the Reserve Bank are currency risk, interest rate risk and movement in gold price. Unrealised gains/losses on valuation of Foreign Currency Assets (FCA) and Gold are not taken to the Income Account but instead recorded in the CGRA. Net balance in CGRA, therefore, varies with the size of the asset base, its valuation, and

Table XII.2: Balances in CF and ADF

(₹ billion)

As on June 30	Balance in CF	Balance in ADF	Total	CF and ADF as percentage to total assets
1	2	3	4=(2+3)	5
2015	2,216.14*	217.61	2,433.75	8.4
2016	2,201.83*	227.61	2,429.44	7.5
2017	2,282.07#	228.11	2,510.18	7.6
2018	2,321.08@	228.11	2,549.19	7.05
2019	1,963.44$	228.75	2,192.19	5.34

*: The decline in the CF is due to charging of the debit balance in the Forward Contract Valuation Account on account of MTM loss on forward contract as on June 30, 2015 and June 30, 2016.

#: Increase in CF is the net impact of provision of ₹131.40 billion and charging of the debit balance of IRS and FCVA amounting to ₹65.85 billion as on June 30, 2017.

@: Increase in CF is the net impact of provision of ₹141.90 billion and charging of the debit balance of IRA-FS amounting to ₹168.74 billion as on June 30, 2018.

$: The decline in the CF is due to writing back of excess provision of ₹526.37 billion as on June 30, 2019.

movement in the exchange rate and price of gold. CGRA provides a buffer against exchange rate/gold price fluctuations. It can come under pressure if there is an appreciation of the rupee *vis-à-vis* major currencies or a fall in the price of gold. When CGRA is not sufficient to fully meet exchange losses, it is replenished from the contingency fund. During 2018-19, the balance in CGRA decreased by 3.93 per cent from ₹6,916.41 billion as on June 30, 2018 to ₹6,644.80 billion as on June 30, 2019 mainly due to depreciation of major currencies against US dollar partly compensated by the rise in the international price of gold.

d. *Investment Revaluation Account-Foreign securities (IRA-FS)*

The foreign dated securities are marked to market on the last business day of each month and the unrealised gains/losses arising therefrom are transferred to the IRA-FS. The balance in IRA-FS as on June 30, 2019 was ₹157.35 billion.

e. *Investment Revaluation Account–Rupee Securities (IRA-RS)*

Rupee securities and oil bonds (with exception as mentioned under Significant Accounting Policy) held as assets of the Banking Department are marked to market as on the last business day of each month and the unrealised gains/losses arising therefrom are booked in IRA-RS. The balance in IRA-RS increased from ₹132.85 billion as on June 30, 2018 to ₹494.76 billion as on June 30, 2019 due to increase in portfolio of rupee securities and decline in yields on Government of India securities held by the Bank during the year.

f. *Foreign Exchange Forward Contracts Valuation Account (FCVA) & Provision for Forward Contracts Valuation Account (PFCVA)*

Marking to market of outstanding forward contracts as on June 30, 2019 resulted in a net unrealised gain of ₹13.04 billion, which was credited to the FCVA with contra debit to Revaluation of Forward Contracts Account (RFCA). As per the extant policy, the amounts recorded in these accounts are reversed on the maturity of the contracts. The balance in FCVA as on June 30, 2019 was ₹13.04 billion.

The balances in CGRA, FCVA, PFCVA, IRA-FS and IRA-RS for the last five years is given in Table XII.3.

Table XII.3: Balances in CGRA, FCVA, PFCVA, IRA-FS and IRA-RS

(₹ billion)

As on June 30	CGRA	FCVA	PFCVA	IRA-FS	IRA-RS
1	2	3	4	5	6
2015	5,591.93	0.00	0.39	32.14	0.00
2016	6,374.78	0.00	14.69	132.66	391.46
2017	5,299.45	0.00	29.63	0.00	570.90
2018	6,916.41	32.62	0.00	0.00	132.85
2019	6,644.80	13.04	0.00	157.35	494.76

g. *Provision for payables*

This represents the year end provisions made for expenditure incurred but not defrayed and income received in advance/ payable, if any. Provision for payables decreased by 18.19 per cent from ₹27.88 billion as on June 30, 2018 to ₹22.81 billion as on June 30, 2019.

h. *Surplus transferable to the Government of India*

Under Section 47 of the RBI Act, 1934 after making provisions for bad and doubtful debts, depreciation in assets, contribution to staff and superannuation funds and for all matters for which provisions are to be made by or under the Act or that are usually provided by bankers, the balance of the profits of the Bank is required to be paid to the central government. Under Section 48 of the RBI Act, 1934 the Reserve Bank is not liable to pay income tax or super tax on any of its income, profits or gains. Accordingly, after adjusting the expenditure, provision for ADF and contribution of ₹0.04 billion to the four statutory funds, the surplus transferable to the Government of India for the year 2018-19 amounted to ₹1,759.87 billion (including ₹7.16 billion as against ₹8.49 billion in the previous year payable towards the difference in interest expenditure borne by the Government, consequent on conversion of special securities into marketable securities). Out of ₹1,759.87 billion, an amount of ₹280 billion was transferred to central government during the year.

i. *Bills Payable*

The Reserve Bank provides remittance facilities for its constituents through issue of Demand Drafts (DDs) and Payment Orders (POs) (besides electronic payment mechanism). The balance under this head represents the unclaimed DDs/POs. The amount outstanding under this head increased from ₹0.05 billion as on June 30, 2018 to ₹0.08 billion as on June 30, 2019.

j. *Miscellaneous*

This is a residual head representing items such as interest earned on earmarked securities, amounts payable on account of leave encashment, medical provisions for employees, global provision etc. The balance under this head increased from ₹128.91 billion as on June 30, 2018 to ₹133.51 billion as on June 30, 2019.

XII.8.2 Liabilities of Issue Department- Notes Issued

(i) The liabilities of Issue Department reflect the quantum of currency notes in circulation. Section 34 (1) of the RBI Act, 1934 requires that all bank notes issued by the Reserve Bank since April 1, 1935 and the currency notes issued by the Government of India before the commencement of operations of the Reserve Bank, be part of the liabilities of the Issue Department. The 'Notes Issued' increased by 13.43 per cent from

₹19,119.60 billion as on June 30, 2018 to ₹21,687.97 billion as on June 30, 2019. The increase is on account of the continued efforts of Reserve Bank of India to supply adequate quantity of banknotes to meet the transactional needs of the public. Also, an amount of ₹107.20 billion, representing the value of Specified Bank Notes (SBNs) not paid was transferred to 'Other Liabilities and Provisions' as on June 30, 2018. In terms of Gazette Notification issued by Government of India on May 12, 2017, the Reserve Bank of India has made payments to the extent of ₹0.13 billion towards exchange value of SBNs to eligible tenderers during the year ended June 30, 2019.

XII.9 ASSETS OF THE RESERVE BANK

XII.9.1 ASSETS OF BANKING DEPARTMENT

i) Notes, Rupee Coin and Small Coin

This head represents the balances of bank notes, one rupee notes, rupee coins of ₹1, 2, 5 and 10 and small coins kept in the vaults of the Banking Department to meet the day to day requirements of the banking functions conducted by the Reserve Bank. The balance as on June 30, 2019 was ₹0.09 billion, same as balance as on June 30, 2018.

ii) Gold Coin and Bullion

As on June 30, 2019, the Bank holds 618.16 metric tonnes of gold as compared to 566.23 metric tonnes as on June 30, 2018. The increase is on account of addition of 51.93 metric tonnes of Gold during the year.

Of 618.16 metric tonnes, 292.30 metric tonnes as on June 30, 2019 is held as backing for notes issued and shown separately as an asset of Issue Department. The balance 325.86 metric tonnes as on June 30, 2019 as compared to 273.93 metric tonnes on June 30, 2018 is treated as an asset of Banking Department (Table XII.6). The value of gold held as asset of Banking Department increased by 26.73 per cent from ₹696.74 billion as on June 30, 2018 to ₹882.98 billion as on June 30, 2019, on account of addition of 51.93 metric tonnes of gold during the year as well as rise in the international price of gold.

iii) Bills purchased and discounted

Though the Reserve Bank can undertake purchase and discounting of commercial bills under the RBI Act, 1934 no such activity was undertaken in 2018-19; consequently, there was no such asset in the books of the Reserve Bank as on June 30, 2019.

iv) Investments -Foreign-Banking Department (BD)

The Foreign Currency Assets (FCA) of the Reserve Bank include: (i) deposits with other central banks (ii) deposits with the Bank for International Settlements (BIS) (iii) deposits with commercial banks overseas (iv) investments in foreign treasury bills and securities and (v) Special Drawing Rights (SDR) acquired from the Government of India.

The FCA is reflected under two heads in the balance sheet: (a) 'Investments -Foreign-BD' shown as an asset of Banking Department and (b) 'Investments -Foreign-ID' shown as an asset of Issue Department.

'Investments-Foreign-ID' are the FCAs, eligible as per Section 33 (6) of the RBI Act, 1934, used for backing of Notes Issued. The remaining FCAs constitute 'Investments-Foreign-BD'.

The position of FCA for the last two years is given in Table XII.4.

Table XII.4: Details of Foreign Currency Assets

(₹ billion)

	Particulars	As on June 30	
		2018	2019
1		2	3
I	Investments-Foreign –ID	18,366.85	20,887.65
II	Investments-Foreign –BD*	7,983.89	6,964.53
	Total	**26,350.74**	**27,852.18**

*: includes Shares in BIS and SWIFT and SDRs transferred from GoI valued at ₹103.21 billion as on June 30, 2019 compared to ₹104.79 billion as on June 30, 2018.

Note:

1. The Reserve Bank has agreed to make resources available under the IMF's New Arrangements to Borrow (NAB). Currently India's commitment under NAB stands at SDR 4.44 billion (₹425.48 billion / US$ 6.17 billion). As on June 30, 2019, investments amounting to SDR 0.29 billion (₹27.85 billion / US$0.40 billion) have been made under the NAB.
2. The Reserve Bank has agreed to invest up to an amount, the aggregate of which shall not exceed US$5 billion (₹344.59 billion), in the bonds issued by India Infrastructure Finance Company (UK) Limited. As on June 30, 2019, the Reserve Bank has invested US$1.86 billion (₹128.39 billion) in such bonds.
3. In terms of the Note Purchase Agreement, 2016 entered into by the Reserve Bank with IMF, the Reserve Bank would purchase SDR denominated Notes of IMF for an amount up to the equivalent of US$10 billion (₹689.18 billion).
4. During the year 2013-14, the Reserve Bank and Government of India (GoI) entered into an MoU for transfer of SDR holdings from GoI to the Reserve Bank in a phased manner. As on June 30, 2019, SDR 1.05 billion (₹100.36 billion/ US$1.46 billion) were held by the Bank.
5. With a view to strengthening regional financial and economic cooperation, the Reserve Bank of India has agreed to offer an amount of US$2 billion both in foreign currency and Indian rupee under the SAARC Swap Arrangement to SAARC member countries. As on June 30, 2019, Swap with Bhutan, amounting to US$0.1 billion (₹6.89 billion) is outstanding.

v) Investments- Domestic-Banking Department (BD)

Investments comprise Dated Government Rupee Securities, Treasury Bills and Special Oil Bonds. As on June 30, 2019, the Reserve Bank did not hold any domestic treasury bills. The Reserve Bank's holding of domestic securities increased by 57.19 per cent, from ₹6,297.45 billion as on June 30, 2018 to ₹9,898.77 billion as on June 30, 2019. The increase was on account of liquidity management operations conducted by way of net purchase of government securities amounting to ₹3,311.12 billion (face value).

A part of 'Investments-Domestic-BD' is also earmarked for various staff funds and DEA Fund as explained in para 2.5(d). As on June 30, 2019, ₹565.50 billion (face value) was earmarked for staff funds and DEA Fund taken together.

vi) Loans and Advances

a) *Central and State Governments*

These loans are extended in the form of Ways and Means Advances (WMA) in terms of Section 17(5) of the RBI Act, 1934 and the limit in case of central government is fixed from time to time in consultation with the Government of India and in case of state governments, the limits are fixed based on the recommendations of Advisory Committee/ Group constituted for this purpose. Loans and advances to the central government decreased from ₹554.35 billion as on June 30, 2018 to ₹265.31 billion as on June 30, 2019, whereas loans and advances to state governments increased from ₹14.93 billion as on June 30, 2018 to ₹26.66 billion as on June 30, 2019.

b) *Loans and advances to Commercial, Co-operative Banks, NABARD and others*

- *Loans and advances to Commercial and Co-operative Banks:* These mainly include amounts outstanding against Repo under Liquidity Adjustment Facility (LAF) and Marginal Standing Facility (MSF). The amount outstanding decreased from ₹1,006.90 billion as on June 30, 2018 to ₹572 billion as on June 30, 2019 primarily due to decrease in amount outstanding against Repo to banks.

- *Loans and advances to NABARD:*

  The Reserve Bank can extend loans to NABARD under Section 17 (4E) of the RBI Act, 1934. No loans were outstanding both as on June 30, 2018 and June 30, 2019.

- *Loans and advances to others*

  The balance under this head represents loans and advances to National Housing Bank (NHB), liquidity support provided to Primary Dealers (PDs) and outstanding Repo/Term Repo conducted with the PDs. The balance under this head increased by 8.87 per cent from ₹62.37 billion as on June 30, 2018 to ₹67.90 billion as on June 30, 2019 primarily due to increase in amount outstanding against Repo to PDs.

vii) Investment in Subsidiaries/ Associates

The comparative position of investment in subsidiaries/associate institutions as on June 30, 2018 and June 30, 2019 is given in Table XII.5. The total holding as on June 30, 2019 was ₹19.64 billion as compared to ₹33.70 billion as on June 30, 2018. The net decrease is on account of the following:

a) *New investments made during the year:* During the year, the Reserve Bank invested an amount of ₹0.30 billion in National Centre for Financial Education (NCFE) and an amount of ₹0.34 billion in Indian Financial Technology and Allied Services (IFTAS) towards 30 per cent and 100 per cent shareholding respectively.

b) *Disinvestments during the year:* Further**,** pursuant to the amendment in National Housing Bank Act, 1987 and enactment of NABARD Amendment Act, 2018, the entire shareholding of the Reserve Bank in NHB (100 per cent) and NABARD (0.40 per cent) amounting to ₹14.50 billion and ₹0.20 billion, respectively, have been transferred to Government of India during the year.

Table XII.5: Holdings in Subsidiaries/Associates

(₹ billion)

Subsidiaries/Associates	2017-18	2018-19	Per cent holding as on June 30, 2019
1	2	3	4
a) Deposit Insurance and Credit Guarantee Corporation (DICGC)	0.50	0.50	100
b) National Housing Bank (NHB)	14.50	0.00	-
c) National Bank for Agriculture and Rural Development (NABARD)	0.20	0.00	-
d) Bharatiya Reserve Bank Note Mudran Pvt. Ltd. (BRBNMPL)	18.00	18.00	100
e) Reserve Bank Information Technology (P) Ltd. (ReBIT)	0.50	0.50	100
f) National Centre for Financial Education (NCFE)	0.00	0.30	30
g) Indian Financial Technology & Allied Services (IFTAS)	0.00	0.34	100
Total	**33.70**	**19.64**	

viii) Other Assets

'Other Assets' comprise fixed assets (net of depreciation), accrued income, balances held in (i) Swap Amortisation Account

(SAA) (ii) Revaluation of Forward Contracts Account (RFCA) and miscellaneous assets. Miscellaneous assets comprise mainly loans and advances to staff, amount spent on projects pending completion, security deposit paid, interim amount transferred to central government *etc*. The amount outstanding under 'Other Assets' increased by 58.45 per cent from ₹405.92 billion as on June 30, 2018 as compared to ₹643.20 billion as on June 30, 2019 primarily on account of interim transfer made to central government during the year.

a. *Swap Amortisation Account (SAA)*

In the case of swaps that are in the nature of repo at off-market rates, the difference between the future contract rate and the rate at which the contract is entered into is amortised over the period of the contract and held in the SAA. The balance held in this account is to be reversed on maturity of the outstanding contracts. As on June 30, 2019 there are no outstanding contracts. Accordingly, there is no amount outstanding in SAA as on June 30, 2019 as compared to ₹23.10 billion as on June 30, 2018.

b. *Revaluation of Forward Contracts Account (RFCA)*

As per the extant policy, the forward contracts are marked to market on a half yearly basis and the net gain is recorded in FCVA with contra entry in the RFCA. The balance in RFCA was ₹32.62 billion as on June 30, 2018 and ₹13.04 billion as on June 30, 2019. The balance represents marked to market gain on outstanding forward contracts.

XII.9.2 Assets of Issue Department

The eligible assets of the Issue Department held as backing for notes issued consist of Gold Coin and Bullion, Rupee Coin, Investments–Foreign ID, Government of India Rupee Securities and Domestic Bills of Exchange. The Reserve Bank holds 618.16 metric tonnes of gold, of which 292.30 metric tonnes are held as backing for notes issued as on June 30, 2019 (Table XII.6). The value of gold held as backing for notes issued increased by 6.53 per cent from ₹743.49 billion as on June 30, 2018 to ₹792.04 billion as on June 30, 2019. Consequent upon the increase in notes issued, 'Investments-Foreign-ID' held as backing for notes issued increased by 13.72 per cent from ₹18,366.85 billion as on June 30, 2018 to ₹20,887.65 billion as on June 30, 2019. The balance of 'Rupee Coins' held by the Issue Department decreased by 10.58 per cent from ₹9.26 billion as on June 30, 2018 to ₹8.28 billion as on June 30, 2019.

FOREIGN EXCHANGE RESERVE

XII.10 The Foreign Exchange Reserves (FER) predominantly comprise FCA, besides Gold, SDRs and Reserve Tranche Position (RTP). The SDR (other than the amount acquired from GoI and included under Investments-Foreign–BD) does not form part of Reserve Bank's balance sheet. Similarly, the RTP, which represents India's

Table XII.6: Physical holding of Gold

	As on June 30 , 2018	As on June 30 , 2019
	Volume in metric tonnes	Volume in metric tonnes
1	2	3
Gold held for backing Notes issued (held in India)	292.30	292.30
Gold held as asset of Banking Department (held abroad)	273.93	325.86
Total	**566.23**	**618.16**

Table XII.7(a): Foreign Exchange Reserves

(₹ billion)

Components	As on June 30		Variation	
	2018	2019	Absolute	Per Cent
1	2	3	4	5
Foreign Currency Assets (FCA)	26,098.07^	27,616.45#	1,518.38	5.82
Gold	1,440.23@	1,675.02*	234.79	16.30
Special Drawing Rights (SDR)	101.92	100.36	(-) 1.56	(-) 1.53
Reserve Position in the IMF	170.40	231.69	61.29	35.97
Foreign Exchange Reserves (FER)	27,810.62	29,623.52	1,812.90	6.52

^: Excludes (a) SDR Holdings of the Reserve Bank amounting to ₹101.92 billion, which is included under the SDR holdings, (b) Investment of ₹144.01 billion in bonds issued by IIFC (UK), and (c) ₹6.74 billion lent to Bhutan under a Currency Swap arrangement made available for SAARC countries.

#: Excludes (a) SDR Holdings of the Reserve Bank amounting to ₹100.36 billion, which is included under the SDR holdings, (b) Investment of ₹128.39 billion in bonds issued by IIFC (UK) and (c) ₹6.98 billion lent to Bhutan under a Currency Swap Arrangement made available for SAARC countries.

@: Of this, Gold valued at ₹743.49 billion is held as an asset of Issue Department and Gold valued at ₹696.74 billion is held as an asset of Banking Department.

*: Of this, Gold valued at ₹792.04 billion is held as an asset of Issue Department and Gold valued at ₹882.98 billion is held as an asset of Banking Department.

Table XII.7(b): Foreign Exchange Reserves

(US$ billion)

Components	As on June 30		Variation	
	2018	2019	Absolute	Per Cent
1	2	3	4	5
Foreign Currency Assets (FCA)	380.77*	400.71**	19.94	5.24
Gold	21.00	24.30	3.30	15.71
Special Drawing Rights (SDR)	1.49	1.46	(-) 0.03	(-) 2.01
Reserve Position in the IMF	2.48	3.36	0.88	35.48
Foreign Exchange Reserves (FER)	405.74	429.83	24.09	5.94

*: Excludes (a) SDR Holdings of the Reserve Bank amounting to US$ 1.49 billion, which is included under the SDR holdings, (b) US$ 2.10 billion invested in bonds of IIFC (UK) and (c) BTN equivalent to US$ 0.10 billion equivalent of INR currency lent to Bhutan under a Currency Swap arrangement made available for SAARC countries.

**: Excludes (a) SDR Holdings of the Reserve Bank amounting to US$ 1.46 billion, which is included under the SDR holdings, (b) US$ 1.86 billion invested in bonds of IIFC (UK) and (c) BTN equivalent to US$ 0.1 billion equivalent of INR currency lent to Bhutan under a Currency Swap Arrangement made available for SAARC countries.

quota contribution to IMF in foreign currency is not part of Reserve Bank's balance sheet. The position of FER as on June 30, 2018 and June 30, 2019 in Indian Rupees and the US dollar, which is the numéraire currency for our FER, is furnished in Tables XII.7 (a) and (b).

ANALYSIS OF INCOME AND EXPENDITURE

INCOME

XII.11 The main components of Reserve Bank's income are 'Interest Receipts', which forms the major portion and 'Other income' including (i) Discount (ii) Exchange- Domestic and Foreign Sources (iii) Commission (iv) Amortization of Premium/Discount on Foreign and Rupee Securities (v) Profit /Loss on Sale and Redemption of Foreign and Rupee Securities (vi) Depreciation on rupee securities inter portfolio transfer (vii) Rent Realised (viii) Profit or loss on sale of Bank's property and (ix) Provisions no longer required and Miscellaneous Income. During the year, exchange gain/loss has been computed using weighted average cost method resulting in an impact of ₹214.64 billion. Certain items of income such as interest on LAF repo, Repo in foreign security and exchange gain/loss from foreign exchange transactions are reported on net basis.

Earnings from Foreign Sources

XII.12 The income from foreign sources, increased by 173.56 per cent from ₹274.01 billion in 2017-18 to ₹749.58 billion in 2018-19 mainly on account of the general rise in yield/interest rates across all currencies and movement in the

Table XII.8: Earnings from Foreign Sources

(₹ billion)

Item	As on June 30		Variation	
	2017-18	2018-19	Absolute	Per Cent
1	2	3	4	5
Foreign Currency Assets (FCA)	26,350.74	27,852.18	1,501.44	5.70
Average FCA	25,170.70	26,896.92	1,726.22	6.86
Earnings from FCA (interest, discount, exchange gain/loss, capital gain/loss on securities)	274.01	749.58	475.57	173.56
Earnings from FCA as per cent of average FCA	1.09	2.79	1.70	155.96

exchange rates. The rate of earnings on foreign currency assets was higher at 2.79 per cent in 2018-19 as compared with 1.09 per cent in 2017-18. (Table XII.8).

Earnings from Domestic Sources

XII.13 The net income from domestic sources increased by 132.07 per cent from ₹508.80 billion in 2017-18 to ₹1,180.78 billion in 2018-19 mainly on account of increase in (a) coupon income due to an increase in the portfolio of rupee securities (b) net income on interest under LAF/ MSF operations due to increase in net liquidity injection to the banking system and (c) write back of excess risk provision from CF (Table XII.9).

Table XII.9: Earnings from Domestic Sources

(₹ billion)

Item	2017-18	2018-19	Variation	
			Absolute	Per cent
1	2	3	4	5
Earnings (I+II+III)	**508.80**	**1,180.78**	**671.98**	**132.07**
I. Earnings from Rupee Securities				
i) Interest on holding of Rupee Securities	479.68	583.43	103.75	21.63
ii) Profit on Sale and redemption of Rupee Securities	60.36	0.40	-59.96	-99.34
iii) Depreciation on Rupee Securities inter portfolio transfer	-0.08	-0.27	-0.19	237.50
iv) Amortisation of premium/discount on Rupee Securities	31.13	21.45	-9.68	-31.10
v) Net Interest on LAF Operations	-95.41	10.46	105.87	110.96
vi) Interest on MSF Operations	1.25	1.35	0.10	8.00
Sub total (i+ii+iii+iv+v+vi)	***476.93***	***616.82***	***139.89***	***29.33***
II. Interest on Loans and Advances				
i) Government (Central & States)	5.86	12.85	6.99	119.28
ii) Banks & Financial Institutions	1.35	1.47	0.12	8.89
iii) Employees	0.58	0.66	0.08	13.79
Sub total (i+ii+iii)	***7.79***	***14.98***	***7.19***	***92.30***
III. Other Earnings				
i) Discount	0.00	0.00	0.00	0.00
ii) Exchange	0.00	0.00	0.00	0.00
iii) Commission	20.35	22.72	2.37	11.65
iv) Rent realised, Profit or Loss on sale of Bank's Property, Provisions no longer required and Miscellaneous	3.73	526.26	522.53	14,008.85
Sub total (i+ii+iii+iv)	***24.08***	***548.98***	***524.90***	***2,179.82***

XII.14 Interest on holding of Rupee Securities and oil bonds increased by 21.63 per cent from ₹479.68 billion in 2017-18 to ₹583.43 billion in 2018-19 on account of increase in the Reserve Bank's holding of Government securities as a result of net purchase of ₹3,311.12 billion in 2018-19.

XII.15 The net interest income from Liquidity Adjustment Facility (LAF)/Marginal Standing Facility (MSF) operations increased to ₹11.81 billion in 2018-19 from ₹(-)94.16 billion in 2017-18 due to increase in net liquidity injection to the banking system.

XII.16 Profit on sale and redemption of Rupee Securities decreased to ₹0.40 billion in 2018-19 as against ₹60.36 billion in 2017-18 on account of lower sale of Rupee Securities amounting to ₹0.60 billion (Face Value) in 2018-19 as compared to ₹900.00 billion (Face Value) in 2017-18.

XII.17 *Premium/ Discount on amortisation of Rupee Securities and Oil Bonds:* The rupee securities and oil bonds, held by the Bank are amortised on daily basis during the period of residual maturity and the premium/discount is booked in the income head. The net income from premium/discount on amortisation of domestic securities decreased by 31.10 per cent from ₹31.13 billion during 2017-18 to ₹21.45 billion for 2018-19.

XII.18 *Interest on loans and advances*

a. *Central and State Government:*

Interest income from Ways and Means Advances (WMA)/Overdraft (OD) received from the Centre and States increased by 119.28 per cent from ₹5.86 billion during 2017-18 to ₹12.85 billion in 2018-19. Of the total, interest income received from the Centre on account of WMA/OD increased from ₹4.34 billion in 2017-18 to ₹10.65 billion in 2018-19 and interest income received from the States on account of WMA/OD/ Special Drawing Facility (SDF) increased from ₹1.52 billion during 2017-18 to ₹2.20 billion in 2018-19. The increased earning was on account of higher utilisation of WMA/ OD facility by central and state governments in 2018-19.

b. *Banks & Financial institutions*: Interest on loans and advances to banks and financial institutions increased by 8.89 per cent from ₹1.35 billion in 2017-18 to ₹1.47 billion in 2018-19.

c. *Employees*: Interest on loans and advances to employees increased by 13.79 per cent from ₹0.58 billion in 2017-18 to ₹0.66 billion in 2018-19.

XII.19 *Commission:* The commission income increased by 11.65 per cent from ₹20.35 billion in 2017-18 to ₹22.72 billion in 2018-19 primarily on account of increase in management commission received for servicing outstanding central and state government loans including savings bonds, Government Securities, Treasury Bills (T-Bills) and Cash Management Bills (CMBs).

XII.20 *Rent realised, Profit or Loss on sale of Bank's Property, Provisions no longer required and Miscellaneous Income*: Earnings from these income heads increased from ₹3.73 billion in 2017-18 to ₹526.26 billion in 2018-19 due to write back of excess risk provision from CF to 'Provision no longer required'.

EXPENDITURE

XII.21 The Reserve Bank incurs expenditure in the course of performing its statutory functions by way of agency charges/commission, printing of notes, expenditure on remittance of currency

Table XII.10: Expenditure

(₹ billion)

Item	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
i. Interest Payment	0.01	0.01	0.01	0.01	0.01
ii. Employees Cost	40.58	44.77	46.21	38.48	68.51
iii. Agency charges/ commission	30.45	47.56	40.52	39.03	39.10
iv. Printing of notes	37.62	34.21	79.65	49.12	48.11
v. Provisions	10.00	10.00	131.90	141.90	0.64
vi. Others	14.90	13.35	13.26	14.23	14.08
Total (i+ii+iii+iv+v+vi)	**133.56**	**149.90**	**311.55**	**282.77**	**170.45**

besides staff related and other expenses. The total expenditure of the Bank decreased by 39.72 per cent from ₹282.77 billion in 2017-18 to ₹170.45 billion in 2018-19 (Table XII.10).

i) Interest payment

During 2018-19 an amount of ₹0.01 billion was paid as interest to Dr. B.R. Ambedkar Fund (set up for giving scholarship to wards of staff) and Employees Benevolent Fund.

ii) Employee cost

The total employee cost for the year 2018-19 increased by 78.04 per cent from ₹38.48 billion in 2017-18 to ₹68.51 billion in 2018-19. The increase was due to net impact of increase in Bank's expenditure towards accrued liabilities of various superannuation funds from ₹6.48 billion in 2017-18 to ₹36.10 billion in 2018-19. Contribution to superannuation funds depends on the actuarial valuation of the liabilities under these funds.

iii) Agency Charges/ commission

a. Agency Commission on Government Transactions

The Reserve Bank discharges the function of banker to the government through a large network of agency bank branches that serve as retail outlets for government receipts and payments. The Reserve Bank pays commission to these agency banks at prescribed rates which were last revised with effect from July 01, 2012. The agency commission paid on account of government business increased by 1.52 per cent from ₹37.60 billion in the year 2017-18 to ₹38.17 billion in the year 2018-19. The marginal increase of ₹0.57 billion may be due to substantial increase in underlying government transactions. However, a part of the increased outgo of agency commission has been set off on account of the savings in agency commission due to transactions being processed through e-Kuber integration.

b. Underwriting Commission paid to Primary Dealers

Reserve Bank paid total underwriting commission of ₹0.74 billion to Primary Dealers during 2018-19 as compared to ₹1.13 billion during 2017-18. Despite increased G-sec borrowing program during Financial Year 2019-20, volatility in currency, phases of tighter liquidity scenarios, higher crude prices and SLR reduction, underwriting commission was on the lower side as compared to the previous year. The upward pressure on yield that could possibly have been exerted by these factors was adequately outweighed by softening effect of factors such as market expectation of a stable central government, net repo rate cut by 50 basis points (bps) by the Reserve Bank, liquidity infusion through dollar swaps and OMOs, global rally in bonds, relatively dovish signals from both the Fed and ECB, and overall moderate inflation. As a result of which the yields softened during the year (10 year benchmark yield decreased by around 102 bps). Hence, as the net market conditions were benign and risk of devolvement reduced, PDs demanded lesser underwriting commission as compared to last year when market conditions had turned volatile due to modifications in Government borrowing, variations in market liquidity and banking sector developments.

c. *Sundries*

This includes the expenses incurred on handling charges, turnover commission paid to banks for Relief / Savings Bonds subscriptions and Commission paid on Securities Borrowing and Lending Arrangement (SBLA) *etc.* The commission paid under this head decreased from ₹0.08 billion in 2017-18 to ₹0.02 billion in 2018-19.

d. *Fees paid to the External Asset Managers, Custodians etc*.

Fees paid for custodial services decreased from ₹0.22 billion in 2017-18 to ₹0.17 billion in 2018-19.

iv) Printing of Notes

The supply of notes during the year 2018-19 at 29,191 million pieces was 16.75 per cent higher than that of the year 2017-18 (25,003 million pieces). However, the expenditure incurred on printing of banknotes decreased by 2.06 per cent from ₹49.12 billion in the year 2017-18 to ₹48.11 billion during the year 2018-19 mainly on account of downward revision of the rates of printing of banknotes supplied by BRBNMPL press.

v) *Others*

Other expenses consisting of expenditure on remittance of currency, printing and stationery, audit fees and related expenses, miscellaneous expenses etc. increased by 3.44 per cent from ₹14.23 billion in 2017-18 to ₹14.72 billion in 2018-19.

vi) Provisions

In 2018-19, a provision of ₹0.64 billion was made for transfer to Asset Development Fund (ADF).

Contingent Liabilities

XII.22 The total contingent liabilities of the Reserve Bank amounted to ₹9.94 billion. The main component of it being partly paid shares of Bank for International Settlements (BIS) held by the Reserve Bank and denominated in SDR. The uncalled liability on partly paid shares of the BIS as on June 30, 2019 was ₹8.55 billion. The balances are callable at three months' notice by a decision of the BIS Board of Directors.

Prior period transactions

XII.23 For the purpose of disclosure, prior period transactions of ₹0.01 million and above only have been considered. The prior period transactions under expenditure and income amounted to ₹(-)0.06 billion and ₹0.01 billion respectively.

Previous year's figures

XII.24 Figures for the previous year have been rearranged, wherever necessary, to make them comparable with the current year.

Auditors

XII.25 The statutory auditors of the Bank are appointed by the central government in terms of Section 50 of the RBI Act, 1934. The accounts of the Reserve Bank for the year 2018-19 were audited by M/s Chhajed & Doshi, Mumbai and M/s G. P. Kapadia & Co., Mumbai, as the Statutory Central Auditors and M/s Kothari & Co., Kolkata, M/s Suri & Co., Chennai and M/s Bansal & Co. LLP, New Delhi as Statutory Branch Auditors.

ANNEX

CHRONOLOGY OF MAJOR POLICY ANNOUNCEMENTS: JULY 2018 TO JUNE 2019*

Date of Announcement	Policy Initiative
Monetary Policy Department	
August 1, 2018	The policy repo rate was increased by 25 bps to 6.50 per cent.
October 5, 2018	The monetary policy stance was changed from neutral to calibrated tightening.
February 7, 2019	The policy repo rate was reduced by 25 basis point to 6.25 per cent and the monetary policy stance was changed from calibrated tightening to neutral.
April 4, 2019	The policy repo rate was reduced by 25 bps to 6.0 per cent.
June 6, 2019	The policy repo rate was reduced by 25 bps to 5.75 per cent and the monetary policy stance was changed from neutral to accommodative.
Financial Inclusion and Development Department	
September 21, 2018	Guidelines were issued regarding co-origination of loans by banks and NBFCs for lending to priority sector.
October 17, 2018	Master Direction (MD) on relief measures by banks in areas affected by natural calamities for SCBs was updated and MD on relief measures for RRBs was issued.
January 2, 2019	Expert committee on MSMEs was constituted (under the Chairman: Shri.U.K.Sinha).
February 4, 2019	The KCC scheme was extended to animal husbandry and fisheries sectors for their working capital requirements.
February 7, 2019	• Limit for collateral free agricultural loans was raised from the existing level of ₹1 lakh to ₹1.6 lakhs.
	• Internal Working Group (IWG) to review agricultural credit was constituted.
February 21, 2019	Circular on ‘Interest Subvention Scheme for MSMEs’ was issued advising banks to take appropriate action for successful implementation of the scheme.
March 7, 2019	Banks were advised regarding the continuation of the interest subvention scheme for short-term crop loans up to ₹3 lakhs during 2018-19 and 2019-20.
May 6, 2019	Eligibility criteria for housing loans under priority sector were revised for RRBs and SFBs.
Financial Markets Regulation Department	
July 24, 2018	• Comprehensive repo directions were issued, covering repo in government securities (G-sec), corporate bond and tri-party repo with a view to harmonise and simplify regulations across different types of collateral and also to encourage wider participation.
	• ‘When Issued’ direction for G-sec market was issued liberalising the eligible participants’ base and relaxing the entity-wise limits for taking positions in the ‘When Issued’ market.
July 25, 2018	Short sale directions for G-sec market were issued liberalising the eligible participants’ base as well as relaxing the entity-wise and security category-wise limits for short selling in G-sec.
October 5, 2018	Electronic Trading Platforms (Reserve Bank) Directions, 2018 were introduced to put in place a framework for authorisation of electronic trading platforms (ETP) for financial market instruments regulated by the Reserve Bank.
October 29, 2018	Payment banks and SFBs were permitted to participate in the call money market both as borrower and lender.
November 29, 2018	Legal Entity Identifier (LEI) code for non-individual entities was introduced for participation in all financial markets regulated by the Reserve Bank.
February 7, 2019	A taskforce on offshore rupee markets were set up to incentivise non-residents to move to domestic markets for their hedging requirements and to improve market liquidity to promote hedging activity onshore.

*Indicative in nature and details are available on the Reserve Bank’s website.

Date of Announcement	Policy Initiative
March 15, 2019	Reserve Bank of India (Prevention of Market Abuse) Directions, 2019 were issued in line with the best global practices, to prevent abuse in markets regulated by the Reserve Bank.
March 27, 2019	• The limit for FPI was increased to 6 per cent and 2 per cent of the outstanding stock of G-sec and SDL respectively for 2019-20. Further, the limit for FPI in corporate bonds was fixed at 9 per cent of the outstanding stock. • Non-residents were given access to the onshore OTC rupee IRD markets in India for the purposes of both hedging and other than hedging.
April 25, 2019	FPIs were permitted to invest in municipal bonds, within the limits for SDLs, to broaden access of non-resident investors to debt instruments in India.
May 24, 2019	A separate channel called VRR was introduced for FPIs with more operational flexibility to encourage them to undertake long-term debt investment in India.
June 20, 2019	An electronic trading platform developed by CCIL for buying/selling foreign exchange by retail customers of banks (FX-Retail) was introduced which will be operational from August 5, 2019.
June 26, 2019	• Interest rate derivative directions were issued covering all interest rate derivative products (both OTC and exchange traded) to achieve consistency and ease of access with the eventual objective of fostering a thriving environment for management of interest rate risk in the Indian economy. • A regulatory framework for Financial Benchmarks Administrator (FBA) was introduced, with the objective of improving the governance of the benchmark processes in markets regulated by the Reserve Bank.
Financial Markets Operations Department	
March 13, 2019	The Reserve Bank augmented its liquidity management toolkit and introduced long-term foreign exchange swap auctions to manage rupee liquidity. The first such buy/sell swap auction was conducted on March 26, 2019.
Foreign Exchange Department	
August 29, 2018	In consultation with the Government of India, it was decided to permit receipt of remittances to the Chief Minister's Distress Relief Fund – Kerala, through exchange houses, subject to the condition that the remittances are directly credited to the fund by the banks and the banks maintain full details of the remitters.
September 1, 2018	With the objective of integrating the reporting structure prescribed under FEMA for foreign investments received in India which were filed in a disaggregated manner across various platforms, formats and modes, a single master form was introduced through the FIRMS application.
September 7, 2018	The outward remittance services by non-bank entities through AD (category I) banks in India has been modified for overseas education by enhancing the limit to USD 10,000 per transaction.
September 19, 2018	In consultation with the Government of India, it has been decided to liberalise some aspects of the ECB policy with the objective of easing the constraints of manufacturing sector for raising capital from overseas and to improve liquidity in secondary market for rupee denominated bond.
October 3, 2018	In order to have easier access to foreign currency borrowings in view of their high import requirements, public sector oil marketing companies (OMCs) were permitted to raise ECB for working capital purposes with minimum average maturity period (MAMP) of 3/5 years from all recognised lenders under the automatic route.
November 6, 2018	The minimum average maturity requirement for ECBs in infrastructure space was reduced to 3 years and exemption from mandatory hedging of 100 per cent for infrastructure space companies was made applicable for ECBs with minimum average maturity of 5 years instead of earlier 10 years.
November 12, 2018	Individuals resident in India were permitted to include non-resident Indian (NRI) close relative(s) as joint holder(s) in all types of resident bank accounts on "Either or Survivor" basis subject to certain conditions.
November 26, 2018	Reduction in mandatory hedging requirement from 100 per cent to 70 per cent for ECBs, between 3 and 5 years maturity, raised by infrastructure space companies.
January 16, 2019	Rationalisation of the framework for the ECB and rupee denominated bonds for improving the ease of doing business.

Date of Announcement	Policy Initiative
February 5, 2019	All the nine forms prescribed for reporting foreign investments received in India were made available for online filing through the FIRMS application.
February 7, 2019	Relaxing the end use restrictions for resolution applicants under the Corporate Insolvency Resolution Process (CIRP) and allowing them to raise ECBs from the recognised lenders, except the branches/overseas subsidiaries of Indian banks, for repayment of rupee term loans of the target company under the approval route.
February 27, 2019	Relaxation in case of opening of Branch Office (BO)/Liaison Office (LO)/Project Office (PO) or any other place of business in India by a NGO, non-profit organisation, Body/Agency/Department of a foreign government, if such an entity is engaged, partly or wholly, in any of the activities covered under Foreign Contribution (Regulation) Act, 2010 (FCRA).
March 13, 2019	The trade credit policy was rationalised to put in place a coherent and streamlined framework to further improve the ease of doing business and address the financing needs of the importers.
March 20, 2019	• An individual travelling from India to Nepal or Bhutan may carry Reserve Bank of India currency notes in Mahatma Gandhi (New) series of denominations ₹200 and/or ₹500, subject to a total limit of ₹25,000. • In order to facilitate compilation of estimates of bilateral trade in services, it was decided to incorporate an additional field for capturing the country code of ultimate exporter/importer in the BoP file-format under FETERS.
March 28, 2019	• No prior approval of the Reserve Bank is required if government approval or license/permission by the concerned ministry/regulator has already been granted for opening of a BO/LO/PO or any other place of business in India, where the principal business of the applicant falls in the defence, telecom, private security and information & broadcasting sector. • Certain modifications have been made for opening foreign currency accounts by FPI/FVCI registered with SEBI as well as for citizen of Bangladesh and Pakistan residing in India and who have been granted long-term visa.
April 11, 2019	Re-insurance and composite insurance brokers registered with IRDA have been permitted to open and maintain non-interest bearing foreign currency accounts with an AD bank in India for the purpose of undertaking transactions in the ordinary course of their business.
Department of Banking Regulation	
July 12, 2018	In order to address the concerns arising out of the anonymity provided by payments through demand drafts and its possible misuse for money laundering, it has been decided that the name of the purchaser be incorporated on the face of demand draft, pay order, banker's cheque *etc*., by the issuing bank. These instructions would be effective on instruments issued on or after September 15, 2018.
August 1, 2018	The Bank rate was raised by 25 bps to 6.75 per cent with immediate effect.
August 2, 2018	Banks were advised to use the conversion rate of FBIL for the purpose of converting foreign currency assets/ liabilities in INR/USD and other major currencies for reporting in Form 'A' (CRR) and Form VIII (SLR) returns with effect from the reporting fortnight ending July 20, 2018.
November 2, 2018	Banks were permitted to provide partial credit enhancement to bonds issued by the systemically important non-deposit taking non-banking financial companies (NBFC-ND-SIs) registered with the Reserve Bank and HFCs registered with NHB, subject to certain conditions.
November 29, 2018	Banks were advised regarding the applicability of NSFR with effect from April 1, 2020.
December 5, 2018	• With the objective of aligning SLR with LCR requirement, it was decided to reduce the SLR, which was 19.5 per cent of NDTL, by 25 bps every calendar quarter beginning from January 5, 2019 till it reaches 18 per cent of NDTL on April 11, 2020. • With the objective of promoting greater credit discipline among working capital borrowers, guidelines were issued (effective from April 1, 2019) prescribing a 40 per cent mandatory loan component in working capital (to be increased to 60 per cent from July 1, 2019) and 20 per cent credit conversion factor on the undrawn portion of cash credit/overdraft facilities for the large borrowers, having aggregate fund based working capital limit of ₹1,500 million and above from banking system.

Date of Announcement	Policy Initiative
December 27, 2018	All SCBs (including RRBs), SFBs, LABs, Co-operative Banks, NBFCs and AIFIs were advised to complete filing the charges pertaining to subsisting transactions by March 31, 2019 and all current transactions on an ongoing basis, with CERSAI.
December 28, 2018	Extension of facilities – (a) permitting banks to reckon government securities as Level 1 HQLA under FALLCR within mandatory SLR requirement up to 0.5 per cent of the bank's NDTL in respect of their incremental lending to NBFCs and HFCs till March 31, 2019 (b) increase in single borrower limit for NBFCs to 15 per cent of capital funds till March 31, 2019.
January 9, 2019	All SCBs (excluding RRBs) were advised regarding the amendments made by the Government of India in existing guidelines to include 'Charitable institutions, Central Government, State Government or any other entity owned by Central Government or State Government' as persons eligible to make deposit under the Gold Monetisation Scheme, 2015.
January 10, 2019	It was decided to extend the transition period of the last tranche of Capital Conservation Buffer (CCB) by one year, *i.e.*, up to March 31, 2020. The increase in the trigger level of CET1 capital for write-down/conversion of AT1 instruments, from 5.50 per cent to 6.125 per cent effective March 31, 2019, was postponed till March 31, 2020.
January 11, 2019	Banks were advised that the benefit from increased interest equalisation rate from 3 per cent to 5 per cent in respect of exports by manufacturers in the MSME sector under the Interest Equalisation Scheme on Pre and Post-Shipment Rupee Export Credit would be provided to all eligible MSME exporters. The scheme is effective from April 1, 2015 for five years, covering exports under 416 identified tariff lines and export of MSMES, shall also include merchant exporters from January 2, 2019 allowing them interest equalisation at 3 per cent on credit for export of products covered under the identified tariff lines.
February 7, 2019	The Bank rate was reduced by 25 bps to 6.5 per cent with immediate effect.
February 22, 2019	• With a view to facilitate flow of credit to well-rated NBFCs and to harmonise risk weights applicable to banks' exposure to various categories of NBFCs under the standardised approach for credit risk management, it was decided that exposures to all NBFCs, excluding Core Investment Companies (CICs), will be risk weighted as per the ratings assigned by the rating agencies registered with SEBI and accredited by the Reserve Bank, in a manner similar to that of corporates under the existing regulations. Exposures to CICs, rated as well as unrated, will continue to be risk-weighted at 100 per cent. • In January 2019, a one-time restructuring of existing loans to MSMEs that were in default but 'standard' as on January 1, 2019 was permitted without an asset classification downgrade, subject to certain conditions, which, *inter alia*, prescribed that the borrowing entity was required to be GST-registered on the date of implementation of the restructuring. MSMEs where the aggregate exposure of banks and NBFCs did not exceed ₹250 million as on January 1, 2019 were eligible for the scheme. However, the condition of being GST-registered was not to be applicable to MSMEs that were exempt from GST-registration. In this regard, it was clarified that the limit for exemption from GST-registration should be determined as per the limits that were applicable on the date of circular *i.e.*, January 1, 2019. • The definition of bulk deposits was revised as 'single rupee term deposits of ₹2 crore and above' for SCBs (excluding RRBs) and SFBs. Banks were also advised to maintain the bulk deposit interest rate card in their Core Banking System to facilitate supervisory review.
March 22, 2019	Implementation of Ind AS for SCBs (excluding RRBs) deferred by one year earlier, was deferred till further notice.
April 1, 2019	Banks were advised to make disclosure of divergence from Income Recognition, Asset Classification and Provisioning (IRACP) norms, when either or both of the following conditions are satisfied: (a) the additional provisioning for NPAs assessed by the Reserve Bank exceeds 10 per cent of the reported profit before provisions and contingencies for the reference period, and (b) the additional gross NPAs identified by the Reserve Bank exceed 15 per cent of the published incremental gross NPAs for the reference period.
April 4, 2019	• Banks were advised to reckon an additional 2 per cent government securities held by them under FALLCR within the mandatory SLR requirement as Level 1 HQLA for the purpose of computing LCR in a phased manner, effective April 4, 2019 till April 1, 2020. • The Bank rate was reduced by 25 bps to 6.25 per cent with immediate effect.

Date of Announcement	Policy Initiative
May 8, 2019	NCLAT *vide* order dated February 25, 2019 had restrained financial institutions from classifying the accounts of IL&FS or its entities as 'NPA' without prior permission. In view of the above order, banks and AIFIs were advised *vide* RBI circular dated April 24, 2019 to disclose in their notes to accounts details of amount outstanding, amount which is NPAs as per IRAC norms but not classified as NPA, provisions required to be made as per IRAC norms and provisions actually held in respect of IL&FS and IL&FS entities. Subsequently, *vide* order dated May 2, 2019, NCLAT had permitted banks to classify their exposures towards IL&FS and group entities as NPA. In view of the same, the instructions contained in the above mentioned circular dated April 24, 2019 were withdrawn.
May 29, 2019	Amendment to the Master Direction on KYC was made. Major changes included: (a) allowing banks to carry out *Aadhaar* authentication/offline verification for individuals using their *Aadhaar* number for identification purpose voluntarily (b) addition of 'Proof of Possession of *Aadhaar* number' to the list of Officially Valid Documents (OVD) (c) obtaining customer's *Aadhaar* number for e-KYC authentication, for those receiving any benefit or subsidy under DBT (d) provision of identification of customers by regulated entities other than banks, through offline verification under *Aadhaar* Act if provided on voluntary basis.
May 31, 2019	The guidelines on rationalisation on Branch Authorisation Policy were revised, which introduced the concept of 'Banking Outlets' for RRBs. The permission for opening new banking outlets, in tier 1 to 4 centres, shall become applicable only after an RRB has opened at least 25 per cent of the total banking outlets during the previous financial year in Unbanked Rural Centres.
June 3, 2019	In order to capture exposures and concentration risk more accurately and to align the framework with international norms, the amendments were incorporated in the earlier circulars on 'Large Exposure Framework' dated December 1, 2016 and April 1, 2019. The revised guidelines supercede the earlier circulars.
June 6, 2019	The Bank rate was reduced by 25 bps to 6.0 per cent with immediate effect.
June 7, 2019	The Reserve Bank issued the prudential framework for resolution of stressed assets by the banks.
June 10, 2019	• It was decided that repurchase of SDLs by the concerned state government would be exempted from disclosure norms to be made in 'Notes to Accounts' in banks' audited Annual Financial Statements, apart from other approved types of transactions already exempted. • The facilities associated with Basic Savings Bank Deposit Account (BSBDA) were reviewed.
June 28, 2019	• It was decided that, with effect from the quarter commencing October 1, 2019, the minimum leverage ratio shall be 4 per cent for Domestic Systemically Important Banks (DSIBs) and 3.5 per cent for other banks. • The Master Office File (MOF) system maintained by the Reserve Bank for the directory of all BO/Offices of banks in India through which BSR code is allotted, has been replaced by a new web-based reporting system *viz.,* Central Information System for Banking Infrastructure (CISBI) with a single proforma.
Department of Cooperative Bank Regulation	
July 6, 2018	Guidelines on spreading of MTM losses and creation of Investment Fluctuation Reserve (IFR) were issued.
August 16, 2018	• UCBs were permitted to undertake eligible transactions for acquisition/sale of non-SLR investment in secondary market with mutual funds, pension/provident funds and insurance companies, in addition to undertaking transactions with commercial banks and primary dealers, subject to adherence to the instructions issued by the Reserve Bank in this regard. • LAF was extended to Scheduled State Co-operative Banks (StCBs). With effect from August 20, 2018, MSF was extended to Scheduled UCBs and Scheduled StCBs in order to provide an additional window for liquidity management over and above what was available under LAF.
September 27, 2018	Guidelines were issued for allowing voluntary transition of UCBs to SFBs provided UCBs satisfy criteria such as – a minimum net worth of ₹500 million, maintaining 9 per cent CRAR as well as other eligibility conditions.
June 10, 2019	UCBs having liquidity stress were permitted to sell securities from Held-to-Maturity (HTM) portfolio.

Date of Announcement	Policy Initiative
Department of Non-Banking Regulation	
July 27, 2018	Standalone Primary Dealers (SPDs) were permitted to offer foreign exchange products to their foreign portfolio investor (FPI) clients.
October 25, 2018	Directions on fit and proper criteria for sponsors of ARCs registered under the SARFAESI Act were issued.
November 29, 2018	Minimum holding period (MHP) requirement for securitisation transactions related to loans of original maturity above 5 years were relaxed for a period of six months.
February 22, 2019	• All systemically important non-deposit taking NBFCs were advised to take appropriate action as envisaged under Interest Subvention Scheme for micro, small and medium enterprises (MSMEs) announced by the Government of India. • Harmonisation of regulations governing AFCs, LCs and ICs were undertaken along with merging these into a new category called NBFC – Investment and Credit Company (NBFC – ICC).
April 16, 2019	Systemically important non-deposit taking investment and credit companies were made eligible for Authorised Dealer – Category II (AD – Cat II) license subject to meeting certain conditions.
May 16, 2019	NBFCs with asset size of more than ₹50 billion were advised to appoint a chief risk officer (CRO) with clearly specified role and responsibilities.
May 29, 2019	Relaxations related to MHP requirement for securitisation transactions were extended till December 31, 2019.
June 28, 2019	ARCs were permitted to acquire financial assets from other ARCs subject to certain conditions.
Department of Non-Banking Supervision	
May 8, 2019	NBFCs registered with the Reserve Bank were advised to report cyber security related incidents in electronic format.
Consumer Education and Protection Department	
September 3, 2018	Internal Ombudsman Scheme 2018 was extended to all SCBs (excluding RRBs) with more than 10 banking outlets.
January 31, 2019	Ombudsman Scheme for digital transactions was launched.
April 26, 2019	Ombudsman Scheme for non-banking financial companies was extended to non-deposit taking NBFCs having asset size of ₹1 billion or above and having customer interface.
June 24, 2019	Complaint Management System was launched.
Internal Debt Management Department	
October 29, 2018	Guidelines on Subsidiary General Ledger (SGL)/Constituent Subsidiary General Ledger (CSGL) account were comprehensively reviewed and a revised notification was issued to facilitate greater participation in government securities market and to provide market participants further operational ease in opening and operating SGL/CSGL account.
November 16, 2018	Separate guidelines for Value Free Transfer (VFT) were issued, broadening the scope of transactions where eligible entities may directly undertake VFT through RBI's CBS.
June 6, 2019	It was decided to allow specified Stock Exchanges to act as Aggregators/Facilitators to aggregate the bids of their stock brokers/other retail participants and submit a single consolidated bid under the non-competitive segment of the primary auctions of SDLs.
Department of Currency Management	
September 7, 2018	Banks were advised regarding the Gazette Notification dated September 6, 2018 on amendment to Reserve Bank of India (Note Refund) Rules.
November 20, 2018	All banks maintaining Currency Chests were advised to fulfil the required prerequisites related to the replacement of ICCOMS with an improved currency management module.

Date of Announcement	Policy Initiative
February 28, 2019	Instructions regarding standardisation of storage facilities in Currency Chests were issued to the banks maintaining Currency Chests.
April 8, 2019	Banks were advised regarding the minimum standards requirement for setting up new Currency Chests with the objective of encouraging them to open large Currency Chests with modern facilities.
May 14, 2019	Instructions were issued to the banks for timely reconciliation of transactions (*i.e.*, ATM cash replenishment) between the bank, the service provider and its sub-contractor.
May 23, 2019	Large modern Currency Chests, which are fulfilling the newly introduced minimum standards for setting up Currency Chests, were allowed to increase the service charges to be levied on cash deposited by non-chest bank branches.
June 14, 2019	Banks were advised regarding the security measures aimed at mitigating risks in ATM operations and enhancing security.
June 26, 2019	The Reserve Bank appealed to members of the public to continue to accept coins as legal tender in all their transactions without any hesitation.
Department of Payment and Settlement Systems	
October 15, 2018	Directions related to capital requirements and governance framework of Central Counterparties (CCPs) and framework for recognition of foreign CCPs were issued.
October 16, 2018	For all KYC-compliant PPIs, the road map was laid to ensure (i) interoperability of PPIs issued in the form of wallets through UPI, (ii) interoperability between wallets and bank accounts through UPI, and (iii) interoperability for PPIs issued in the form of cards through card networks.
November 15, 2018	Positive confirmation to the remitter of the funds regarding completion of the fund transfer was introduced in the RTGS system with the objective of providing an assurance to the remitter that the funds have been successfully credited to the beneficiary account.
January 4, 2019	With the objective of strengthening customer protection in unauthorised electronic payment transactions in PPIs issued by authorised non-banks, the criteria for determining customers' liability were reviewed.
January 8, 2019	It was decided to permit authorised card payment networks to offer card tokenisation services to any token requestor through mobile phones/tablets.
February 25, 2019	The KYC requirements for PPIs were reviewed and the time line for completion of KYC was extended from 12 to 18 months.
March 7, 2019	The guidelines prescribed for White Label ATMs were reviewed in order to enhance the viability of WLAs.
May 28, 2019	Customer transactions cut-off time in RTGS was extended from 4:30 pm to 6:00 pm, with effect from June 1, 2019.
June 11, 2019	The processing charges and time varying charges levied on banks by the Reserve Bank for outward transactions undertaken using the RTGS system and also the processing charges levied by the Reserve Bank for transactions processed in the NEFT system were waived by the Reserve Bank from July 1, 2019.
June 12, 2019	The directions on governance of authorised domestic CCPs were reviewed and the upper age limit for appointment of Director, Independent Director and Chairperson was revised from 65 to 70 years.

APPENDIX TABLE 1: MACROECONOMIC AND FINANCIAL INDICATORS

Item	Average 2003-04 to 2007-08 (5 years)	Average 2009-10 to 2013-14 (5 years)	2016-17	2017-18	2018-19
1	2	3	4	5	6
I. Real Economy					
I.1 Real GDP at market prices (% change)*	7.9	6.7	8.2	7.2	6.8
I.2 Real GVA at basic prices (% change)*	7.7	6.3	7.9	6.9	6.6
I.3 Foodgrains Production (Million tonnes)	213.6	248.8	275.1	285.0	283.4
I.4 a) Food Stocks (Million tonnes at end-March)	18.6	50.0	38.0	43.3	72.7
b) Procurement	39.4	61.3	60.2	68.2	77.7
c) Off-take	41.5	56.9	61.9	60.3	65.9
I.5 Index of Industrial Production (% change)**	11.2	4.6	4.6	4.4	3.8
I.6 Index of Eight Core Industries (% change)**	5.9	4.9	4.8	4.3	4.4
I.7 Gross Domestic Saving Rate (% of GNDI at current prices)*	33.6	33.9	29.9	30.1	_
I.8 Gross Domestic Investment Rate (% of GDP at current prices)*	35.2	38.0	30.9	32.3	_
II. Prices					
II.1 Consumer Price Index (CPI) Combined (average % change)	_	_	4.5	3.6	3.4
II.2 CPI- Industrial Workers (average % change)	5.0	10.3	4.1	3.1	5.4
II.3 Wholesale Price Index (average % change)#	5.5	7.1	1.7	2.9	4.3
III. Money and Credit					
III.1 Reserve Money (% change)	20.4	12.1	-12.9	27.3	14.5
III.2 Broad Money (M_3) (% change)	18.6	14.7	6.9	9.2	10.5
III.3 a) Aggregate Deposits of Scheduled Commercial Banks (% change)	20.2	15.0	11.3	6.2	10.0
b) Bank Credit of Scheduled Commercial Banks (% change)	26.7	16.7	4.5	10.0	13.3
IV. Financial Markets					
IV.1 Interest rates (%)					
a) Call/Notice Money rate	5.6	7.2	6.2	5.9	6.3
b) 10 year G-Sec yield	7.0	8.0	7.0	7.0	7.7
c) 91-Days T-bill yield	_	_	6.4	6.2	6.6
d) Weighted Average cost of Central Government Borrowings	_	_	7.2	7.0	7.4
e) Commercial Paper	7.7	8.4	7.4	7.0	7.6
f) Certificate of Deposits##	8.9	8.2	6.9	6.6	7.3
IV.2 Liquidity (₹ billion)					
a) LAF Outstanding~	_	_	3,140.7	-574.8	-1,482.1
b) MSS Outstanding~~	_	_	0.0	0.0	0.0
c) Average Daily Call Money Market Turnover	184.9	255.3	306.0	282.1	364.5
d) Average Daily G-Sec Market Turnover###	77.1	241.4	829.9	537.7	432.9
e) Variable Rate Repo$	_	_	129.9	2,622.1	1,639.0
f) Variable Rate Reverse Repo$	_	_	2,032.0	153.1	0.0
g) MSF$	_	_	19.3	525.9	942.6
V. Government Finances&					
V.1 Central Government Finances (% of GDP)					
a) Revenue Receipts	10.0	9.2	8.9	8.4	8.2
b) Capital Outlay	1.6	1.6	1.6	1.4	1.5
c) Total Expenditure	14.9	15.0	12.9	12.5	12.2
d) Gross Fiscal Deficit	3.7	5.4	3.5	3.5	3.4
V.2 State Government Finances&&					
a) Revenue Deficit (% of GDP)	0.4	0.0	0.3	0.2	0.1
b) Gross Fiscal Deficit (% of GDP)	2.7	2.2	3.5	2.2	2.7
c) Primary Deficit (% of GDP)	0.3	0.6	1.8	0.6	1.1

APPENDIX TABLE 1: MACROECONOMIC AND FINANCIAL INDICATORS *(Concld.)*

Item	Average 2003-04 to 2007-08 (5 years)	Average 2009-10 to 2013-14 (5 years)	2016-17	2017-18	2018-19
1	2	3	4	5	6
VI. External Sector					
VI.1 Balance of Payments					
a) Merchandise Exports (% change)	25.3	12.2	5.2	10.3	9.1
b) Merchandise Imports (% change)	32.3	9.7	-1.0	19.5	10.3
c) Trade Balance/GDP (%)	-5.5	-9.1	-4.9	-6.0	-6.6
d) Invisible Balance/GDP (%)	5.2	5.8	4.3	4.2	4.5
e) Current Account Balance/GDP (%)	-0.3	-3.3	-0.6	-1.8	-2.1
f) Net Capital Flows/GDP (%)	4.7	3.8	1.6	3.4	2.0
g) Reserve Changes [(BoP basis) (US$ billion)] [(Increase (-)/Decrease (+)]	-40.3	-6.6	-21.6	-43.6	3.3
VI.2 External Debt Indicators					
a) External Debt Stock (US$ billion)	156.5	359.0	471.0	529.3	543.0
b) Debt-GDP Ratio (%)	17.8	20.9	19.9	20.1	19.7
c) Import cover of Reserves (in Months)	14.0	8.5	11.3	10.9	9.6
d) Short-term Debt to Total Debt (%)	13.6	21.3	18.7	19.3	20.0
e) Debt Service Ratio (%)	8.3	5.6	8.3	7.5	6.4
f) Reserves to Debt (%)	113.7	84.8	78.5	80.2	76.0
VI.3 Openness Indicators (%)					
a) Export plus Imports of Goods/GDP	30.7	41.0	29.4	29.3	31.4
b) Export plus Imports of Goods & Services/GDP	41.3	53.2	40.7	41.1	43.7
c) Current Receipts plus Current Payments/GDP	47.1	59.4	46.2	46.5	49.5
d) Gross Capital Inflows plus Outflows/GDP	37.3	50.4	46.5	45.1	37.9
e) Current Receipts & Payments plus Capital Receipts & Payments/ GDP	84.4	109.8	92.7	91.6	87.4
VI.4 Exchange Rate Indicators					
a) Exchange Rate (Rupee/US$)					
End of Period	43.1	51.1	64.8	65.0	69.2
Average	44.1	51.2	67.1	64.5	69.9
b) 36 - Currency REER (% change)	3.1^	0.8	2.2	4.5	-4.8
c) 36 - Currency NEER (% change)	1.7^	-4.9	-0.1	3.1	-5.6
d) 6 - Currency REER (% change)	4.4^	1.9	2.0	3.2	-5.8
e) 6 - Currency NEER (% change)	1.6^	-5.4	-1.0	1.6	-7.1

_ : Not Available.
* : Data are at 2011-12 base.
** : Data for average 2003-04 to 2007-08 and 2009-10 to 2013-14 are spliced on 2011-12 base year. For 2016-17, 2017-18 and 2018-19, data are based on the new series with base year 2011-12.
\# : Base year for WPI is 2011-12=100 for annual data and 2004-05=100 for average of 5 years inflation.
\## : Data for column 2 pertains to April 13, 2007 to March 28, 2008.
\### : Outright trading turnover in central government dated securities (based on calendar days).
~ : LAF outstanding as on March 31 (negative means injection).
~~ : Outstanding as on last Friday of the financial year.
$: Outstanding as on March 31.
& : Data for 2018-19 are Provisional Accounts.
&& : Data for 2017-18 onwards are provisional and pertain to budgets of 27 states.
^ : Average of period 2005-06 to 2007-08.
Note : Real Effective Exchange Rate (REER) are based on CPI (combined).
Source : RBI, National Statistical Office, Ministry of Agriculture & Farmers' Welfare, Ministry of Commerce and Industry, Food Corporation of India (FCI), Labour Bureau and Budget documents of the central and state governments.

APPENDIX TABLE 2 : GROWTH RATES AND COMPOSITION OF REAL GROSS DOMESTIC PRODUCT

(At 2011-12 Prices)

(Per cent)

Sector	Growth Rate				Share		
	Average 2013-14 to 2018-19	**2016-17**	**2017-18**	**2018-19**	**2016-17**	**2017-18**	**2018-19**
1	2	3	4	5	6	7	8
Expenditure Side GDP							
1. Private Final Consumption Expenditure	7.6	8.2	7.4	8.1	56.1	56.3	56.9
2. Government Final Consumption Expenditure	7.6	5.8	15.0	9.2	9.7	10.5	10.7
3. Gross Fixed Capital Formation	6.4	8.3	9.3	10.0	30.8	31.4	32.3
4. Change in Stocks	6.9	-48.2	21.2	4.8	1.0	1.1	1.1
5. Valuables	-3.0	-18.9	27.4	-9.0	1.2	1.5	1.2
6. Net Exports	-32.7	7.2	-263.1	-31.0	-1.1	-3.6	-4.4
a) Exports	4.4	5.1	4.7	12.5	20.3	19.8	20.8
b) Less Imports	4.0	4.4	17.6	15.4	21.3	23.4	25.3
7. Discrepancies	-61.2	239.7	42.3	-21.8	2.2	2.9	2.1
8. GDP	**7.3**	**8.2**	**7.2**	**6.8**	**100.0**	**100.0**	**100.0**
GVA at Basic Prices (Supply Side)							
1. Agriculture, forestry and fishing	**3.4**	**6.3**	**5.0**	**2.9**	**15.2**	**14.9**	**14.4**
2. Industry	**7.5**	**8.3**	**6.1**	**6.2**	**23.4**	**23.2**	**23.1**
of which :							
a) Mining and quarrying	6.0	9.5	5.1	1.3	3.1	3.0	2.9
b) Manufacturing	7.8	7.9	5.9	6.9	18.2	18.0	18.0
c) Electricity, gas, water supply and other utility services	6.9	10.0	8.6	7.0	2.2	2.2	2.2
3. Services	**8.0**	**8.1**	**7.8**	**7.7**	**61.4**	**61.9**	**62.5**
of which :							
a) Construction	5.2	6.1	5.6	8.7	8.1	8.0	8.2
b) Trade, hotels, transport, communication and services related to broadcasting	8.1	7.7	7.8	6.9	19.0	19.1	19.1
c) Financial, real estate and professional services	9.2	8.7	6.2	7.4	22.0	21.9	22.1
d) Public Administration, defence and other services	8.0	9.2	11.9	8.6	12.3	12.9	13.1
4. GVA at basic prices	**7.1**	**7.9**	**6.9**	**6.6**	**100.0**	**100.0**	**100.0**

Source: National Statistical Office (NSO).

APPENDIX TABLE 3A: GROSS SAVINGS

(Per cent of GNDI)

Item	2014-15	2015-16	2016-17	2017-18
1	2	3	4	5
I. Gross Savings	**31.6**	**30.5**	**29.9**	**30.1**
1.1 Non-financial corporations	**11.1**	**12.0**	**11.6**	**12.0**
1.1.1 Public non-financial corporations	1.0	1.1	1.1	1.4
1.1.2 Private non-financial corporations	10.1	10.9	10.5	10.6
1.2 Financial corporations	**2.7**	**2.1**	**2.2**	**2.1**
1.2.1 Public financial corporations	1.3	1.3	1.3	1.3
1.2.2 Private financial corporations	1.3	0.8	0.8	0.9
1.3 General Government	**-1.4**	**-1.2**	**-0.8**	**-0.9**
1.4 Household sector	**19.2**	**17.6**	**16.9**	**17.0**
1.4.1 Net financial saving	6.9	7.9	6.2	6.5
Memo: Gross financial saving	9.9	10.7	9.2	10.8
1.4.2 Saving in physical assets	11.9	9.4	10.3	10.2
1.4.3 Saving in the form of valuables	0.4	0.3	0.3	0.2

GNDI: Gross national disposable income.

Note: Net financial saving of the household sector is obtained as the difference between gross financial saving and financial liabilities during the year.

Source: NSO.

APPENDIX TABLE 3B: FINANCIAL SAVING OF THE HOUSEHOLD SECTOR

(Per cent of GNDI)

Item	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1	2	3	4	5	6	7	8
A. Gross financial saving	**10.4**	**10.5**	**10.4**	**9.9**	**10.7**	**9.2**	**10.8**
Of which:							
1. Currency	1.2	1.1	0.9	1.0	1.4	-2.0	_
2. Deposits	6.0	6.0	5.8	4.8	4.6	6.3	_
3. Shares and debentures	0.2	0.2	0.2	0.2	0.3	0.2	_
4. Claims on government	-0.2	-0.1	0.2	0.0	0.5	0.4	_
5. Insurance funds	2.2	1.8	1.8	2.4	1.9	2.3	_
6. Provident and pension funds	1.1	1.5	1.5	1.5	2.1	2.0	_
B. Financial liabilities	**3.2**	**3.2**	**3.1**	**3.0**	**2.7**	**3.0**	**4.3**
C. Net financial saving (A-B)	**7.2**	**7.2**	**7.2**	**6.9**	**7.9**	**6.2**	**6.5**

GNDI: Gross national disposable income; _: Not available.

Note: 1. Figures may not add up to total due to rounding off.

2. Data on components of gross financial saving are as per First Revised Estimates of 2016-17.

Source: First Revised Estimates of 2017-18, NSO.

APPENDIX TABLE 4: INFLATION, MONEY AND CREDIT

(Per cent)

Inflation									
Consumer Price Index (All India)[#]	**Rural**			**Urban**			**Combined**		
	2016-17	**2017-18**	**2018-19**	**2016-17**	**2017-18**	**2018-19**	**2016-17**	**2017-18**	**2018-19**
1	2	3	4	5	6	7	8	9	10
General Index (All Groups)	**5.0**	**3.6**	**3.0**	**4.0**	**3.6**	**3.9**	**4.5**	**3.6**	**3.4**
Food and beverages	4.7	2.4	0.7	3.9	1.8	0.7	4.4	2.2	0.7
Housing	_	_	_	5.2	6.5	6.7	5.2	6.5	6.7
Fuel and light	4.6	6.5	6.0	1.0	5.6	5.2	3.3	6.2	5.7
Miscellaneous	5.1	4.3	6.3	3.7	3.1	5.4	4.5	3.8	5.8
Excluding Food and Fuel	5.5	4.7	5.7	4.3	4.6	5.9	4.8	4.6	5.8
Other Price Indices	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
1. Wholesale Price Index (2011-12=100)*									
All Commodities	**9.6**	**8.9**	**7.4**	**5.2**	**1.3**	**-3.7**	**1.7**	**2.9**	**4.3**
Primary Articles	17.7	9.8	9.8	9.8	2.2	-0.4	3.4	1.4	2.7
of which : Food Articles	15.6	7.3	9.9	12.3	5.6	2.6	4.0	2.1	0.3
Fuel and Power	12.3	14.0	10.3	7.1	-6.1	-19.7	-0.3	8.2	11.5
Manufactured Products	5.7	7.3	5.4	3.0	2.6	-1.8	1.3	2.7	3.7
Non-Food Manufactured Products	6.1	7.3	4.9	2.7	2.7	-1.8	-0.1	3.0	4.2
2. CPI- Industrial Workers (IW) (2001=100)	**10.4**	**8.4**	**10.4**	**9.7**	**6.3**	**5.6**	**4.1**	**3.1**	**5.4**
of which : CPI- IW Food	9.9	6.3	11.9	12.3	6.5	6.1	4.4	1.5	0.6
3. CPI- Agricultural Labourers (1986-87=100)	**10.0**	**8.2**	**10.0**	**11.6**	**6.6**	**4.4**	**4.2**	**2.2**	**2.1**
4. CPI- Rural Labourers (1986-87=100)	**10.0**	**8.3**	**10.2**	**11.5**	**6.9**	**4.6**	**4.2**	**2.3**	**2.2**
Money and Credit									
	2010-11	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**^	**2017-18**	**2018-19**
Reserve Money (RM)	**19.1**	**3.6**	**6.2**	**14.4**	**11.3**	**13.1**	**-12.9**	**27.3**	**14.5**
Currency in Circulation	18.8	12.4	11.6	9.2	11.3	14.9	-19.7	37.0	16.8
Bankers' Deposits with RBI	20.2	-15.9	-10.0	34.0	8.3	7.8	8.4	3.9	6.4
Currency-GDP Ratio$	12.4	12.2	12.0	11.6	11.6	12.1	8.7	10.7	11.2
Narrow Money (M1)	**10.0**	**6.0**	**9.2**	**8.5**	**11.3**	**13.5**	**-3.9**	**21.8**	**13.6**
Broad Money (M3)	**16.1**	**13.5**	**13.6**	**13.4**	**10.9**	**10.1**	**6.9**	**9.2**	**10.5**
Currency-Deposit Ratio	16.3	16.1	15.7	15.1	15.2	16.0	11.0	14.4	15.4
Money Multiplier (Ratio)##	4.7	5.2	5.5	5.5	5.5	5.3	6.7	5.8	5.6
GDP-M_3 Ratio$##	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Scheduled Commercial Banks									
Aggregate Deposits	15.9	13.5	14.2	14.1	10.7	9.3	11.3	6.2	10.0
Bank Credit	21.5	17.0	14.1	13.9	9.0	10.9	4.5	10.0	13.3
Non-food Credit	21.3	16.8	14.0	14.2	9.3	10.9	5.2	10.2	13.3
Credit-Deposit Ratio	75.7	78.0	77.9	77.8	76.6	77.7	72.9	75.5	77.7
Credit-GDP Ratio$	51.6	52.8	52.9	53.4	52.4	52.6	51.0	50.5	51.4

**:** Base for Consumer Price Index (All India) is 2012=100.

_ **:** CPI Rural for Housing is not compiled.

***** **:** Base for WPI is 2004-05=100 for the period 2010-11 to 2012-13 and 2011-12=100 for the period 2013-14 to 2018-19.

^ : March 31, 2017 over April 1, 2016 barring RM and its components.

$ **:** GDP data are based on 2011-12 base; ##: Ratio.

Note: Data refer to y-o-y change in per cent unless specified otherwise.

Source: RBI, NSO, Labour Bureau and Ministry of Commerce and Industry.

APPENDIX TABLE 5: CAPITAL MARKET - PRIMARY AND SECONDARY

(Amount in ₹ billion)

Item	2017-18		2018-19 P	
	Number	Amount	Number	Amount
1	2	3	4	5
I. PRIMARY MARKET				
A. Prospectus and Rights Issues				
1. Private Sector (a+b)	**221**	**729.5**	**154**	**534.3**
a) Financial	20	360.6	31	443.5
b) Non-Financial	201	368.9	123	90.8
2. Public Sector (a+b+c)	**8**	**371.9**	**4**	**14.8**
a) Public Sector Undertakings	4	69.4	4	14.8
b) Government Companies	…	…	…	…
c) Banks/Financial Institutions	4	302.5	…	…
3. Total (1+2, i+ii, a+b)	**229**	**1,101.4**	**158**	**549.1**
Instrument Type				
(i) Equity	222	1,051.9	133	182.3
(ii) Debt	7	49.5	25	366.8
Issuer Type				
(a) IPOs	200	837.8	123	160.8
(b) Listed	29	263.6	35	388.3
B. Euro Issues (ADRs and GDRs)	**…**	**…**	**1.0**	**127.7**
C. Private Placement				
1. Private Sector (a+b)	**2,366**	**4,472.9**	**2,158**	**3,895.6**
a) Financial	1,723	3,407.4	1,907	2,735.2
b) Non-Financial	643	1,065.5	251	1,160.4
2. Public Sector (a+b)	**203**	**2,291.1**	**148**	**2,343.1**
a) Financial	162	1,894.8	120	1,999.0
b) Non-Financial	41	396.3	28	344.1
3. Total (1+2, i+ii)	**2,569**	**6,764.0**	**2,306**	**6,238.7**
(i) Equity	56	693.8	14	102.9
(ii) Debt	2,513	6,070.2	2,292	6,135.8
D. Qualified Institutional Placement	**53**	**672.4**	**14**	**102.9**
E. Mutual Funds Mobilisation (Net)#		**2,718.0**		**1,097.0**
1. Private Sector		2,284.7		615.0
2. Public Sector		433.3		482.0
II. SECONDARY MARKET				
BSE				
BSE Sensex: End-Period	32,968.7		38,672.9	
Period Average	32,396.8		35,971.8	
Price Earning Ratio@	22.7		28.0	
Market Capitalisation to GDP ratio (%)	83.2		79.3	
Turnover Cash Segment		10,829.7		7,755.9
Turnover Derivatives Segment		32.6		22.5
NSE				
S&P CNX Nifty: End-Period	10,113.7		11,623.9	
Period Average	10,030.1		10,859.5	
Price Earning Ratio@	24.7		29.0	
Market Capitalisation to GDP ratio (%)	82.2		78.4	
Turnover Cash Segment		72,348.3		79,490.0
Turnover Derivatives Segment		1,649,848.6		2,376,007.1

…: Nil; P: Provisional; **#:** Net of redemptions @: As at end of the period.

Source: SEBI, NSE, BSE, CSO and various merchant bankers.

APPENDIX TABLE 6: KEY FISCAL INDICATORS

(As per cent to GDP)

Year	Primary Deficit	Revenue Deficit	Primary Revenue Deficit	Gross Fiscal Deficit	Outstanding Liabilities@	Outstanding Liabilities$
1	2	3	4	5	6	7
			Centre			
1990-91	4.0	3.2	-0.5	7.7	54.6	60.6
1995-96	0.8	2.5	-1.7	5.0	50.3	58.3
2000-01	0.9	4.0	-0.7	5.6	54.6	60.4
2009-10	3.2	5.3	2.0	6.6	55.4	57.3
2010-11	1.8	3.3	0.2	4.9	51.6	53.2
2011-12	2.8	4.5	1.4	5.9	51.7	53.5
2012-13	1.8	3.7	0.5	4.9	51.0	52.5
2013-14	1.1	3.2	-0.2	4.5	50.5	52.2
2014-15	0.9	2.9	-0.3	4.1	50.1	51.4
2015-16	0.7	2.5	-0.7	3.9	50.1	51.5
2016-17	0.4	2.1	-1.1	3.5	48.4	49.6
2017-18	0.4	2.6	-0.5	3.5	48.2	49.5
2018-19 (RE)#	0.2	2.2	-0.9	3.3	47.6	49.0
2018-19 (PA)	0.3	2.3	-0.7	3.4	...	...
2019-20 (BE)	0.2	2.3	-0.8	3.3	46.8	47.9
			States*			
1990-91	1.8	0.9	-0.6	3.3	22.2	22.2
1995-96	0.7	0.7	-1.1	2.6	20.7	20.7
2000-01	1.7	2.6	0.2	4.1	27.8	27.8
2009-10	1.2	0.5	-1.3	3.0	25.9	25.9
2010-11	0.5	0.0	-1.7	2.1	24.0	24.0
2011-12	0.4	-0.3	-1.8	1.9	22.8	22.8
2012-13	0.5	-0.2	-1.7	2.0	22.2	22.2
2013-14	0.7	0.1	-1.4	2.2	22.0	22.0
2014-15	1.1	0.4	-1.2	2.6	21.7	21.7
2015-16	1.5	0.0	-1.5	3.1	23.4	23.4
2016-17	1.8	0.3	-1.4	3.5	24.8	24.8
2017-18	0.6	0.2	-1.4	2.2	23.7	23.7
2018-19 (RE)	1.1	0.1	-1.4	2.7	23.6	23.6
2019-20 (BE)	0.9	0.1	-1.5	2.4	23.7	23.7
			Combined*			
1990-91	5.0	4.1	-0.2	9.3	64.0	70.1
1995-96	1.5	3.1	-1.8	6.4	60.4	68.5
2000-01	3.5	6.5	0.7	9.3	69.2	75.0
2009-10	4.6	5.8	0.9	9.5	70.0	71.8
2010-11	2.4	3.3	-1.3	7.0	65.3	66.9
2011-12	3.3	4.2	-0.3	7.8	65.6	67.4
2012-13	2.3	3.5	-1.1	6.9	65.1	66.7
2013-14	1.9	3.3	-1.5	6.7	65.4	67.1
2014-15	2.0	3.3	-1.4	6.7	65.2	66.6
2015-16	2.2	2.5	-2.2	6.9	67.1	68.5
2016-17	2.2	2.3	-2.4	6.9	67.7	68.8
2017-18	1.0	2.8	-1.9	5.7	66.9	68.2
2018-19 (RE)	1.3	2.3	-2.3	5.9	66.8	68.1
2019-20 (BE)	1.1	2.4	-2.3	5.7	66.6	67.7

… : Not Available; RE: Revised Estimates; PA: Provisional Accounts; BE: Budget Estimates.
@ : Includes external liabilities of the centre calculated at historical exchange rates.
$: Includes external liabilities of the centre calculated at current exchange rates.
Columns 6 and 7 are outstanding figures as at end-March of respective years.
* : Data from 2017-18 onwards are provisional and pertain to budgets of 27 states.
\# : Going by the principle of using latest GDP data for any year, GDP used for 2018-19 (RE) is the latest available Provisional Estimates (released on May 31, 2019). In view of this, the fiscal indicators as per cent to GDP given in this Table may at times marginally vary from those reported in the Union Budget documents.

Note:
1. Data on combined deficit/liabilities indicators are net of inter-governmental transactions between the Centre and the state governments *viz.*, (a) NSSF investment in State governments special securities (b) Loans and advance by the Centre to States and (c) State governments' investment in Centre's treasury bills.
2. Negative sign (-) indicates surplus in deficit indicators.
3. GDP figures used in this table are on 2011-12 base, which are the latest available estimates.
4. As per Union Budget 2019-20, the liabilities of the central government exclude extra budgetary resources which were ₹885 billion at the end of 2018-19 (RE). In 2019-20 (BE), additional liabilities on this account are estimated to be ₹570 billion.

Source: Budget documents of the central and state governments, Status paper on government debt, 2017-18 and Quarterly report on public debt management for the Q4:2018-19.

APPENDIX TABLE 7: COMBINED RECEIPTS AND DISBURSEMENTS OF THE CENTRAL AND STATE GOVERNMENTS

(Amount in ₹ billion)

Item	2014-15	2015-16	2016-17	2017-18	2018-19 (RE)	2019-20 (BE)
1	2	3	4	5	6	7
1 Total Disbursements	**32,852.1**	**37,606.1**	**42,659.7**	**43,037.3**	**52,228.7**	**57,856.8**
1.1 Developmental	18,720.6	22,012.9	25,379.1	24,829.5	31,239.3	34,496.5
1.1.1 Revenue	14,830.2	16,682.5	18,784.2	19,211.6	23,882.8	26,810.8
1.1.2 Capital	3,322.6	4,120.7	5,012.1	4,831.5	6,405.4	6,814.4
1.1.3 Loans	567.8	1,209.7	1,582.8	786.4	951.1	871.3
1.2 Non-Developmental	13,667.7	15,108.1	16,726.5	17,535.3	20,188.7	22,446.9
1.2.1 Revenue	12,695.2	13,797.3	15,552.4	16,846.0	19,369.4	21,374.2
1.2.1.1 Interest Payments	5,845.4	6,480.9	7,244.5	7,957.0	8,808.5	9,841.5
1.2.2 Capital	946.9	1,273.1	1,157.7	676.9	807.3	1,056.5
1.2.3 Loans	25.6	37.8	16.3	12.4	12.0	16.3
1.3 Others	463.8	485.1	554.2	672.5	800.7	913.3
2 Total Receipts	**31,897.4**	**37,780.5**	**42,884.3**	**43,119.7**	**50,765.4**	**57,226.7**
2.1 Revenue Receipts	23,876.9	27,483.7	31,322.0	31,944.1	39,685.8	44,121.9
2.1.1 Tax Receipts	20,207.3	22,971.0	26,221.5	28,455.6	33,649.3	37,508.1
2.1.1.1 Taxes on commodities and services	12,123.5	14,409.5	16,523.8	17,468.6	20,688.5	22,719.6
2.1.1.2 Taxes on Income and Property	8,051.8	8,522.7	9,656.2	10,956.1	12,932.7	14,746.6
2.1.1.3 Taxes of Union Territories (Without Legislature)	32.0	38.8	41.5	30.9	28.1	41.8
2.1.2 Non-Tax Receipts	3,669.7	4,512.7	5,100.6	3,488.5	6,036.6	6,613.9
2.1.2.1 Interest Receipts	396.2	357.8	332.2	335.9	361.9	329.9
2.2 Non-debt Capital Receipts	609.5	598.3	690.6	1,416.0	1,266.2	1,671.1
2.2.1 Recovery of Loans & Advances	220.7	165.6	209.4	413.8	463.8	601.8
2.2.2 Disinvestment proceeds	388.8	432.7	481.2	1,002.2	802.4	1,069.3
3 Gross Fiscal Deficit [1 - (2.1 + 2.2)]	**8,365.6**	**9,524.1**	**10,647.0**	**9,677.2**	**11,276.6**	**12,063.8**
3A Sources of Financing: Institution-wise						
3A.1 Domestic Financing	8,236.3	9,396.6	10,467.1	9,597.9	11,325.6	12,093.3
3A.1.1 Net Bank Credit to Government	-374.8	2,310.9	6,171.2	1,447.9	3,863.9	...
3A.1.1.1 Net RBI Credit to Government	-3,341.9	604.7	1,958.2	-1,448.5	3,259.9	...
3A.1.2 Non-Bank Credit to Government	8,611.1	7,085.7	4,295.8	8,150.0	7,461.7	...
3A.2 External Financing	129.3	127.5	180.0	79.3	-48.9	-29.5
3B Sources of Financing: Instrument-wise						
3B.1 Domestic Financing	8,236.3	9,396.6	10,467.1	9,597.9	11,325.6	12,093.3
3B.1.1 Market Borrowings (net)	6,640.6	6,733.0	6,898.2	7,948.6	8,315.5	9,592.9
3B.1.2 Small Savings (net)	-565.8	-785.1	-1,050.4	-1,632.2	-2,171.7	-2,085.3
3B.1.3 State Provident Funds (net)	343.4	352.6	456.9	423.5	427.0	424.8
3B.1.4 Reserve Funds	51.1	-33.2	-64.4	184.2	-145.8	-8.7
3B.1.5 Deposits and Advances	275.5	134.7	177.9	251.4	160.1	137.1
3B.1.6 Cash Balances	954.7	-174.4	-224.6	-82.4	1,463.3	630.1
3B.1.7 Others	536.8	3,169.1	4,273.4	2,504.9	3,277.0	3,402.4
3B.2 External Financing	129.3	127.5	180.0	79.3	-48.9	-29.5
4 Total Disbursements as per cent of GDP	*26.3*	*27.3*	*27.8*	*25.2*	*27.5*	*27.4*
5 Total Receipts as per cent of GDP	*25.6*	*27.4*	*27.9*	*25.2*	*26.7*	*27.1*
6 Revenue Receipts as per cent of GDP	*19.2*	*20.0*	*20.4*	*18.7*	*20.9*	*20.9*
7 Tax Receipts as per cent of GDP	*16.2*	*16.7*	*17.1*	*16.6*	*17.7*	*17.8*
8 Gross Fiscal Deficit as per cent of GDP	*6.7*	*6.9*	*6.9*	*5.7*	*5.9*	*5.7*

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

Note: Data from year 2017-18 pertains to 27 states. GDP data are based on 2011-12 base.

Source: Budget Documents of the central and state governments.

APPENDIX TABLE 8: INDIA'S OVERALL BALANCE OF PAYMENTS

(US$ million)

	2014-15	2015-16	2016-17	2017-18	2018-19 P
1	2	3	4	5	6
A. CURRENT ACCOUNT					
1. Exports, f.o.b.	316,545	266,365	280,138	308,970	337,237
2. Imports, c.i.f.	461,484	396,444	392,580	469,006	517,519
3. Trade Balance	-144,940	-130,079	-112,442	-160,036	-180,283
4. Invisibles, Net	118,081	107,928	98,026	111,319	123,026
a) 'Non-Factor' Services *of which* :	76,529	69,676	68,345	77,562	81,941
Software Services	70,400	71,454	70,763	72,186	77,654
b) Income	-24,140	-24,375	-26,302	-28,681	-28,861
c) Private Transfers	66,264	63,139	56,573	62,949	70,601
5. Current Account Balance	-26,859	-22,151	-14,417	-48,717	-57,256
B. CAPITAL ACCOUNT					
1. Foreign Investment, Net (a+b)	73,456	31,891	43,224	52,401	30,094
a) Direct Investment	31,251	36,021	35,612	30,286	30,712
b) Portfolio Investment	42,205	-4,130	7,612	22,115	-618
2. External Assistance, Net	1,725	1,505	2,013	2,944	3,413
3. Commercial Borrowings, Net	1,570	-4,529	-6,102	-183	10,416
4. Short Term Credit, Net	-111	-1,610	6,467	13,900	2,021
5. Banking Capital *of which* :	11,618	10,630	-16,616	16,190	7,433
NRI Deposits, Net	14,057	16,052	-12,367	9,676	10,387
6. Rupee Debt Service	-81	-73	-99	-75	-31
7. Other Capital, Net$	1,109	3,315	7,559	6,213	1,057
8. Total Capital Account	89,286	41,128	36,447	91,390	54,403
C. Errors & Omissions	**-1,021**	**-1,073**	**-480**	**902**	**-486**
D. Overall Balance [A(5)+B(8)+C]	**61,406**	**17,905**	**21,550**	**43,574**	**-3,339**
E. Monetary Movements (F+G)	**-61,406**	**-17,905**	**-21,550**	**-43,574**	**3,339**
F. IMF, Net	**0**	**0**	**0**	**0**	**0**
G. Reserves and Monetary Gold (Increase -, Decrease +)	**-61,406**	**-17,905**	**-21,550**	**-43,574**	**3,339**
of which : SDR allocation	**0**	**0**	**0**	**0**	**0**
Memo: As a ratio to GDP					
1. Trade Balance	-7.1	-6.2	-4.9	-6.0	-6.6
2. Net Services	3.8	3.3	3.0	2.9	3.0
3. Net Income	-1.2	-1.2	-1.1	-1.1	-1.1
4. Current Account Balance	-1.3	-1.1	-0.6	-1.8	-2.1
5. Capital Net	4.4	2.0	1.6	3.4	2.0
6. Foreign Investment, Net	3.6	1.5	1.9	2.0	1.1

P : Provisional.

$: Includes delayed export receipts, advance payments against imports, net funds held abroad and advances received pending issue of shares under FDI.

Note: 1. Gold and silver brought by returning Indians have been included under imports, with a contra entry in private transfer receipts.
2. Data on exports and imports differ from those given by DGCI&S on account of differences in coverage, valuation and timing.

Source: RBI.

APPENDIX TABLE 9: FOREIGN DIRECT INVESTMENT FLOWS TO INDIA: COUNTRY-WISE AND INDUSTRY-WISE

(US$ million)

Source/Industry	2014-15	2015-16	2016-17	2017-18	2018-19 P
1	2	3	4	5	6
Total FDI	**24,748**	**36,068**	**36,317**	**37,366**	**38,744**
Country-wise Inflows					
Singapore	5,137	12,479	6,529	9,273	14,632
Mauritius	5,878	7,452	13,383	13,415	6,570
USA	1,981	4,124	2,138	1,973	2,823
Japan	2,019	1,818	4,237	1,313	2,745
Netherlands	2,154	2,330	3,234	2,677	2,519
United Kingdom	1,891	842	1,301	716	1,211
South Korea	138	241	466	293	982
Cayman Islands	72	440	49	1,140	863
UAE	327	961	645	408	853
Germany	942	927	845	1,095	817
Hong Kong	325	344	134	1,044	598
Canada	153	52	32	274	548
Ireland	11	8	12	108	427
France	347	392	487	403	375
British Virgin Islands	30	203	212	21	290
Switzerland	292	195	502	506	280
Luxembourg	204	784	99	243	251
Others	2,846	2,476	2,012	2,464	1,959
Sector-wise Inflows					
Manufacturing	9,613	8,439	11,972	7,066	7,919
Financial Services	3,075	3,547	3,732	4,070	6,372
Communication Services	1,075	2,638	5,876	8,809	5,365
Retail & Wholesale Trade	2,551	3,998	2,771	4,478	4,311
Computer Services	2,154	4,319	1,937	3,173	3,453
Business services	680	3,031	2,684	3,005	2,597
Electricity and other energy Generation, Distribution & Transmission	1,284	1,364	1,722	1,870	2,427
Construction	1,640	4,141	1,564	1,281	2,009
Miscellaneous Services	586	1,022	1,816	835	1,226
Transport	482	1,363	891	1,267	1,019
Restaurants and Hotels	686	889	430	452	749
Education, Research & Development	131	394	205	347	736
Mining	129	596	141	82	247
Real Estate Activities	202	112	105	405	213
Trading	228	0	0	0	0
Others	232	215	470	226	102

P: Provisional.

Note: Includes FDI through approval and automatic routes only.

Source: RBI.

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