ANNUAL REPORT

2022-23

RESERVE BANK OF INDIA

Report of the Central Board of Directors on the working of the Reserve Bank of India for the year ended March 31, 2023 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 2022-23

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

गवर्नर
GOVERNOR

LETTER OF TRANSMITTAL

Ref.No.SECD.BRDS.S147/02.16.001/2023-24

May 29, 2023
Jyeshtha 8, 1945 (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 March 31, 2023 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 March 31, 2023.

Sincerely,

Shaktikanta Das

केन्द्रीय कार्यालय भवन, शहीद भगतसिंह मार्ग, मुम्बई - 400 001, भारत
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CENTRAL BOARD / LOCAL BOARDS

GOVERNOR

Shaktikanta Das

DEPUTY GOVERNORS

Mahesh Kumar Jain

Michael Debabrata Patra

M. Rajeshwar Rao

T. Rabi Sankar

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

Revathy Iyer

Sachin Chaturvedi

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

Satish Kashinath Marathe

Swaminathan Gurumurthy

Anand Gopal Mahindra

Venu Srinivasan

Pankaj Ramanbhai Patel

Ravindra H. Dholakia

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

Ajay Seth

Vivek Joshi

MEMBERS OF LOCAL BOARDS

WESTERN AREA

EASTERN AREA

Sachin Chaturvedi

NORTHERN AREA

Revathy Iyer

SOUTHERN AREA

(Position as on May 26, 2023)

PRINCIPAL OFFICERS

(As on May 26, 2023)

EXECUTIVE DIRECTORS	S. C. Murmu
	O. P. Mall
	Saurav Sinha
	Vivek Deep
	Jayant Kumar Dash
	R. Subramanian
	Rohit Jain
	Radha Shyam Ratho
	Jose J. Kattoor
	Ajay Kumar
	Ajay K. Choudhary
	Deepak Kumar
	Rajiv Ranjan
	Sitikantha Pattanaik
	Neeraj Nigam
	Sudha Balakrishnan (Chief Financial Officer)
CENTRAL OFFICE	
Central Vigilance Cell	Sadhana Varma, Chief General Manager & CVO
Consumer Education and Protection Department	Anupam Sonal, Chief General Manager
Corporate Strategy and Budget Department	Rajani Prasad, Chief General Manager
Department of Regulation	R. Lakshmi Kanth Rao, Chief General Manager-in-Charge
Department of Supervision	A. K. Chowdhury, Chief General Manager-in-Charge
Department of Communication	Yogesh K. Dayal, Chief General Manager
Department of Currency Management	Suman Ray, Chief General Manager-in-Charge
Department of Economic and Policy Research	D. P. Rath, Principal Adviser
Department of External Investments and Operations	Aditya Gaiha, Chief General Manager-in-Charge
Department of Government and Bank Accounts	Charulatha S. Kar, Chief General Manager-in-Charge
Department of Information Technology	Arun Kumar Singh, Chief General Manager-in-Charge
Department of Payment and Settlement Systems	P. Vasudevan, Chief General Manager-in-Charge
Department of Statistics and Information Management	A. R. Joshi, Principal Adviser
Enforcement Department	H. N. Iyer, Chief General Manager-in-Charge
Financial Inclusion and Development Department	Sonali Sengupta, Chief General Manager-in-Charge
Financial Markets Operations Department	Seshsayee G., Chief General Manager
Financial Markets Regulation Department	Dimple Bhandia, Chief General Manager
FinTech Department	Suvendu Pati, Chief General Manager
Foreign Exchange Department	Ajay Kumar Misra, Chief General Manager-in-Charge
Financial Stability Unit	Kaya Tripathi, Chief General Manager
Human Resource Management Department	Subrata Das, Chief General Manager-in-Charge
Inspection Department	G. P. Borah, Principal Chief General Manager
Internal Debt Management Department	Rakesh Tripathy, Chief General Manager
International Department	Mohua Roy, Adviser-in-Charge
Legal Department	Unnikrishnan A., Principal Legal Adviser
Monetary Policy Department	Muneesh Kapur, Adviser-in-Charge
Premises Department	Mala Sinha, Chief General Manager-in-Charge
Rajbhasha Department	Sadhana Varma, Chief General Manager
Risk Monitoring Department	Manoranjan Dash, Chief General Manager
Secretary's Department	Aviral Jain, Chief General Manager-in-Charge & Secretary
COLLEGES	**PRINCIPALS**
College of Agricultural Banking, Pune	V. G. Sekar
Reserve Bank Staff College, Chennai	K. Babuji
OFFICES	**REGIONAL DIRECTORS**
Chennai	S. M. Narasimha Swamy
Kolkata	R. Kesavan
Mumbai	Ajay Michyari
New Delhi	Vivek Aggarwal
BRANCHES	
Ahmedabad	Rajesh Kumar
Andhra Pradesh	A. O. Basheer
Bengaluru	R. Gurumurthy
Bhubaneswar	H. N. Panda
Chandigarh	Vivek Srivastava
Dehradun	Latha Vishwanath
Gangtok	Kishore Pariyar
Guwahati	Sanjeev Singha
Hyderabad	K. Nikhila
Jaipur	Rohit P. Das
Jammu	K. P. Patnaik
Kanpur	Ishan Shukla
Lucknow	Balu Kenchappa
Nagpur	Sangeeta Lalwani
Panaji	Smita Chandramani Kumar
Patna	Sanjiv Dayal
Raipur	Reeny Ajith
Shimla	R. S. Amar
Thiruvananthapuram	Thomas Mathew
	OFFICERS-IN-CHARGE
Agartala	Satwant Singh Sahota, General Manager (O-i-C)
Aizawl	P. Shimrah, General Manager (O-i-C)
Belapur	Jaikish, Chief General Manager
Bhopal	Hemant Kumar Soni, General Manager-in-Charge
Imphal	Thotngam Jamang, Chief General Manager
Kochi	T. Venkateswara Rao, General Manager (O-i-C)
Kohima	Paresh G. Chauhan, General Manager (O-i-C)
Itanagar	Abhijit Majumdar, General Manager (O-i-C)
Ranchi	Sanjiv Sinha, General Manager (O-i-C)
Shillong	Olden Nongpluh, General Manager (O-i-C)
Srinagar	R. S. Rathore, Manager

CONTENTS

CONTENTS

CONTENTS

CONTENTS

Page No.

BOXES

CONTENTS

SELECT ABBREVIATIONS

ACU	-	Asian Clearing Union
AD	-	Authorised Dealer
ADF	-	Asset Development Fund
AD Cat-I	-	Authorised Dealer Category-I
ADEPT	-	Automated Data Extraction Project
AEs	-	Advanced Economies
AePS	-	Aadhaar Enabled Payment System
ATFC	-	Advisory Task Force on the Codes
AGR	-	Alternate Grievance Redress
AI	-	Artificial Intelligence
AIDs	-	All-Inclusive Directions
AIDC	-	Agriculture Infrastructure and Development Cess
AIFIs	-	All India Financial Institutions
AML	-	Anti-Money Laundering
AML-CFT	-	Anti-Money Laundering-Combating the Financing of Terrorism
ANBC	-	Adjusted Net Bank Credit
AP	-	Authorised Person
APBS	-	Aadhaar Payment Bridge System
API	-	Application Programming Interface
APRA	-	Australian Prudential Regulation Authority
ARCs	-	Asset Reconstruction Companies
AREAER	-	Annual Report on Exchange Arrangements and Exchange Restrictions
ARMS	-	Audit and Risk Management Sub-Committee
ASAG	-	Advanced Supervisory Analytics Group
ASEAN	-	Association of Southeast Asian Nations
ATBs	-	Auction Treasury Bills
ATM	-	Automated Teller Machine
AUM	-	Assets Under Management
BBPOUs	-	Bharat Bill Payment Operating Units
BBPS	-	Bharat Bill Payment System
BC	-	Banking Capital
BCs	-	Business Correspondents
BCBS	-	Basel Committee on Banking Supervision
BC-ICT	-	Business Correspondents - Information and Communication Technology
BCM	-	Business Continuity Management
BCP	-	Business Continuity Plan
BD	-	Banking Department
BE	-	Budget Estimates
BFS	-	Board for Financial Supervision
BFSI	-	Banking, Financial Services and Insurance
BI	-	Bank of Indonesia
BIS	-	Bank for International Settlements
BNPL	-	Buy Now Pay Later
BoE	-	Bank of England
BoJ	-	Bank of Japan
BoP	-	Balance of Payments
BPM	-	Business Process Management
bps	-	Basis Points
BPSS	-	Board for Regulation and Supervision of Payment and Settlement Systems
BQR	-	Bharat Quick Response
BRBNMPL	-	Bharatiya Reserve Bank Note Mudran Private Limited
BRICS	-	Brazil, Russia, India, China and South Africa

SELECT ABBREVIATIONS

BSBDA	-	Basic Savings Bank Deposit Account
B-SC	-	Building Sub-Committee
BSE	-	Bombay Stock Exchange
BSR	-	Basic Statistical Return
CA	-	Concurrent Audit
CAB	-	College of Agricultural Banking
CAD	-	Current Account Deficit
CAFRAL	-	Centre for Advanced Financial Research and Learning
CAGR	-	Compound Annual Growth Rate
CaMS	-	Case Management System
CBDC	-	Central Bank Digital Currency
CBDT	-	Central Board of Direct Taxes
CBIC	-	Central Board of Indirect Taxes and Customs
CBP	-	Capacity Building Programme
CBSE	-	Central Board of Secondary Education
CBSL	-	Central Bank of Sri Lanka
CC	-	Cash Credit
CCB	-	Committee of the Central Board
CCBs	-	Central Cooperative Banks
CCIL	-	Clearing Corporation of India Limited
CCIR	-	Comprehensive Credit Information Repository
CCO	-	Chief Compliance Officer
CCP	-	Central Counterparty
CCS	-	Consumer Confidence Survey
CDES	-	Currency Distribution and Exchange Scheme
CDs	-	Certificates of Deposit
CDBMS	-	Centralised Database Management System
CEO	-	Chief Executive Officer
CEOBE	-	Credit Equivalent of Off-Balance Sheet Exposure
CEPD	-	Consumer Education and Protection Department
CERT-IN	-	Computer Emergency Response Team - India
CERSAI	-	Central Registry of Securitisation Asset Reconstruction and Security Interest of India
CET-1	-	Common Equity Tier-1
CF	-	Contingency Fund
CFLs	-	Centres for Financial Literacy
CFR	-	Central Fraud Registry
CGA	-	Controller General of Accounts
CGFS	-	Committee on the Global Financial System
CGRA	-	Currency and Gold Revaluation Account
CIBIL	-	Credit Information Bureau (India) Limited
CiC	-	Currency in Circulation
CICERO	-	Centre for International Climate Research
CII	-	Critical Information Infrastructure
CIIE	-	Centre for Innovation Incubation and Entrepreneurship
CIMS	-	Centralised Information Management System
CISBI	-	Centralised Information System for Banking Infrastructure
CISCE	-	Council for the Indian School Certificate Examinations
CISO	-	Chief Information Security Officer
CKYCR	-	Central KYC Records Registry
CLS	-	Continuous Linked Settlement
CMBs	-	Cash Management Bills
CMIE	-	Centre for Monitoring Indian Economy

SELECT ABBREVIATIONS

CMS	-	Complaint Management System
CODs	-	Central Office Departments
CoF	-	Card-on-File
CoFT	-	Card-on-File Tokenisation
CoPI	-	Consumer Protection Index
COR	-	Certificate of Registration
CoS	-	College of Supervisors
CP	-	Consumer Pyramid
CPFIR	-	Central Payments Fraud Information Registry
CPHS	-	Consumer Pyramid Expenditure Survey
CPI	-	Consumer Price Index
CPI-AL	-	CPI for Agricultural Labourers
CPI-IW	-	CPI for Industrial Workers
CPI-RL	-	CPI for Rural Labourers
CPMI-IOSCO	-	Committee on Payments and Market Infrastructures-International Organisation of Securities Commissions
CPs	-	Commercial Papers
CPS	-	Centralised Payment System
CPSEs	-	Central Public Sector Enterprises
CPWD	-	Central Public Works Department
CRA	-	Contingent Reserve Arrangement
CRE-RH	-	Commercial Real Estate - Residential Housing
CRILC	-	Central Repository of Information on Large Credits
CRO	-	Chief Risk Officer
CRPC	-	Centralised Receipt and Processing Centre
CRAR	-	Capital to Risk-Weighted Assets Ratio
CRR	-	Cash Reserve Ratio
CSAA	-	Control Self-Assessment Audit
CSBD	-	Corporate Strategy and Budget Department
CSF	-	Consolidated Sinking Fund
CSI	-	Current Situation Index
CSII	-	Colour Shift Intaglio Ink
CSS	-	Centrally Sponsored Scheme
CTS	-	Cheque Truncation System
CU	-	Capacity Utilisation
CUB	-	Closed User Group
CwP	-	Currency with the Public
DBIE	-	Database on Indian Economy
DBT	-	Direct Benefit Transfer
DBU	-	Digital Banking Unit
DCCBs	-	District Central Cooperative Banks
DDs	-	Demand Drafts
DEA	-	Depositors’ Education and Awareness
DEAF	-	Depositor Education Awareness Fund
DEIO	-	Department of External Investments and Operations
DEPR	-	Department of Economic and Policy Research
DFI	-	Development Financial Institution
DGBA	-	Department of Government and Bank Accounts
DGFT	-	Directorate General of Foreign Trade
DICGC	-	Deposit Insurance and Credit Guarantee Corporation
DIF	-	Deposit Insurance Fund
DIS	-	Deposit Insurance System
DISCOM	-	Distribution Companies
DIT	-	Department of Information Technology

SELECT ABBREVIATIONS

DLP	-	Digital Lending Partner
DoC	-	Department of Communication
DoR	-	Department of Regulation
DoS	-	Department of Supervision
DPPF	-	Digital Payments Protection Fund
DPI	-	Digital Payments Index
DPSS	-	Department of Payment and Settlement Systems
DR	-	Disaster Recovery
DSIM	-	Department of Statistics and Information Management
e₹	-	Digital Rupee
EAP	-	Employee Assistance Programme
e-BAAT	-	Electronic Banking Awareness and Training
EBITDA	-	Earnings Before Interest, Taxes, Depreciation and Amortisation
EBLR	-	External Benchmark-based Lending Rate
EBR	-	Element-Based Repository
ECB	-	External Commercial Borrowings
EC/EDI	-	Electronic Commerce/Electronic Data interchange
ECL	-	Expected Credit Loss
ECLGS	-	Emergency Credit Line Guarantee Scheme
ECS	-	Electronic Clearing Service
EDC	-	Executive Directors' Committee
EDDPE	-	Expanding and Deepening of Digital Payment Ecosystem
EFD	-	Enforcement Department
EFI	-	External Funded Institutions
EGRC	-	Enterprise Governance Risk and Compliance
EKP	-	Enterprise Knowledge Portal
EL	-	Expected Loss
EMDEs	-	Emerging Market and Developing Economies
EMEs	-	Emerging Market Economies
EoI	-	Expression of Interest
EOL	-	Exchange of Letter
EPFO	-	Employees' Provident Fund Organisation
ER&D	-	Engineering Research and Design
ERM	-	Enterprise-wide Risk Management
ETCD	-	Exchange Traded Currency Derivatives
ETP	-	Electronic Trading Platform
EU	-	European Union
EWI	-	Early Warning Indicator
EWS	-	Early Warning Signals
FAE	-	First Advance Estimates
FAQs	-	Frequently Asked Questions
FAR	-	Fully Accessible Route
FALLCR	-	Facility to Avail Liquidity for Liquidity Coverage Ratio
FBIL	-	Financial Benchmark India Pvt. Ltd.
FC	-	Financial Conglomerate
FC	-	Finance Commission
FCA	-	Foreign Currency Asset
FCBD	-	Finance and Central Bank Deputies
FCB	-	Foreign Central Bank
FCNR(B)	-	Foreign Currency Non-Resident Account (Bank)
FCS-OIS	-	Foreign Currency Settled-Overnight Indexed Swap
FCVA	-	Foreign Exchange Forward Contracts Valuation Account
FDI	-	Foreign Direct Investment
FE	-	Final Estimate

SELECT ABBREVIATIONS

FED	-	Foreign Exchange Department
FEMA	-	Foreign Exchange Management Act
FER	-	Foreign Exchange Reserves
FI-Index	-	Financial Inclusion Index
FIs	-	Financial Intermediaries
FICNs	-	Fake Indian Currency Notes
FIDD	-	Financial Inclusion and Development Department
FIF	-	Financial Inclusion Fund
FI-Index	-	Financial Inclusion Index
FinTech	-	Financial Technology
FIP	-	Financial Information Provider
FIU	-	Financial Information User
FLA	-	Foreign Liabilities and Assets
FLCs	-	Financial Literacy Centres
FLW	-	Financial Literacy Week
FMCG	-	Fast Moving Consumer Goods
FMCBG	-	Finance Ministers and Central Bank Governors
FMOD	-	Financial Markets Operations Department
FMR	-	Fraud Monitoring Return
FMRD	-	Financial Markets Regulation Department
FMRS	-	Fraud Risk Management System
FOMC	-	Federal Open Market Committee
Forex	-	Foreign Exchange
FPI	-	Foreign Portfolio Investment
FPOs	-	Follow-on Public Offers
FPS	-	Fast Payment Systems
FRBs	-	Floating Rate Bonds
FRM	-	Fraud Risk Mitigation
FRRR	-	Fixed Rate Reverse Repo
FSAP	-	Financial Sector Assessment Programme
FSB	-	Financial Stability Board
FSDC	-	Financial Stability and Development Council
FSDC-SC	-	Financial Stability and Development Council - Sub-Committee
FSR	-	Financial Stability Report
FSU	-	Financial Stability Unit
FSWM	-	Financially Sound and Well Managed
FTP	-	Foreign Trade Policy
FWG	-	Framework Working Group
G-20	-	Group of Twenty
G-24	-	Group of Twenty-Four
G-30	-	Group of Thirty
GBP	-	Green Bond Principles
GCC	-	Gulf Cooperation Council
GCCs	-	General Credit Cards
GCF	-	Gross Capital Formation
GCM	-	Governance and Compliance Manager
GDP	-	Gross Domestic Product
GENCOs	-	Generation Companies
GFCE	-	Government Final Consumption Expenditure
GFCF	-	Gross Fixed Capital Formation
GFD	-	Gross Fiscal Deficit
GFSN	-	Global Financial Safety Net
GFWC	-	Green Finance Working Committee
GIFs	-	Graphics Interchange Formats
GIFT-City	-	Gujarat International Finance Tec-City
GLP	-	Gross Loan Portfolio
GNDI	-	Gross National Disposable Income
GNPA	-	Gross Non-Performing Asset

SELECT ABBREVIATIONS

GoI - Government of India
GPFI - Global Partnership for Financial Inclusion
GRF - Guarantee Redemption Fund
GRIHA - Green Rating for Integrated Habitat Assessment
GSDP - Gross State Domestic Product
GST - Goods and Services Taxes
GSTR - GST Returns
GSTN - Goods and Services Tax Network
G-secs - Government Securities
GVA - Gross Value Added
GVCs - Global Value Chains
GW - Gigawatt
HFCs - Housing Finance Companies
HFIs - High Frequency Indicators
HQLA - High Quality Liquid Asset
HRMD - Human Resource Management Department
HRM-SC - Human Resource Management Sub-Committee
HS - Harmonised System
HTM - Held to Maturity
IADI - International Association of Deposit Insurers
IBA - Indian Banks' Association
IBU - IFSC Banking Units
ICCW - Interoperable Card-less Cash Withdrawal
ICEGATE - Indian Customs Electronic Gateway
ICMA - International Capital Markets Association
ICT - Information and Communication Technology
ID - International Department
IDMD - Internal Debt Management Department
IEAI - Inflation Expectations Anchoring Index
IFA - International Financial Architecture
IFA WG - International Financial Architecture Working Group
IFC - International Finance Corporation
IFR - Investment Fluctuation Reserves
IFRS - International Financial Reporting Standards
IFSCA - International Financial Services Centres Authority
IFSC - Indian Financial System Code
IFTAS - Indian Financial Technologies and Allied Services
IGBC - Indian Green Building Council
IGIDR - Indira Gandhi Institute of Development Research
IIBM - Indian Institute of Bank Management
IIFC - India Infrastructure Finance Company
IIBX - India International Bullion Exchange
IIP - Index of Industrial Production
IMD - India Meteorological Department
IMF - International Monetary Fund
IMFC - International Monetary and Financial Committee
IMPS - Immediate Payment Service
INB - Internet Banking
Ind-AS - Indian Accounting Standards
InFiNet - Indian Financial Network
INR - Indian Rupee
IO - Internal Ombudsman

SELECT ABBREVIATIONS

IoRS	-	Inter-Operable Regulatory Sandbox
IOS	-	Industrial Outlook Survey
IoT	-	Internet of Things
IPL	-	Indian Premier League
IPO	-	Initial Public Offering
IRA	-	Investment Revaluation Accounts
IRACP	-	Income Recognition, Asset Classification and Provisioning
IRA-FS	-	Investment Revaluation Account-Foreign Securities
IRA-RS	-	Investment Revaluation Account-Rupee Securities
IRD	-	Interest Rate Derivatives
IRDAI	-	Insurance Regulatory and Development Authority of India
IRIS	-	Integrated Risk Monitoring and Incident Reporting System
IRRS	-	Integrated Rajbhasha Reporting System
IRS	-	Interest Rate Swap
iSOC	-	Integrated Security Operation Centre
ISPI	-	Index of Supply Chain Pressures for India
IT	-	Information Technology
ITBS	-	Information Technology, Telecom and Business Services
IT-SC	-	Information Technology Sub-Committee
ITBs	-	Intermediate Treasury Bills
IVRS	-	Inter-active Voice Response System
IWG	-	Internal Working Group
KLEMS	-	Capital(K), Labour(L), Energy(E), Material(M) and Services(S)
KCC	-	Kisan Credit Card
KMP	-	Key Managerial Personnel
KRIs	-	Key Risk Indicators
kWp	-	Kilowatts Peak
KYC	-	Know Your Customer
LABs	-	Local Area Banks
LAF	-	Liquidity Adjustment Facility
LBMA	-	London Bullion Market Association
LCR	-	Liquidity Coverage Ratio
LEF	-	Large Exposure Framework
LEI	-	Legal Entity Identifier
LEs	-	Legal Entities
LFPR	-	Labour Force Participation Rate
LIBOR	-	London Inter-Bank Offered Rate
LMI	-	Low and Middle-Income
LPA	-	Long Period Average
LPG	-	Liquefied Petroleum Gas
LPS	-	Late Payment Surcharge
LPSS	-	Lightweight Payment and Settlement System
LRS	-	Liberalised Remittance Scheme
LSF	-	Late Submission Fee
M_3	-	Money Supply
MAF	-	Medical Assistance Fund
MANI	-	Mobile Aided Note Identifier
MAS	-	Monetary Authority of Singapore
MCA	-	Ministry of Corporate Affairs
MCLR	-	Marginal Cost of Funds-based Lending Rate
MCV	-	Mobile Coin Van
MDs	-	Master Directions
ME	-	Mutual Evaluation
MFIs	-	Microfinance Institutions
MGNREGS	-	Mahatma Gandhi National Rural Employment Guarantee Scheme
MIBOR	-	Mumbai Interbank Offered Rate
MIFOR	-	Mumbai Interbank Forward Outright Rate

SELECT ABBREVIATIONS

MMA	-	Maldives Monetary Authority
MMIFOR	-	Modified MIFOR
MIS	-	Management Information System
ML	-	Machine Learning
MM	-	Money Multiplier
MNBCs	-	Miscellaneous Non-Banking Companies
MoF	-	Ministry of Finance
MoSPI	-	Ministry of Statistics and Programme Implementation
MoU	-	Memorandum of Understanding
MPC	-	Monetary Policy Committee
MSF	-	Marginal Standing Facility
MSME	-	Micro, Small and Medium Enterprises
MSPs	-	Minimum Support Prices
MTDS	-	Medium-Term Debt Management Strategy
MTF	-	Medium-Term Framework
MTSS	-	Money Transfer Service Schemes
NABARD	-	National Bank for Agriculture and Rural Development
NACH	-	National Automated Clearing House
NBFC	-	Non-Banking Financial Company
NBFC-BL	-	NBFC Base Layer
NBFC-ML	-	NBFC Middle Layer
NBFC-UL	-	NBFC Upper Layer
NBFC-TL	-	NBFC Top Layer
NBFC-ND	-	Non-Deposit taking NBFCs
NBFI	-	Non-Banking Financial Institutions
NCCDs	-	Non-Centrally Cleared Derivatives
NCERT	-	National Council of Educational Research and Training
NCFE	-	National Centre for Financial Education
NCGTC	-	National Credit Guarantee Trustee Company Ltd.
NCIIPC	-	National Critical Information Infrastructure Protection Centre
NDA	-	Net Domestic Assets
NDCs	-	Nationally Determined Contributions
NDI	-	Non-Debt Instrument
NDTL	-	Net Demand and Time Liabilities
NEER	-	Nominal Effective Exchange Rate
NEFT	-	National Electronic Funds Transfer
NeTC	-	National Electronic Toll Collection
NETS	-	Network for Electronic Transfers
NFA	-	Net Foreign Assets
NFC	-	Non-Food Credit
NFS	-	National Financial Switch
NFSA	-	National Food Security Act
NGFS	-	Network for Greening of the Financial System
NGTA	-	Next Generation Treasury Application
NHB	-	National Housing Bank
NIAP	-	Nationwide Intensive Awareness Programme
NIBM	-	National Institute of Bank Management
NIM	-	Net Interest Margin
NIPL	-	NPCI International Private Limited
NISM	-	National Institute of Securities Markets
NLP	-	Natural Language Processing
NLP	-	National Logistics Policy

SELECT ABBREVIATIONS

NNML	-	Net Non-Monetary Liabilities
NNPA	-	Net Non-Performing Assets
NOC	-	No Objection Certificate
NOF	-	Net Owned Funds
NPA	-	Non-Performing Assets
NPCI	-	National Payments Corporation of India
NPE	-	Non-Performing Exposures
NRA	-	National Risk Assessment
NRB	-	Nepal Rastra Bank
NRC	-	Nomination and Remuneration Committee
NRE	-	Non-Resident External
NRIs	-	Non-Resident Indians
NRO	-	Non-Resident Ordinary
NSAs	-	National Supervisory Authorities
NSE	-	National Stock Exchange
NSFE	-	National Strategy for Financial Education
NSFI	-	National Strategy for Financial Inclusion
NSSF	-	National Small Savings Fund
NSO	-	National Statistical Office
OBC	-	Other Backward Classes
OBICUS	-	Order Books, Inventories and Capacity Utilisation Survey
OD	-	Overdraft
ODR	-	Online Dispute Resolution
OECD	-	Organisation for Economic Co-operation and Development
OFCB	-	Overseas Foreign Currency Borrowing
OI	-	Overseas Investment
OIS	-	Overnight Indexed Swap
OLTAS	-	Online Tax Accounting System
OMO	-	Open Market Operation
OMT	-	Offsite Monitoring Template
OPEC	-	Organisation of Petroleum Exporting Countries
ORBIOs	-	Offices of the Reserve Bank of India Ombudsmen
OTC	-	Over the Counter
PAs	-	Payment Aggregators
PADO	-	Public Administration, Defence and Other Services
PAT	-	Profit After Tax
PBs	-	Payments Banks
PCA	-	Prompt Corrective Action
PCE	-	Personal Consumption Expenditure
PCR	-	Provisioning Coverage Ratio
PDs	-	Primary Dealers
PDS	-	Public Distribution System
PFCE	-	Private Final Consumption Expenditure
PFCVA	-	Provision for Forward Contracts Valuation Account
PFMIs	-	Principles for Financial Market Infrastructure
PFMS	-	Public Financial Management System
PFRDA	-	Pension Fund Regulatory and Development Authority
PIDF	-	Payments Infrastructure Development Fund
PLFS	-	Periodic Labour Force Survey
PLI	-	Production-Linked Incentive
PMGKAY	-	Pradhan Mantri Garib Kalyan Anna Yojana
PMI	-	Purchasing Managers' Index
PML	-	Prevention of Money Laundering
PMUY	-	Pradhan Mantri Ujjwala Yojana
PNCPS	-	Perpetual Non-Cumulative Preference Shares
PPAC	-	Petroleum Planning and Analysis Cell

SELECT ABBREVIATIONS

POL	-	Petroleum, Oil and Lubricants
POs	-	Payment Orders
PoS	-	Point of Sale
PPIs	-	Prepaid Payment Instruments
PRAKALP	-	Pratyaksh Kar Lekhankan Pranali
Pr. CCA	-	Principal Chief Controller of Accounts
PSBs	-	Public Sector Banks
PSL	-	Priority Sector Lending
PSLCs	-	Priority Sector Lending Certificates
PSOs	-	Payment System Operators
PSS	-	Payment and Settlement Systems
PSUs	-	Public Sector Undertakings
PVBs	-	Private Banks
PWBD	-	Persons with Benchmark Disabilities
QCVM	-	Quick Response code-based Coin Vending Machine
QIP	-	Qualified Institutional Placement
QR	-	Quick Response
RA	-	Recovery Agents
RAD	-	Risk Analysis Division
RAM-OR	-	Risk Assessment Methodology for Operational Risk
RAR	-	Risk Assessment Report
RBA	-	Risk-Based Approach
RBI	-	Reserve Bank of India
RBIA	-	Risk Based Internal Audit
RBIH	-	Reserve Bank Innovation Hub
RB-IOS	-	Reserve Bank-Integrated Ombudsman Scheme
RBR	-	Return-Based Repository
RCA	-	Root Cause Analysis
RCB	-	Rural Cooperative Bank
RCG-Asia	-	Regional Consultative Group- Asia
RDA	-	Rupee Drawing Arrangement
RDBs	-	Rupee-Denominated Bonds
RE	-	Revised Estimates
ReBIT	-	Reserve Bank Information Technology Private Limited
RECO	-	Revenue Expenditure to Capital Outlay
REs	-	Regulated Entities
RF	-	Restructuring Framework
RFCA	-	Revaluation of Forward Contracts Account
RFID	-	Radio Frequency Identification
RFP	-	Request for Proposal
RM	-	Reserve Money
RMAB	-	Royal Monetary Authority of Bhutan
RMC	-	Risk Monitoring Committee
RMD	-	Risk Monitoring Department
RMI	-	Raw Material Inventory
RoA	-	Return on Assets
RoDTEP	-	Remission of Duties and Taxes on Exported Products
RoE	-	Return on Equity
ROs	-	Regional Offices
RPA	-	Robotic Process Automation
RR	-	Risk Register
RRA	-	Regulations Review Authority
RRBs	-	Regional Rural Banks
RS	-	Regulatory Sandbox
RTGS	-	Real Time Gross Settlement
RTI	-	Right to Information
RTL	-	Risk Tolerance Limits
RTP	-	Reserve Tranche Position
RWA	-	Risk Weighted Assets

SAA	-	Swap Amortisation Account
SAs	-	Statutory Auditors
SAAR	-	Seasonally Adjusted Annualised Rate
SAARC	-	South Asian Association for Regional Cooperation
SAED	-	Special Additional Excise Duty
SAP	-	Systems Applications and Products
SARTTAC	-	South Asia Regional Training and Technical Assistance Centre
SAS	-	Statistical Analytics System
SATARC	-	Security Automation, Threat Analysis and Response Centre
SBI	-	State Bank of India
SBR	-	Scale-Based Regulation
SBS	-	Shredding and Briquetting Systems
SC	-	Scheduled Caste
SCBs	-	Scheduled Commercial Banks
SDF	-	Special Drawing Facility/ Standing Deposit Facility
SDG	-	Sustainable Development Goals
SDLs	-	State Development Loans
SDMX	-	Statistical Data and Metadata Exchange
SDRs	-	Special Drawing Rights
SDS	-	Step-Down Subsidiary
SEA	-	Solvent Extractors' Association of India
SEs	-	Supervised Entities
SEACEN	-	South East Asian Central Banks
SEBI	-	Securities and Exchange Board of India
SEZ	-	Special Economic Zone
SFBs	-	Small Finance Banks
SFDB	-	SAARCFINANCE database
SFMS	-	Structured Financial Messaging System
SFWG	-	Sustainable Finance Working Group
SGrBs	-	Sovereign Green Bonds
SGSs	-	State Government Securities
SGST	-	States' Goods and Services Tax
SHGs	-	Self-Help Groups
SINE	-	Society for Innovation and Entrepreneurship
SIOS	-	Services and Infrastructure Outlook Survey
SIP	-	Systematic Investment Plan
SLBC	-	State Level Bankers' Committee
SLCCs	-	State Level Coordination Committees
SLR	-	Statutory Liquidity Ratio
SMA	-	Special Mention Account
SMCC	-	Social Media Command Centre
SoC	-	Statement of Co-operation
SOC	-	Security Operations Centre
SOFR	-	Secured Overnight Financing Rate
SOP	-	Standard Operating Procedure
SPDs	-	Standalone Primary Dealers
SPE	-	Special Purpose Entity
SPECTRA	-	Software Platform for External Commercial Borrowings and Trade Credits Reporting and Approval
SPMCIL	-	Security Printing and Minting Corporation of India Limited
SRO	-	Self-Regulatory Organisation
SSAF	-	Securitisation of Stressed Assets Framework
S-SC	-	Strategy Sub-Committee
SSCI	-	Services Sector Composite Index
SSMs	-	Senior Supervisory Managers
ST	-	Scheduled Tribe
STC	-	Short-term Trade Credit

SELECT ABBREVIATIONS

StCBs	-	State Cooperative Banks
SWIFT	-	Society for Worldwide Interbank Financial Telecommunication
SWM	-	South-West Monsoon
TA	-	Technical Assistance
TAC	-	Technical Advisory Committee
TACS	-	Technical Advisory Committee on Surveys
TAT	-	Turn-Around Time
T-Bills	-	Treasury Bills
TEs	-	Training Establishments
TIN	-	Tax Information Network
TOL/ATNW Ratio	-	Total Outside Liabilities-Adjusted Tangible Net Worth Ratio
TRQ	-	Tariff Rate Quota
TRs	-	Trade Repositories
TReDS	-	Trade Receivables Discounting System
TSA	-	Treasury Single Account
TSCAs	-	Time-Sensitive Critical Activities
UCBs	-	Urban Cooperative Banks
UDAY	-	Ujjwal DISCOM Assurance Yojana
UFCE	-	Unhedged Foreign Currency Exposure
UFR	-	Unified Fraud Reporting
UID	-	Unique Identification
UIDF	-	Urban Infrastructure Development Fund
UK	-	United Kingdom
UNCCI	-	Unorganised Sector Composite Coincident Index
UNGA	-	United Nations General Assembly
UPI	-	Unified Payments Interface
USA	-	United States of America
USD	-	US Dollar
UTs	-	Union Territories
UTI	-	Unique Transaction Identifier
UTLBCs	-	Union Territory Level Bankers' Committees
VAPT	-	Vulnerability Assessment and Penetration Testing
VAT	-	Value Added Tax
VM	-	Variation Margin
VOICE	-	Voicing Opinion to Inspire, Contribute and Excel
VRR	-	Voluntary Retention Route/ Variable Rate Repo
VRRR	-	Variable Rate Reverse Repo
WACR	-	Weighted Average Call Rate
WADTDR	-	Weighted Average Domestic Term Deposit Rate
WALR	-	Weighted Average Lending Rate
WAM	-	Weighted Average Maturity
WAS	-	Weighted Average Spread
WAY	-	Weighted Average Yield
WEO	-	World Economic Outlook
WGDL	-	Working Group on Digital Lending
WLA	-	White Label ATM
WLAO	-	White Label ATM Operators
WMA	-	Ways and Means Advances
WPI	-	Wholesale Price Index
WPR	-	Worker Population Ratio
WTO	-	World Trade Organisation
XBRL	-	eXtensible Business Reporting Language
ZIs	-	Zonal Inspectorates
ZTCs	-	Zonal Training Centres

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*For the Year April 1, 2022 to March 31, 2023 **

PART ONE: THE ECONOMY - REVIEW AND PROSPECTS

I ASSESSMENT AND PROSPECTS

I.1 Volatility has ebbed in global financial markets and risks to financial stability from the failure of banks in some advanced economies (AEs) in March 2023 have eased. Resolute policy actions have stemmed the tide of confidence runs for now. Amidst the uneasy calm that prevails, a reassessment of global economic prospects is underway. Available projections suggest a weaker outlook for the global economy in 2023 and 2024 after the resilience it exhibited to multiple and often overlapping shocks in 2022 - the war in Ukraine; the persistent elevation in food and energy inflation; and the tightening of financial conditions in response to aggressive and synchronised monetary policy tightening across the world. The most vulnerable countries reeled under the burden of high debt levels. In the early months of 2023, some of the war-induced pressures on inflation have eased with the decline in commodity prices and gradual normalisation of supply chains. The pace of global disinflation, however, remains less than desirable. The resilience of the global financial system will inevitably be tested again as the exit from ultra-easy liquidity resumes and systemic central banks shrink their bloated balance sheets. Financial regulatory policies are also set to tighten in many countries, with lessons from the episodes of banking system stress in March.

I.2 Meanwhile, deep structural forces are at work that may shape medium- to long-term global prospects fundamentally. Profound geo-economic shifts impacting trade and capital flows and technology transfers have weakened the contribution of globalisation to growth. Private investment remains subdued in an atmosphere of extreme uncertainty. Inflation pressures and effects of fragmentation on world trade may be lowering aggregate consumption demand, a slow-moving drag on growth. In the AEs, aging populations are altering labour supply conditions. Green transition, a common global goal, has opened up new investment opportunities in renewables and electric vehicles, but the high costs of lowering carbon emissions could impinge on developmental aspirations. Digitalisation also offers new growth opportunities, but the costs of tech and cyber disruptions are also rising.

I.3 For emerging market economies (EMEs), the outlook appears even more uncertain as they look back at a year of lingering pandemic woes, surging food and energy prices and even shortages, unsustainable debt overhangs and repeated incidence of global spillovers that brought in their train volatile capital flows and generalised risk aversion. Looking ahead into the medium-term, their prospects of convergence with living standards in AEs have suffered a setback even as the benefits of globalisation through trade and capital flows are receding.

I.4 In this turbulent global economic environment, India has experienced macroeconomic and financial stability with a steady

* : Where available, this chapter has been updated beyond March 2023.

pick-up in the momentum of growth. This reflects a sound macroeconomic policy environment and the innate resilience of the economy which fortified it against recurring global shocks. India has remained among the fastest growing major economies of the world, contributing more than 12 per cent to global growth on average during the last five years. As inflation eases from its high reaches under the combined impact of monetary policy actions and supply management, fiscal consolidation reduces debt and deficit levels from pandemic-induced highs, the current account deficit remains within sustainable levels; macroeconomic stability is getting entrenched. Strong and healthy balance sheets of banks, financial institutions and corporate entities is helping to regain growth momentum eroded by the pandemic and the war. Medium-term prospects have been brightened by the demographic dividend, the digital revolution, policy initiatives to transform India into a global manufacturing hub, a resurgence in services sector competitiveness and favourable geo-economic positioning that is underway.

2. Assessment of the 2022-23 Experience

Global Economy

I.5 The global economy was recovering from the impact of successive waves of the COVID-19 pandemic by early 2022, aided by large policy stimulus and expanding coverage of vaccination, when the war in Ukraine jolted the upturn. The gains achieved through concerted fiscal and monetary policy interventions during the pandemic period (2020 and 2021) were undermined by the impact of the war. A generalised surge in global inflation triggered monetary policy actions by central banks in the form of successive interest rate increases and the pulling back of liquidity, leading to tightening of financial conditions and together with other factors, a toll on growth which slowed from 6.2 per cent in 2021 to 3.4 per cent in 2022, according to the International Monetary Fund (IMF).

I.6 Waves of global spillovers to EMEs resulted in large currency depreciations, capital flight, investor risk aversion and raised debt distress in some of them. The brunt of a surge in borrowing costs imposed on EMEs and risk-off sentiments resulted in portfolio outflows from both bond and equity markets for much of the year. Heightened risks of a global recession clouded the overall macroeconomic and financial outlook. When data releases pointed towards resilient labour markets and consumer spending in both AEs and EMEs, sentiments recovered towards the second half of the year. Sovereign bond yields eased across most AEs and EMEs and equity markets regained lost ground. The weakening of the US dollar towards the close of the year buoyed other currencies across AEs and EMEs.

I.7 By the end of the year, the global economy regained poise, cushioned by a milder winter in Europe, policy support to mitigate the impact of soaring energy prices, resilient labour markets, and signs of inflation peaking. Easing of pandemic restrictions, mending of supply chain and logistics disruptions, and a rebound in demand for contact-intensive services buoyed the global economy. Nonetheless, global inflation surged to 8.7 per cent from 4.7 per cent in 2021, overshooting targets in the majority of countries through the year. Global trade (goods and services) growth slowed from 10.4 per cent in 2021 to 5.1 per cent in 2022, reflecting the post-pandemic slowdown in global demand and the restrictions on cross-border movements of goods and services imposed by the war in Ukraine.

Domestic Economy

I.8 Amidst strong global headwinds, the Indian economy is expected to have recorded a growth of 7.0 per cent in real GDP in 2022-23. A sustained recovery in discretionary spending, particularly in contact intensive services, restoration of consumer confidence, high festival season spending after two consecutive years of COVID-19 induced isolation and the government's thrust on capex provided impetus to the growth momentum. In the second half of the year, however, the pace of year-on-year growth moderated because of unfavourable base effects, weakening private consumption demand caused by high inflation, slowdown in export growth and sustained input cost pressures.

I.9 Agriculture and allied activities were resilient in 2022-23, with gross value added (GVA) registering a growth of 3.3 per cent. While uneven spatial and temporal distribution of the south-west monsoon (SWM) led to a marginal decline in *kharif* foodgrains production, the production of *kharif* oilseeds, sugarcane and cotton was higher during the year. *Rabi* acreage expanded during the year for most crops and the prospects of *rabi* crop production, both foodgrains and oilseeds, remain promising, notwithstanding some damage due to unseasonal rains in some parts of the country in March 2023.

I.10 In the industrial sector, manufacturing activity withstood global spillovers, while electricity generation exhibited robust growth, and mining recorded steady activity. Sustained momentum was seen in construction activity, while infrastructure and capital goods production benefitted from the government-led investment in infrastructure. Production of consumer goods, on the other hand, remained muted and recovery in sectors such as automobiles was lopsided. Uneven recovery in consumption was evident as growth in the price sensitive entry-level car segment turned sluggish as compared to the recovery in passenger cars. The continued lag in two-wheeler sales, 40 per cent of which caters to rural India, is also indicative of subdued rural demand.

I.11 Like many other economies, India also experienced a surge in inflation during 2022-23, primarily reflecting the impact of overlapping global supply shocks and pass-through of higher input costs. The sharp increase in global prices of crude oil, food, fertilisers and metals, along with renewed supply disruptions in the aftermath of the war, exerted broad-based price pressures during the first half of the year. As a result, inflation reached a peak of 7.8 per cent in April 2022. Following gradual normalisation of global supply chains, softening global commodity prices, targeted supply management measures by the government and successive hikes in the policy repo rate by the Reserve Bank, inflation moderated in the second half of the year. Overall, headline inflation increased to 6.7 per cent in 2022-23 from 5.5 per cent in 2021-22. The lagged pass-through of input costs to retail prices of goods and services amidst improving domestic demand conditions imparted considerable stickiness to already elevated core inflation that ruled at around 6.0 per cent through the year.

I.12 When inflation surged as a consequence of the war in Ukraine, the Monetary Policy Committee (MPC) accorded priority to price stability in the conduct of monetary policy. It changed its stance in April 2022 to remain focused on withdrawal of accommodation to ensure that inflation remains within the target going forward, while supporting growth. As inflation spiked to 7.0 per cent in March 2022 and the MPC sensed that the near-term inflation outlook would deteriorate sharply amidst geopolitical tensions, it raised the policy repo rate by 40 bps to 4.40 per cent in an off-cycle meeting held in May 2022. In each of the subsequent meetings during 2022-23, the MPC raised the policy rate to keep inflation expectations anchored, contain second-order effects, and align inflation with the target. Cumulatively, the MPC increased the policy repo rate by 250 bps during 2022-23 from 4.00 per cent to 6.50 per cent on top of an increase of 40 bps in the lower bound of the liquidity adjustment facility (LAF) corridor in April 2022. Accordingly, the overnight weighted average call money rate, the operating target of monetary policy, rose by 320 bps during the year, fully pricing in the cumulative policy actions.

I.13 The Reserve Bank adopted a nuanced and nimble footed approach to liquidity management in sync with the change in the stance of monetary policy, *i.e.,* gradual reduction in the size of surplus liquidity in the system, while still maintaining adequate liquidity to meet the credit needs of the productive sectors of the economy. Overall, the surplus liquidity - as reflected in net amounts absorbed under the LAF - moderated from a daily average of ₹6.6 lakh crore in March 2022 to ₹0.14 lakh crore in March 2023.

I.14 Financial markets experienced bouts of volatility in 2022-23, as geopolitical tensions intensified, interest rate hikes by the US Fed turned aggressive and the global growth outlook deteriorated, dampening investors' sentiments. Equity markets in India, however, gained marginally, despite portfolio outflows and forex market pressures, reflecting India's growth resilience and rising investment in the market by resident entities. Money market interest rates hardened during 2022-23, tracking the increase in the policy repo rate and the ebbing surplus liquidity conditions. Sovereign bond yields hardened in line with the monetary policy actions and changing inflation-growth outlook; however, the extent of increase remained contained as compared to the sharp rise observed in bond yields in AEs. Domestic equity markets moved lower in H1 of 2022-23 as the economic fall-out of geopolitical tensions, hawkish monetary policy stances by global central banks and mounting recession fears weighed on market sentiments. They recovered in early H2 and closed at an all-time high on December 1, 2022, buoyed by robust corporate earnings and inflows from foreign portfolio investors. Weak global cues amid emergence of financial stability risks following the collapse of a few niche banks in the US and concerns about financial health of a major financial services provider in Europe imparted volatility to the markets towards the close of the year. Monetary transmission in the credit market - the pass-through of policy repo rate changes to lending rates - strengthened during 2022-23 on the back of reduction in surplus liquidity in the banking system, sustained high credit growth and the mandated external benchmark regime for loan pricing in select sectors.

I.15 The management of government finances was guided by the need for prudence. Accordingly, the gross fiscal deficit (GFD) of the central government declined from 6.75 per cent of GDP in 2021-22 to 6.45 per cent of GDP in 2022-23 (RE)[1], reflecting the drawdown of pandemic-related stimulus, even as targeted fiscal measures were undertaken to shield domestic consumers from high food and energy prices emanating from the war in Ukraine. Despite

[1] As per the "Budget At a Glance 2023-24", gross fiscal deficit as per cent of GDP declined from 6.7 per cent in 2021-22 to 6.4 per cent in 2022-23 (RE), based on the first advance estimates of GDP for 2022-23. Taking into account second advance estimates of GDP for 2022-23, gross fiscal deficit as per cent of GDP for 2022-23 (RE) works out to 6.45 per cent as against the RE of 6.43 per cent given in the Union Budget 2023-24.

higher subsidy outgo, capex remained the lynchpin of the government's spending strategy. As a result, the revenue expenditure to capital outlay (RECO) ratio improved from 6.0 in 2021-22 to 5.6 in 2022-23 (RE). Similarly, the revenue expenditure to capital expenditure ratio further improved to 4.7 in 2022-23 (RE) from 5.4 in 2021-22. Tax revenues remained robust - gross tax revenues exceeded budget estimates by ₹2.9 lakh crore - underpinned by goods and services tax (GST) and direct tax collections.

I.16 State governments had budgeted a gross fiscal deficit (GFD) at 3.4 per cent of GDP for 2022-23. Provisional accounts indicate that the actual performance of state governments may have been better, primarily due to higher-than-expected tax devolution from the Centre and a healthy growth in states' own tax revenues. During 2022-23, therefore, states' GFD to GDP ratio is estimated to remain within 3.0 per cent. In the fiscal arena, a landmark development was the first issue of Sovereign Green Bonds (SGrBs) by the central government during the year, the proceeds of which will be used in public sector projects that reduce the emission intensity of the economy.

I.17 Despite prolonged geopolitical tensions and slowing global trade, India's merchandise exports touched US$ 450.4 billion during 2022-23, which is 6.7 per cent above the previous year's record level. India witnessed a transition from net importer to exporter in areas such as mobile phones and toys and registered a 10-fold increase in exports of defence goods in a short span, leveraging on policies such as 'Make in India' and '*AatmaNirbhar Bharat*'. India's merchandise imports, after recording high growth in the first half of the year, decelerated during the second half, reflecting, *inter alia,* the fall in international commodity prices and slowing demand for export-related imports. India's merchandise trade deficit increased during the year, but the pace of increase slowed in the second half.

I.18 Unlike merchandise exports, strong growth of 27.9 per cent was witnessed in services exports, led by software services across key verticals such as information technology (IT) services, business process management (BPM), and engineering research and design (ER&D), supported by a rise in global capability centres (GCCs).

I.19 Within capital flows, net inflows under foreign direct investment (FDI), *albeit* strong, were lower during 2022-23 at US$ 28.0 billion than US$ 38.6 billion a year ago. Moreover, there were net portfolio outflows during the year to the tune of US$ 5.9 billion, reflecting risk-off sentiments that impacted flows to EMEs as an asset class. The rising cost of borrowing in 2022-23 rendered external commercial borrowings (ECBs) less appealing for raising funds as compared with the previous year.

I.20 Belying market fears of a possible spike in India's external vulnerabilities, India's current account deficit (CAD) at 2.7 per cent of GDP (during April-December 2022) remained sustainable, although it expanded from 1.1 per cent a year ago. These developments, combined with lower net capital inflows than in the previous year, led to a depletion in the foreign exchange reserves to the tune of US$ 14.7 billion on a balance of payments (BoP) basis during April-December 2022. Including valuation effects, however, India's foreign exchange reserves declined by US$ 28.9 billion during 2022-23.

I.21 During the year, the banking system continued the efforts to augment capital and improve asset quality. The onset of a fresh lending cycle since the second half of 2021-22 gained momentum during 2022-23, resulting in double digit credit growth encompassing all major sectors. The asset quality of scheduled commercial banks (SCBs) continued to improve, with gross non-performing assets (GNPA) ratio and net non-performing assets (NNPA) ratio declining and the quarterly slippage ratio cooling off. The provisioning coverage ratio (PCR) also steadily increased. Net interest margin (NIM) witnessed an improvement, reflecting the higher degree of transmission of monetary policy to lending rates than to deposit rates in the rising interest rate cycle. Consequently, profit after tax (PAT) registered strong growth. Return on equity (RoE) and return on assets (RoA) for SCBs improved further during the year. The low slippage ratio, coupled with raising of capital from the market and net capital accretion through profits, helped banks to bolster their capital adequacy levels and obviated the need for recapitalisation of public sector banks by the government. In the rising interest rate environment, interest rate risks for the investment portfolio of banks remained tolerable, supported by macroprudential policy measures such as the investment fluctuation reserves (IFR), providing buffer against mark-to-market losses.

I.22 To commemorate 75 years of independence (*Azadi Ka Amrit Mahotsav*), 75 Digital Banking Units (DBUs) were set up in 75 districts of the country to catalyse the adoption of digital modes of doing banking transactions in the country. These 75 DBUs were dedicated to the service of the nation by the Hon'ble Prime Minister on October 16, 2022. As on March 31, 2023, there were 84 DBUs functioning across the country.

I.23 Non-banking financial companies (NBFCs) maintained robust credit growth during 2022-23, supported by the broad-based revival in economic activity and targeted policy initiatives. The sector strengthened its financial soundness during the year through robust capital buffers, improved asset quality and consolidation of balance sheet. A scale based regulatory framework was implemented for NBFCs during 2022-23.

I.24 During the year, the regulatory framework for asset reconstruction companies (ARCs) was reviewed to achieve the objectives of strengthening their corporate governance and prudential norms, enhancing transparency of their functioning, and augmenting their role in resolution of stressed assets. Furthermore, as a part of a responsive and forward-looking regulatory approach, several measures were undertaken for strengthening and developing credit risk markets, enhancing the robustness of the capital adequacy and provisioning frameworks applicable to regulated entities, and augmenting the rating processes adopted by the credit rating agencies for bank loan ratings. A new SupTech initiative - *DAKSH* - Reserve Bank's Advanced Supervisory Monitoring System - was launched by the Reserve Bank on October 6, 2022. This is a web-based end-to-end workflow application through which the Reserve Bank monitors actual compliances in a more focused manner with the objective of further improving compliance culture among supervised entities (SEs).

I.25 In the area of co-operative banking, the Reserve Bank implemented the recommendations of the expert committee on urban cooperative banks (UCBs) and adopted a simple four-tiered regulatory framework with differentiated regulatory prescriptions aimed at strengthening the financial soundness of UCBs. The measures for strengthening the sector are also being supplemented by offering more operational flexibility for strong UCBs to enable them to fulfil their desired role in credit intermediation.

I.26 Taking forward digitisation efforts announced in the Union Budget 2022-23, the Reserve Bank introduced its Central Bank Digital Currency (CBDC) in phases during the year, with the launch of pilots for Digital Rupee (e₹) in the wholesale and retail segments on November 1, 2022 and December 1, 2022, respectively. The pilots were preceded by issuance of a 'Concept Note' on CBDC to create awareness about CBDCs in general and the planned features of e₹ in particular.

I.27 India has emerged stronger and more resilient from the pandemic, partly due to the wave of digital transformation. Transactions routed through digital modes recorded a marked expansion in 2022-23 over and above the strong growth witnessed a year ago. In 2022-23, total digital payments recorded growth of 57.8 per cent and 19.2 per cent in volume and value terms, respectively, on top of growth of 63.8 per cent and 23.1 per cent, respectively, in the previous year. India outpaced other nations to emerge as the largest player in real-time transactions at the global level, with a 46 per cent share in 2022[2]. The strong penetration and growth in Unified Payments Interface (UPI) were buoyed by rapid merchant onboarding, growing digital awareness and policy thrust on continuous enhancements in the scope and reach of payment systems.

I.28 Sharp upticks witnessed in the *Aadhaar* Payments Bridge System (APBS) and the National Automated Clearing House (NACH) in 2022-23 attested to the diffusion of digital payments in the rural and semi-urban areas of the country, in part owing to the positive nudge provided through government cash transfers going digital. With the recovery in tourism and hospitality sectors, the card industry regained lost momentum, with monthly spending remaining above ₹1.6 lakh crore throughout the year.

I.29 The Reserve Bank released the Payments Vision 2025 during the year with the theme E-Payments for Everyone, Everywhere, Everytime promising to further elevate India's payment systems to empower every user with safe, secure, reliable, accessible, affordable and efficient payment options. Various enhancements were introduced in payment systems to enrich functionalities and onboard consumers on the digital journey. The UPI Lite was introduced to facilitate small value transactions in offline mode using UPI through an on-device wallet. Linking of *RuPay* credit cards to UPI was permitted to deepen usage by broadening the financial products linked for payment processing. Introduction of single block multiple debits in UPI enhanced the capabilities for merchant payments. The UPI was also extended to non-resident Indians (NRIs) and foreign nationals for undertaking merchant payments in India. The linking of UPI with *PayNow* of Singapore helped facilitate low-cost fund transfers and remittances between the two countries. The scope of *Bharat* Bill Payment System (BBPS) was expanded to include all categories of payments and collections, both recurring and non-recurring in nature. BBPS was also extended to provide a standardised bill payment experience to NRIs by facilitating cross-border bill payments.

I.30 Initiatives undertaken to broaden and deepen financial inclusion in the country by the government as well as the Reserve Bank have been helping in promoting inclusive economic

[2] ACI Worldwide, Real Time Payments, Global Data, 2023.

development. The Reserve Bank's Financial Inclusion Index (FI-Index), a quantifiable metric to evaluate the efficacy of efforts towards financial inclusion, based on 97 indicators (reflecting ease of access, availability and usage of services, and quality of services), improved from 53.9 in March 2021 to 56.4 in March 2022 (latest available), with growth witnessed across all sub-indices.

3. *Prospects for 2023-24*

Global Economy

I.31 Global growth is expected to slow down in 2023 and may remain subdued in the medium run. As per the IMF's World Economic Outlook (WEO) released in April 2023, global growth for 2023 at 2.8 per cent is likely to be followed by the medium-term growth plateauing at 3.0 per cent. Globally, disinflation efforts are expected to take down headline inflation from 7.3 per cent to 4.7 per cent in 2023 among AEs, and from 9.8 per cent to 8.6 per cent among emerging market and developing economies (EMDEs). Progress is, however, likely to be gradual amidst sticky and elevated upside pressures. Central banks continue to face a challenging trade-off between restoring price stability and addressing growth slowdown in an environment of heightened uncertainty. Potential financial risks from high debt levels and the recent banking sector developments in the US and Europe highlight the scope for unanticipated build-up of stress with strong adverse spillovers across the global financial system.

I.32 Financial markets are signalling the likely end of the global monetary policy tightening cycle, with equity prices having clawed back losses and bond yields having softened. Commodity prices are also trading with a softening bias as fears of growth slowdown dominate market sentiments. With policy tightening by global central banks having moderated, the US dollar is likely to depreciate, easing pressures on currencies of other AEs and EMEs even as the outlook for capital flows to EMEs remains uncertain.

I.33 Overall, the prospects for the global economy continue to be shadowed by high inflation, the adverse effects of geo-economic fragmentation operating through restrictions on movements of trade, labour, capital and diffusion of technology, and potential amplification of financial sector vulnerabilities. Medium- to long-term challenges such as climate change, cyber security, crypto currencies, FinTech and tech disruptions can also potentially vitiate the outlook.

I.34 The urgent need for multilateral cooperation against this backdrop makes the G20 an effective forum for addressing the global challenges under India's Presidency, with the theme '*Vasudhaiva Kutumbakam*' – 'One Earth · One Family · One Future'. The Ministry of Finance (MoF), Government of India and the Reserve Bank together are steering the G20 discussions to bring in the perspective of EMDEs in the global south under the ambit of the Finance track. The deliberations under the G20 Finance Ministers and Central Bank Governors (FMCBG), Finance and Central Bank Deputies (FCBD) and various Working Group meetings[3] on the presidency's priorities and deliverables will facilitate a globally coordinated policy response to these challenges.

Domestic Economy

I.35 Domestic economic activity does face challenges from an uninspiring global outlook going forward, but resilient domestic macroeconomic and financial conditions, expected dividends

3 Meetings are being held since taking over of G20 Presidency on December 1, 2022.

from past reforms and new growth opportunities from global geo-economic shifts place India at an advantageous position. Taking into account softer global commodity and food prices, good *rabi* crop prospects, sustained buoyancy in contact-intensive services, the government's continued thrust on capex, higher capacity utilisation in manufacturing, double digit credit growth, receding drag on purchasing power from high inflation and rising optimism among businesses and consumers, real GDP growth for 2023-24 is projected at 6.5 per cent with risks evenly balanced.

I.36 Risks to inflation have moderated with downward corrections in global commodity and food prices and easing of the pass-through from high input cost pressures of last year. The cumulative increase in policy repo rate by 250 bps last year would steer the disinflationary process, along with supply side measures to address transient demand-supply mismatch due to food and energy shocks. With a stable exchange rate and a normal monsoon – unless an *El Nino* event strikes – the inflation trajectory is expected to move down over 2023-24, with headline inflation edging down to 5.2 per cent from the average level of 6.7 per cent recorded last year. Monetary policy remains focused on withdrawal of accommodation to ensure that inflation progressively aligns with the target, while supporting growth.

I.37 The March 2023 round of the Reserve Bank's consumer confidence survey reveals that the current situation is perceived by consumers to have improved on account of optimism in the general economic situation and in household income. Future expectations also remain positive. Households' spending on non-essential items is expected to rise over the year ahead. According to the 101st round of the quarterly industrial outlook survey, manufacturing firms are exuding positive sentiments on production, order books, employment conditions and capacity utilisation for Q2 and Q3:2023-24. In the recent 36th round of the quarterly services and infrastructure outlook survey, private companies in both sectors expect the job landscape to improve in Q1:2023-24 despite lower optimism on profit margins and selling prices. These firms also show higher confidence in the overall business scenario in Q2 and Q3:2023-24 in spite of an expected rise in input costs and selling prices.

I.38 The realignment of global supply chains, transition to green energy and ongoing technological advancements provide a congenial environment for a pick-up in investment activity and raising productivity. Robust balance sheets of corporates and banks, coupled with high capacity utilisation, would aid in strengthening the momentum in private investment. Burgeoning credit growth, especially housing and personal loans, reflects steady domestic household demand. This is also mirrored in several high frequency indicators of rural and urban demand such as rising sales of tractor and fertiliser, improvement in the labour participation rate in rural areas, domestic air passenger traffic, passenger vehicle sales, and robust goods and services tax collections. Robust agriculture production buoyed by expectation of a bountiful *rabi* harvest and resilience in allied sector activity are also brightening the outlook for rural demand. Traction in construction activity is likely to be sustained as reflected in steady expansion in its proximate indicators: steel consumption and cement production. Port cargo traffic and railway freight traffic movements also point to industrial activity picking up amidst gradual easing of input cost pressures.

I.39 The prospects of the *kharif* crop would depend on the progress of the rainfall during the SWM. As per the India Meteorological Department's (IMD) forecast, the SWM season rainfall during June-September 2023 is likely to be normal at 96 per cent (+/- 4 per cent) of the long period average (LPA). The actual performance of the SWM rains, however, would depend on the interplay of possible rainfall deficiency due to an *El Nino* event and the counterbalancing effects of events such as the positive Indian Ocean Dipole. The announcement of minimum support prices (MSPs) well in advance of the start of the sowing season would incentivise farmers for expanding sowing acreage. The government has set the target for total foodgrains production during 2023-24 at 332 million tonne, 0.4 per cent above the third advance estimate of previous year's production. With the United Nations General Assembly (UNGA) declaring 2023 as the international year of millets, India can enhance the export potential of millets, as currently only one per cent of the total millet production is exported.

I.40 The crowding-in effects of sustained increase in government capex over recent years is expected to spur higher private investment in 2023-24. In the Union Budget 2023-24, budgeted capital expenditure has increased by 37.4 per cent, with the railways receiving the highest ever capital outlay of ₹2.4 lakh crore. The allocation of interest free loans to states for capital expenditure has also been enhanced to ₹1.3 lakh crore from ₹1.0 lakh crore in the previous year. The entire loan amount will have to be spent in 2023-24 and a share of these loans will be contingent on states increasing their actual capital expenditure. Besides higher allocation for capex, the Union Budget 2023-24 has announced several measures, which are likely to provide a fillip to the growth momentum such as diversification and promotion of allied sectors; boosting logistics infrastructure for last-mile connectivity; export promotion; cooperative-based development; strengthening agricultural extension services through digital public infrastructure; and spurring private investment through Agri-Startups. Private investment growth is also expected to strengthen with the production-linked incentive (PLI) scheme providing additional fillip. Various other steps to enhance logistics efficiencies and cost competitiveness under the Prime Minister's *Gati Shakti* and the National Logistics Policy (NLP) are expected to bring down logistics costs.

I.41 The outlook for services sector remains positive in 2023-24. Real estate and construction have witnessed a revival post-pandemic and are expected to perform well in this year also as both demand for and supply of housing remain buoyant.

I.42 In the external sector, the current account deficit (CAD) is expected to remain moderate, drawing strength from robust services exports and the salubrious impact of moderation in commodity prices of imports. With global uncertainties persisting, foreign portfolio investment (FPI) flows may remain volatile. The favourable domestic growth outlook, lower inflation, and business-friendly policy reforms could, however, help sustain buoyant FDI inflows. Furthermore, inward remittances are likely to remain robust owing to better growth prospects in the Gulf countries. As a result, external vulnerability risks may ease further during 2023-24. The Foreign Trade Policy (FTP), 2023 announced on March 31, 2023 endeavours to promote an export-friendly environment to nurture comparative advantage; harness the opportunities in bilateral trade agreements to help India participate in global value chains (GVCs) and expand access to markets; and explore more trade in the Indian rupee (INR). With global trade volume growth projected by the World Trade Organisation (WTO) to decelerate from 2.7 per cent in 2022 to 1.7 per cent in 2023, progress on all thrust areas in the FTP would be essential.

I.43 The recent financial sector turmoil in the US and Europe has necessitated the need to reassess risks to financial stability and resilience of financial institutions in the context of monetary policy tightening. While Indian banks and non-banking financial intermediaries remain sound and resilient, they need to stress test for these new shocks. Capital buffer and liquidity position, therefore, must be constantly reviewed and strengthened. Accordingly, policy measures, such as guidelines on introduction of expected loss-based approach for provisioning are likely to be announced during 2023-24. In addition, finalisation of guidelines on securitisation of stressed assets, and a comprehensive review of the prudential framework (including the guidelines on resolution of stress in respect of projects under implementation) are also likely to be undertaken during the year with the objective of further strengthening the resolution ecosystem.

I.44 During 2023-24, the Reserve Bank aims at expanding the ongoing pilots in CBDC-Retail and CBDC-Wholesale by incorporating various use cases and features. The pilot in CBDC-Retail is proposed to be expanded to more locations and to include more participating banks.

I.45 As the Reserve Bank embarks upon the journey of realising the Payments Vision 2025, the steps taken so far towards enhanced outreach, customer centricity, cyber security and digital deepening shall be further consolidated and built upon through the five pillars of integrity, inclusion, innovation, institutionalisation and internationalisation. These measures are expected to propel India's payment systems further. Going forward, along with the continued focus on innovation and customer protection, the key priorities would be inclusion and internationalisation. The scope of UPI shall be enhanced to facilitate payments from pre-sanctioned credit lines at banks. The cheque truncation system (CTS) is planned to be migrated from the existing three regional grids to 'One Nation One Grid'. The Reserve Bank envisages enhancing the outreach of payment systems to cross-border payments and remittances. Linkages with fast payment systems in other jurisdictions, on the lines of the UPI-PayNow linkage with Singapore, are in the pipeline.

I.46 One of the milestones of the National Strategy for Financial Inclusion (NSFI) is to expand the reach of centres for financial literacy (CFLs) at every block in the country by March 2024. Looking ahead, the outreach of the CFLs is now being scaled up across the country in a phased manner, and the entire country is expected to be covered by 2024.

I.47 For ensuring public confidence in the financial system and also to protect the interests of customers of regulated entities (REs), the Reserve Bank is in the process of embedding artificial intelligence (AI)/machine learning (ML) and other cutting edge technological tools in its 24x7 online complaint management system (CMS) to facilitate lodging of complaints with ease, provide complainants with necessary information on grievance redressal and expedite complaint processing by aiding decision making for the ombudsman.

4. *Conclusion*

I.48 To sum up, several shocks tested the resilience of the Indian economy in 2022-23. On the back of sound macroeconomic policies, softer commodity prices, a robust financial sector, a healthy corporate sector, continued fiscal policy thrust on quality of government expenditure, and new growth opportunities stemming from global realignment of supply chains, India's growth momentum is likely to be sustained in 2023-24 in an atmosphere of easing inflationary pressures. Slowing global growth, protracted geopolitical tensions and a possible upsurge in financial market volatility following new stress events in the global financial system, however, could pose downside risks to growth. It is important, therefore, to sustain structural reforms to improve India's medium-term growth potential.

II ECONOMIC REVIEW

In an environment of formidable geo-economic fragmentation, elevated global food, energy and commodity prices, aggressive monetary policy tightening and spillovers, the Indian economy exhibited resilience in 2022-23. Overlapping supply shocks caused inflation to remain above the upper tolerance level of the inflation target for several months during the year. With the Reserve Bank acting pro-actively to tame inflation, monetary and credit conditions evolved in sync with the policy stance, even as targeted fiscal measures to contain inflation and fiscal consolidation strengthened macroeconomic stability. The current account deficit in the balance of payments remained sustainable and the health of the financial sector improved enabling a rebound in credit growth.

II.1.1 The flaring up of geopolitical hostilities followed by a tightening of financial conditions on account of aggressive monetary policy actions worldwide dampened global macroeconomic outcomes during 2022 amidst heightened uncertainty. After the short-lived Omicron wave and a successful inoculation drive on a world-wide scale, with 64.20 per cent of world population fully vaccinated as on March 31, 2023, the resilience of the global economy stood out, causing the International Monetary Fund (IMF) to revise estimate of global growth for 2022 to 3.4 per cent in April 2023 from 3.2 per cent in October 2022. However, global trade (goods and services) growth for 2022 was revised down to 5.1 per cent in April 2023 from 5.4 per cent in January 2023. Global inflation remained uncomfortably high at 8.7 per cent in 2022, as against 4.7 per cent a year ago with inflation overshooting the target in an overwhelming majority of countries. Capital flows to emerging market economies (EMEs) remained subdued and volatile.

II.1.2 The synchronised tightening of financial conditions across the globe was reflected in a sharp rise in sovereign bond yields. Other segments of the financial markets also witnessed amplified volatility, reflecting the impact of global spillovers amidst pervasive risk-off sentiments. The relentless appreciation of the US dollar exerted sustained depreciation pressures on currencies of other advanced economies (AEs) and EMEs, eroding a significant part of the foreign exchange reserve buffers of countries due to valuation losses.

II.1.3 Turning to the domestic economy, a recovery gained momentum during the second quarter of 2022-23 as domestic supply chains normalised and activity in contact-intensive sectors rebounded. Robust balance sheets of the corporate sector and banks enabled a rebound in credit demand, which was also facilitated by a large increase in capex by the centre. With real GDP growing by an estimated 7 per cent, the Indian economy turned out to be one of the fastest growing major economies of the world during 2022-23.

II.1.4 Headline CPI inflation, which was projected by the Reserve Bank before the war started in Ukraine to moderate to 4.5 per cent in 2022-23, surged to 6.7 per cent. The elevation in price pressures was broad based and sticky, exceeding the upper tolerance level of the inflation target in several months of the year. The Reserve Bank raised the policy repo rate cumulatively by 250 basis points (bps) and changed the monetary policy stance to withdrawal of accommodation, prioritising price stability while remaining mindful of growth. In view of the dominance of supply side factors in shaping the inflation trajectory, the government introduced several targeted item specific anti-inflationary measures. Fiscal policy demonstrated a commitment to consolidation while directing public expenditure towards a large increase in growth-supportive capex. Capital formation emerged as a lead driver of growth during 2022-23.

II.1.5 Financial conditions remained supportive amidst moderation in surplus liquidity during the year. Money market interest rates rose, broadly in tandem with the policy repo rate movements. Medium to long-term sovereign bond yields hardened under the impact of global spillovers, but the term premium remained below pre-COVID levels. Corporate bond yields hardened during 2022-23, tracking the rise in benchmark G-sec yields, and higher credit spreads. Equity markets exhibited resilience despite heightened global uncertainties, occasionally decoupling from global equity market movements. The Indian rupee was impacted by the strengthening of the US dollar during 2022-23, amidst risk-off sentiments driving net portfolio outflows.

II.1.6 Against this backdrop, the rest of the chapter is structured into six sections. An analysis of real economy is presented in section 2, followed by movements in commodity prices and a detailed analysis of the drivers of inflation in section 3. Developments in monetary aggregates and financial markets are presented in sections 4 and 5, respectively. Government finances (centre and states) are discussed in section 6, followed by an analysis of external sector developments in section 7.

II.2 THE REAL ECONOMY

II.2.1 The Indian economy exhibited robust resilience in 2022-23 amidst a global turmoil following the war in Ukraine, and recorded a growth of 7.0 per cent, the highest among major economies in the world. Barring the Omicron wave scare early in the year 2022, COVID-19 was largely on the ebb for most part of the year helping in restoration of consumer and business confidence. Contact-intensive activity gradually resuscitated during the year and the release of pent-up demand bolstered domestic activity. Sound macroeconomic fundamentals, a resilient financial system reflected in healthy balance sheets of banks and non-banking financial companies (NBFCs), and a deleveraged corporate sector imparted resilience to counter the adverse global spillovers.

II.2.2 In this section, component-wise analysis of aggregate demand is presented in sub-section 2. An assessment of developments in aggregate supply conditions in terms of the performance of agriculture, industry and services are discussed in sub-section 3. A drill-down into employment and labour market developments is presented in sub-section 4. The final sub-section provides policy perspectives.

2. Aggregate Demand

II.2.3 The second advance estimates (SAE) of national income that were released by the National Statistical Office (NSO) on February 28, 2023 indicated that aggregate demand, measured by real GDP, registered a growth of 7.0 per cent in 2022-23 *vis-à-vis* 9.1 per cent growth a year ago (Table II.2.1 and Appendix Table 1). With this, real GDP in level terms surpassed the pre-pandemic level of 2019-20 by 9.9 per cent. For the previous three years, GDP growth numbers were revised up by 20 bps (2019-20), 80 bps (2020-21) and 40 bps (2021-22) indicating that the growth momentum was stronger than what early estimates suggested. While both consumption and investment demand gained traction, adverse external demand conditions and the resultant larger deficit in net exports dragged down growth in 2022-23. Real GDP growth at 9.6 per cent remained robust during H1:2022-23 with a sharp acceleration in momentum from Q1 to Q2:2022-23. In Q3:2022-23, however, the momentum moderated (Chart II.2.1 and Appendix Table 2).

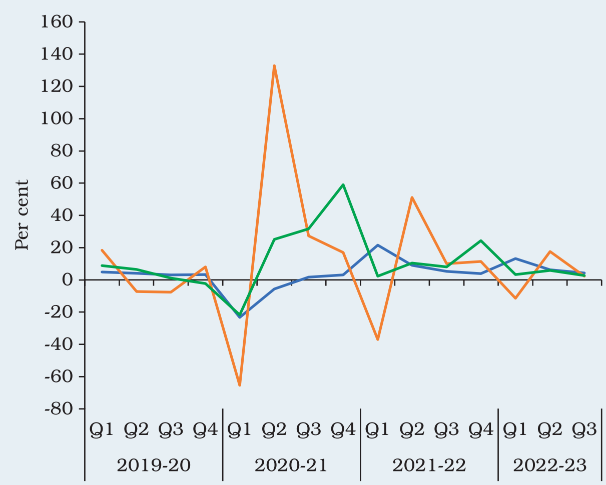
II.2.4 Underlying the vicissitudes in aggregate demand conditions in 2022-23, were the compositional shifts among its major constituents (Chart II.2.2). Private final consumption expenditure (PFCE) registered a steady growth of 7.3 per cent, buoyed by an uptick in the contact-intensive activity including travel and tourism and an upbeat festival time demand in 2022-23. Government final consumption expenditure (GFCE) growth at 1.2 per cent remained muted as the government continued on a consolidation path to restore fiscal health while stepping up capital expenditure to support growth and investment. The improvement in the quality of expenditure bodes well for sustainability and de-risking of

Table II.2.1. Real GDP Growth

Component	Growth (per cent)				
	2018-19	2019-20	2020-21	2021-22	2022-23
1	2	3	4	5	6
I. Total Consumption Expenditure	**7.0**	**5.0**	**-4.6**	**10.5**	**6.4**
Private	7.1	5.2	-5.2	11.2	7.3
Government	6.7	3.9	-0.9	6.6	1.2
II. Gross Capital Formation	**6.2**	**-6.0**	**-11.6**	**22.2**	**9.6**
Gross Fixed Capital Formation	11.2	1.1	-7.3	14.6	11.2
Change in Stocks	27.3	-58.7	-85.5	687.8	1.9
Valuables	-9.7	-14.2	26.4	34.0	-14.8
III. Net Exports					
Exports	11.9	-3.4	-9.1	29.3	11.5
Imports	8.8	-0.8	-13.7	21.8	18.8
IV. GDP	**6.5**	**3.9**	**-5.8**	**9.1**	**7.0**

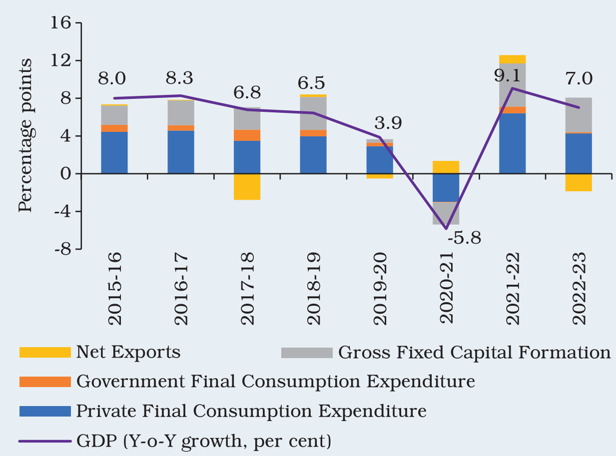
Source: NSO.

Chart II.2.1: GDP Growth (Y-o-Y) and SAAR



Y-o-Y: Year-on-Year. Q-o-Q: Quarter-on-Quarter. MA: Moving Average.
SAAR: Seasonally Adjusted Annualised Rate.
Source: NSO and RBI staff estimates.

Chart II.2.2: Weighted Contribution to GDP Growth



Note: Component-wise contributions do not add up to the growth rate as change in stocks, valuables and statistical discrepancies are not included. The weighted contribution to GDP growth by PFCE, GFCF, GFCE and net exports for 2022-23 stood at 4.3 per cent, 3.7 per cent, 0.1 per cent and (-) 1.9 per cent, respectively.
Source: NSO.

growth going forward. Gross fixed capital formation (GFCF) remained strong with a double-digit growth of 11.2 per cent in 2022-23, primarily aided by the government's thrust on infrastructure. As a result, the ratio of real GFCF to GDP increased to 34.0 per cent in 2022-23 from 32.7 per cent in the preceding year. India's exports, after exhibiting remarkable recovery post-COVID with a growth of 29.3 per cent in 2021-22, tapered to 11.5 per cent in 2022-23. As the growth in imports at 18.8 per cent outpaced the growth in exports, the drag from net exports further widened to 2.9 per cent of GDP in 2022-23 from 1.3 per cent in the preceding year.

Consumption

II.2.5 Emancipated from the COVID-19 induced restrictions which lingered for the previous two years, PFCE - the mainstay of aggregate demand - rebounded strongly to 13.2 per cent in 2022-23 above the pre-pandemic level. A well-rounded resumption in contact-intensive activity and pent-up demand in discretionary consumption spearheaded private consumption in the first half of the year. A resilient farm sector and an improvement in labour market conditions relative to the pandemic period supported the revival in consumption. The production of both consumer durables and non-durables weakened substantially in recent months, indicating a slowdown in consumption as the pent-up demand gradually weakened in the second half of the year.

II.2.6 Indicators of consumption demand suggest a broad-based revival in 2022-23. Indicators pertaining to transport, *viz.*, domestic air passenger traffic, railway passenger traffic and passenger vehicle sales recorded sharp upticks on y-o-y basis pointing towards a resumption in travel, tourism and hospitality. The revenge tourism across domestic leisure destinations combined with wedding/holiday season propelled the hotel, tourism and hospitality sector to turn around strongly and recuperate the loss suffered during the COVID-19 pandemic. Major labour market indicators - all-India unemployment rate, worker population ratio (WPR) and labour force participation rate (LFPR) surpassed their respective pre-COVID levels in Q1:2022-23. Salaries and wages in the corporate sector have registered steady growth in 2022-23. All these factors bode well for propelling consumption demand further. As per the March 2023 round of the consumer confidence survey (CCS) of the Reserve Bank, while the current situation index (CSI) improved further on account of improved sentiments on general economic situation, employment and household income, the future expectation index (FEI) remained positive despite marginally lower optimism. Household's spending was buoyant for both essential and non-essential items with an expectation of a rise in non-essential outlay over the next year.

II.2.7 Rural demand, which was deeply scathed by the second wave of COVID-19 a year ago recovered, *albeit* at a slower pace, *vis-à-vis* urban demand. Real rural wage growth virtually stagnated in 2022-23 despite a visible uptick in economic activity. Although job demand under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) declined on a y-o-y basis, it still prevailed above the pre-pandemic level in 2022-23, indicating that the recovery, especially in the unorganised segment of the economy is not yet complete (Box II.2.1).

Investment and Saving

II.2.8 The rate of gross domestic investment in the Indian economy, measured by the ratio of gross capital formation (GCF) to GDP at current prices, surged to 31.4 per cent in 2021-22 from the COVID induced slump to 27.9 per cent in the preceding year. Although data on GCF are not yet available for 2022-23, movements in its constituents

Box II.2.1
Unorganised Sector Recovery Post-Pandemic

It has been widely conjectured that the economic loss on account of the COVID-19 pandemic continue to weigh heavily on unorganised sector activity. There is no official measure available on the nature of recovery of this segment of the economy post-pandemic. The very nature of operations of the unorganised or informal enterprises do not require maintenance of accounts or adherence to any regulations and hence, makes it difficult to have a proper account of unorganised sector activity in a timely manner.

In the 2011-12 base year series, gross value added (GVA) generated within the household sector[1] broadly captures the unorganised sector activity. The official estimates of the unorganised GVA are released on an annual basis with a lag of almost 10 months. Therefore, currently these data are available only up to 2021-22. Household sector GVA in real terms[2] in 2021-22 is estimated to have increased by 3.1 per cent above the pre-pandemic level of 2019-20.

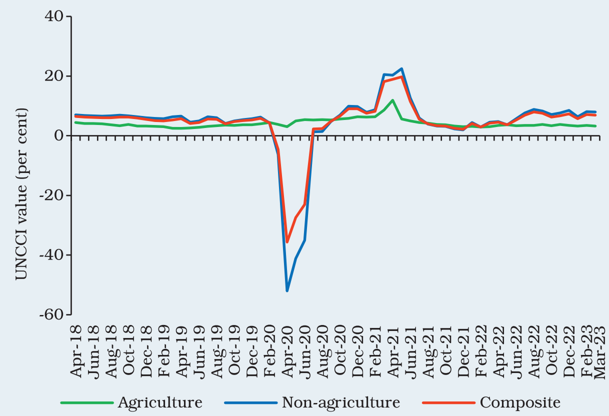
The asymmetrical impact of the pandemic on the unorganised sector was corroborated by official data as well as survey-based studies and anecdotal evidence (Estupinan and Sharma, 2020). There was a sharp contraction even in nominal terms in the household GVA, while GVA of the organised sector registered marginal expansion in 2020-21. Within services, though both organised and household segments of hotels and restaurants; other services; transport; trade and repair; and construction registered a contraction, the contraction was more entrenched in the household segment.

In an attempt to track the performance of the unorganised sector, a composite index for the unorganised sector activity at a monthly frequency is constituted adopting an indicator-based approach. The unorganised sector composite coincident index (UNCCI) with complete information set is available with a lag of 45 days since the end of a reference month.

The high frequency indicators (HFIs) identified for the UNCCI broadly pertain to three categories in which the unorganised sector has a relatively larger presence – (i) agriculture; (ii) construction, trade and transport; and (iii) other miscellaneous activities. From a broader set of 15 indicators, the constituent indicators are selected based on their dynamic correlation with the benchmark indicator – household sector GVA growth.

The UNCCIs have been developed using the dynamic factor model in the state-space framework (Geweke, 1977), which uses Kalman filter to derive the common trend from the constituent indicators. The UNCCI tracks the cataclysmic impact of COVID-19 and the subsequent recovery in the unorganised non-agriculture sector very well (Chart 1). The recent trajectory of the UNCCI points towards an uptick in November 2022 and showed further improvement in the subsequent months. The composite UNCCI stood robust at 6.9 per cent in March 2023.

Chart 1: Unorganised Composite Coincident Index (UNCCI)



Source: RBI staff estimates.

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1. Bhowmick, C., Goel, S., Das, S. and Gautam, (2022), 'A Composite Coincident Index for Unorganised Sector Activity in India', *RBI Bulletin*, December 2022.
2. Estupinan, Xavier and Sharma, Mohit, (2020), 'Job and Wage Losses in Informal Sector due to the COVID-19 Lockdown Measures in India', Rochester, New York .
3. Geweke, J. (1977), 'The Dynamic Factor Analysis of Economic Time Series' in Ainger, D.J. and Goldberger, A.S. (Eds), *Latent Variables in Socio-Economic Models* Pp 365-383, North-Holland Publications, Amsterdam.

[1] Household sector comprises of agricultural activities undertaken on agricultural holdings - individually or in partnership, excluding plantation and corporate farming; along with all unincorporated private enterprises owned by individuals or households - own account or partnership.

[2] NSO releases household sector GVA data only at current prices. Household sector GVA deflator is assumed to be the same as overall GVA deflator for 2021-22.

suggest an uptick primarily led by government spending on infrastructure. The strong pick up in credit growth in 2022-23 and upbeat investment sentiment reflected in the forward-looking surveys conducted by the Reserve Bank, in particular the industrial outlook survey (IOS), suggest that the investment cycle recovery is likely to continue (Box II.2.2).

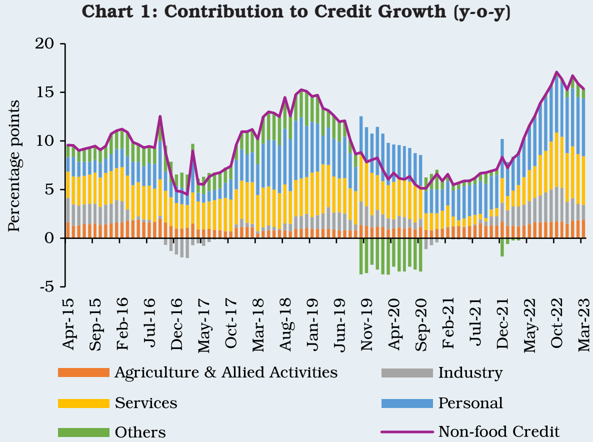
II.2.9 Among the components of GFCF, activity in the construction sector is gathering traction owing to the focus of the government on infrastructure and the ebullient housing sector. This is evident from movement in its proximate coincident indicators – steel consumption and cement production (Chart II.2.3). Buoyant investment demand in machinery and equipment

Box II.2.2
Role of Credit in Driving a Turnaround in Private Investment Cycle

Bank credit plays an important role in financing the investments of corporates in India. A sustained increase in credit may have lead information about investment demand pick-up while an occasional rise may indicate demand for working capital which could be for utilisation of current capacity. As of March 2023, the non-food credit growth (year-on-year) was robust at 15.4 per cent, same as that of the nominal GDP for 2022-23. The broad-based expansion in bank credit has been facilitated by healthier balance sheets of banks (Chart 1).

Despite the increase in commodity prices and rise in interest rates, corporate investments have picked up in the recent period. To assess as to whether the rise in bank credit could revive the investment cycle, the relationship between borrowings and fixed investments of listed non-financial firms is examined by a dynamic panel model for the period 2011-12 to 2020-21 (Arellano and Bond, 1991). Results show that a one percentage point higher growth in bank borrowings increases nominal net fixed assets (NFA) by around 0.17

Chart 1: Contribution to Credit Growth (y-o-y)



Source: RBI.

Table 1: Bank Borrowing and Fixed Investment

Explanatory Variables	ΔNFA_{it}	ΔNFA_{it}	ΔNFA_{it}	ΔNFA_{it}
1	2	3	4	5
$\Delta NFA_{i,t-1}$	0.133*** (0.0316)	0.859*** (0.108)	0.424** (0.192)	0.0862* (0.0515)
Bank Borrowing Growth$_{it}$	0.158** (0.0630)	0.174*** (0.0662)	0.201* (0.104)	0.0252 (0.125)
R & D Expenditure Growth$_{it}$	0.121*** (0.0436)	0.0440 (0.0450)	0.115* (0.0683)	0.0474 (0.0600)
Operating Expenses Growth$_{it}$	-0.258*** (0.0837)			-0.328** (0.146)
Inflation$_{t}$		-0.535** (0.210)	1.027*** (0.323)	
Bank Borrowing Growth$_{it}$ × Inflation$_{t}$			-0.0504*** (0.0116)	
Bank Borrowing Growth$_{it}$ × Operating Expenses Growth$_{it}$				0.0231 (0.0184)
Constant	6.315*** (0.769)	1.588 (2.078)	-0.317 (2.474)	7.885*** (1.664)
N	117	117	117	117
AR(1), p-value	0.0229	0.00760	0.00890	0.0232
AR(2), p-value	0.264	0.180	0.133	0.243
Hansen Test, p-value	0.920	0.804	0.999	0.853

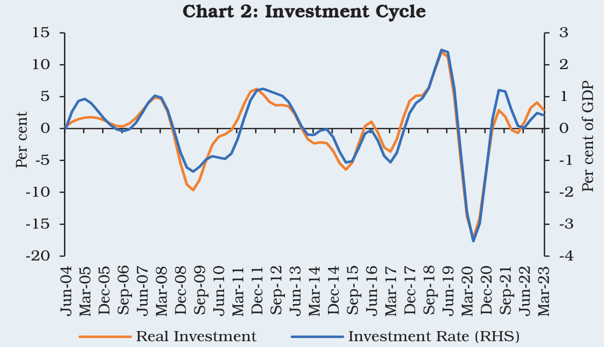
***, **, and * indicate significance at 1 per cent, 5 per cent and 10 per cent level, respectively.
Note: Figures in the parentheses are standard errors. In the above table *'i'* stands for sector and *'t'* for time.
Source: RBI staff estimates.

percentage points (Table 1). Higher inflation raises operating costs, which in turn, may reduce fixed investment. The sensitivity of fixed investment to bank borrowings falls during periods of higher inflation. This highlights the crucial role of low and stable inflation to the investment outlook.

To reconfirm the nature of revival in investment activity, investment cycles are estimated by employing an asymmetric band-pass filter on quarterly seasonally adjusted investment

(Contd.)

Chart 2: Investment Cycle



Note: Cycles are calculated by employing asymmetric band-pass filter on growth of real gross fixed capital formation (GFCF) (orange line) and nominal GFCF as per cent of nominal GDP (blue line).
Source: RBI staff estimates.

rate and real gross fixed capital formation data. Cycles extracted from both series corroborate cyclical revival in investment from the slump encountered during the first wave of the pandemic (Chart 2). The sustainability of the revival going ahead is contingent on lower and stable inflation in India, stronger growth in global output and trade, improvement in financial conditions, timely project completion by the corporates and a favourable commodity price outlook.

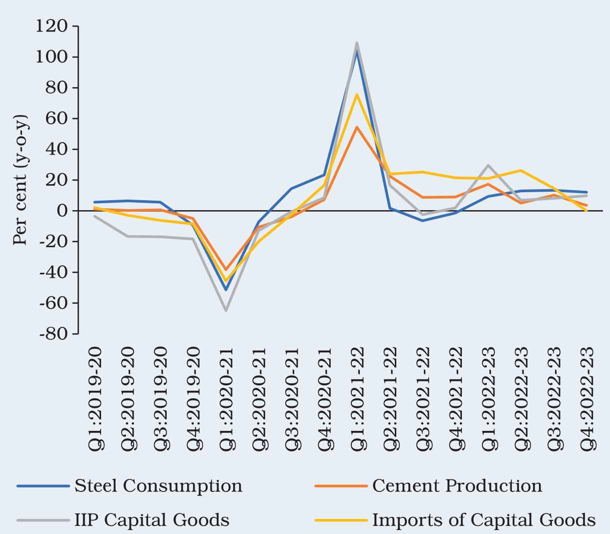
Reference:

Arellano, M., and Bond, S. (1991), 'Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations', *The Review of Economic Studies*, 58(2), 277–297.

is evident from movements in their proximate coincident indicators – imports and production of capital goods – which have registered robust growth in 2022-23.

II.2.10 As per the order books, inventories and capacity utilisation survey (OBICUS) of the Reserve Bank, aggregate capacity utilisation (CU) of the manufacturing sector increased to 74.3 per cent in Q3:2022-23 from 74.0 per cent recorded in the previous quarter. The seasonally adjusted CU,

Chart II.2.3: Indicators of Investment Demand



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

however, declined by 40 bps and stood at 74.1 per cent in Q3:2022-23. For the manufacturing firms, new orders during Q3:2022-23 grew on a year-on-year basis. In Q3:2022-23, the ratio of both finished goods inventory (FGI) to sales and raw material inventory (RMI) to sales remained flat, reflecting a subdued demand condition. For Q4:2022-23, respondents of the IOS exhibited optimism, particularly regarding financial situation.

II.2.11 The rate of gross domestic saving as per cent to gross national disposable income (GNDI) surged to 30.0 per cent in 2021-22 from 28.4 per cent in the preceding year, led by lower dissaving of the general government sector, which offset the drop in household saving. The net financial saving of the household sector – the most important source of funds for the two deficit sectors, namely, the general government sector and the non-financial corporations – moderated to 7.6 per cent of GNDI in 2021-22, (Table II.2.2 and Appendix Table 3). The moderation in household financial saving in India is reflective of the release of pent-up demand, and the associated drawdown in precautionary saving as concerns relating to income flows subsided in 2021-22.

Table II.2.2: Financial Saving of Household Sector

(Per cent of GNDI)

Item	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3	4	5	6	7	8	9	10	11	12
A. Gross Financial Saving	**10.4**	**10.5**	**10.4**	**9.9**	**10.7**	**10.4**	**11.9**	**11.8**	**11.4**	**15.2**	**11.0**
of which:											
1. Currency	1.2	1.1	0.9	1.0	1.4	-2.1	2.8	1.4	1.4	1.9	1.1
2. Deposits	6.0	6.0	5.8	4.8	4.6	6.3	3.0	4.2	4.3	6.2	3.5
3. Shares and Debentures	0.2	0.2	0.2	0.2	0.2	1.1	1.0	0.9	0.5	0.5	0.9
4. Claims on Government	-0.2	-0.1	0.2	0.0	0.5	0.7	0.9	1.1	1.3	1.3	1.2
5. Insurance Funds	2.2	1.8	1.8	2.4	1.9	2.3	2.0	2.0	1.7	2.8	1.9
6. Provident and Pension Funds	1.1	1.5	1.5	1.5	2.1	2.1	2.1	2.1	2.2	2.4	2.4
B. Financial Liabilities	**3.2**	**3.2**	**3.1**	**3.0**	**2.7**	**3.0**	**4.3**	**4.0**	**3.8**	**3.9**	**3.4**
C. Net Financial Saving (A-B)	**7.2**	**7.2**	**7.2**	**6.9**	**7.9**	**7.3**	**7.5**	**7.8**	**7.6**	**11.3**	**7.6**

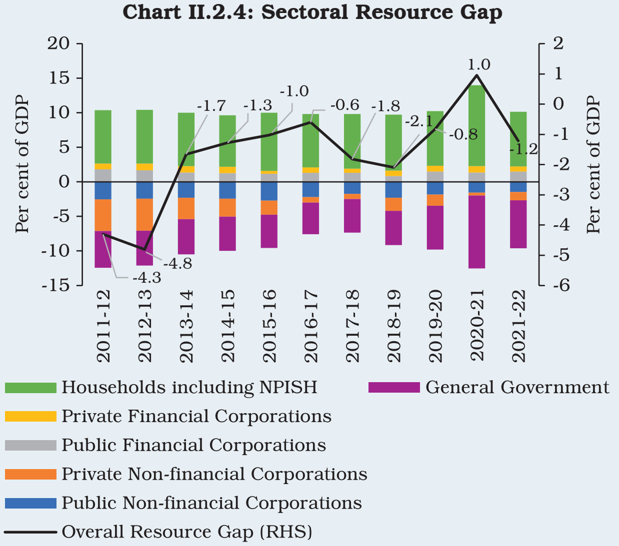
GNDI: Gross National Disposable Income.
Note: Figures may not add up to total due to rounding off.
Source: NSO.

II.2.12 The resource gap of private non-financial corporations widened in 2021-22 due to a revival in investment demand (Chart II.2.4). The dissaving by the general government sector reduced from an elevated level owing to the government's commitment to fiscal consolidation after the COVID induced increase in fiscal deficit in 2020-21.

3. Aggregate Supply

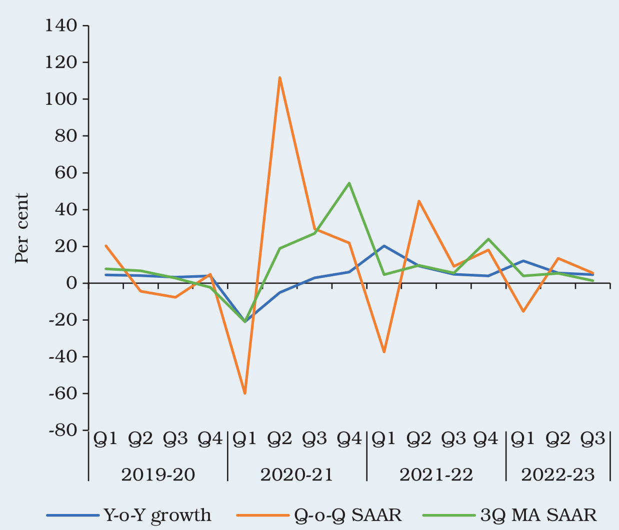
II.2.13 Aggregate supply, measured by gross value added (GVA) at basic prices, expanded by 6.6 per cent in 2022-23, as compared with a growth of 8.8 per cent a year ago. With gradual revival in economic activity, the three-quarter moving average of seasonally adjusted annualised growth rate (MA-SAAR) exhibited an upturn in Q2:2022-23, but moderated in Q3:2022-23 (Chart II.2.5).

Chart II.2.4: Sectoral Resource Gap



NPISH: Non-profit Institutions Serving Households.
Source: NSO and RBI staff Estimates.

Chart II.2.5: GVA Growth (Y-o-Y) and SAAR



SAAR: Seasonally Adjusted Annualised Rate. MA: Moving Average.
Source: NSO and RBI staff estimates.

II.2.14 GVA growth was driven by a resilient agriculture sector and broad-based recovery in the services sector (Table II.2.3). On the other hand, the industrial sector decelerated sharply amidst intensification of input cost pressures, supply chain disruptions and fledgling global demand conditions.

Agriculture and Allied Activities

II.2.15 Agriculture and allied sector growth moderated marginally in 2022-23, for the third consecutive year. The GVA of the sector grew by 3.3 per cent during 2022-23 on record production of foodgrains (including rice, wheat, maize, barley and pulses), sugarcane and rapeseed and mustard. The sector's buoyancy during the year was generally supported by normal cumulative south-west monsoon (SWM) rainfall - despite its uneven distribution over time and across regions, and delayed withdrawal - and normal north-east monsoon rains. Deficient winter season rainfall (January-February) and the consequent above-normal temperature observed during February 2023 - the crucial month when flowering and grain-filling occurs in wheat and other *rabi* crops as well as in horticulture crops - posed downside risks to *rabi* production. Moreover, the unusual showers accompanied with the hailstorms during the month of March caused further risk to the *rabi* crops and delayed the harvesting of the crops in major producing states.

II.2.16 The uneven temporal and spatial distribution of the SWM adversely impacted the progress of *kharif* sowing, reducing the area under cropping. Though the monsoon landed on the Indian mainland on May 29, 2022 (two days prior to its normal date) in line with the India Meteorological Department (IMD)'s forecast, rainfall remained less than normal in June 2022, delaying the onset of *kharif* sowing. Rainfall fluctuated from July 2022 through September 2022 (Chart II.2.6). However, cumulative rainfall at the end of the season (September 30, 2022) was normal at 6 per cent above the long period average (LPA). Spatially, while rains in north-west India hovered around the normal benchmark, central India and south peninsula received episodes of excessive rains during the middle as well as the end of the season, exposing some of the standing crops to damage. The east and north-east regions, which contribute more than one-third

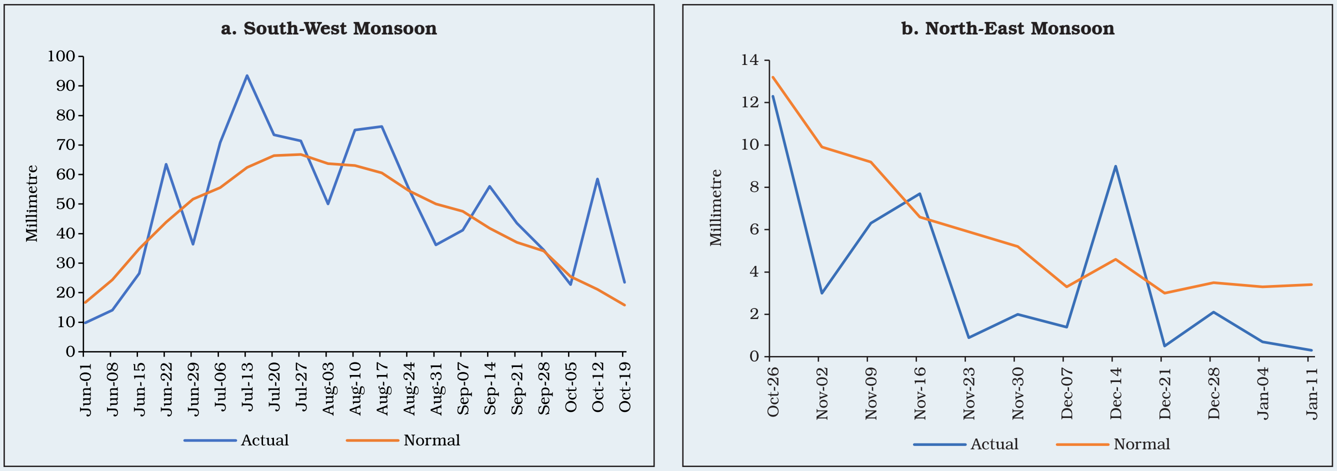
Table II.2.3: Real GVA Growth

(Per cent)

Sector	2018-19	2019-20	2020-21	2021-22	2022-23
1	2	3	4	5	6
I. Agriculture, Forestry and Fishing	**2.1**	**6.2**	**4.1**	**3.5**	**3.3**
II. Industry	**4.9**	**-2.5**	**0.9**	**10.5**	**1.7**
II.1 Mining and Quarrying	-0.8	-3.0	-8.6	7.1	3.4
II.2 Manufacturing	5.4	-3.0	2.9	11.1	0.6
II.3 Electricity, Gas, Water Supply and Other Utility Services	7.9	2.3	-4.3	9.9	9.2
III. Services	**7.1**	**5.8**	**-7.9**	**9.6**	**9.3**
III.1 Construction	6.5	1.6	-5.7	14.8	9.1
III.2 Trade, Hotels, Transport, Communication and Services Related to Broadcasting	7.2	6.0	-19.7	13.8	14.2
III.3 Financial, Real Estate and Professional Services	7.0	6.8	2.1	4.7	6.9
III.4 Public Administration, Defence and Other Services	7.5	6.6	-7.6	9.7	7.1
IV. GVA at Basic Prices	**5.8**	**3.9**	**-4.2**	**8.8**	**6.6**

Source: NSO.

Chart II.2.6: Weekly Rainfall 2022-23

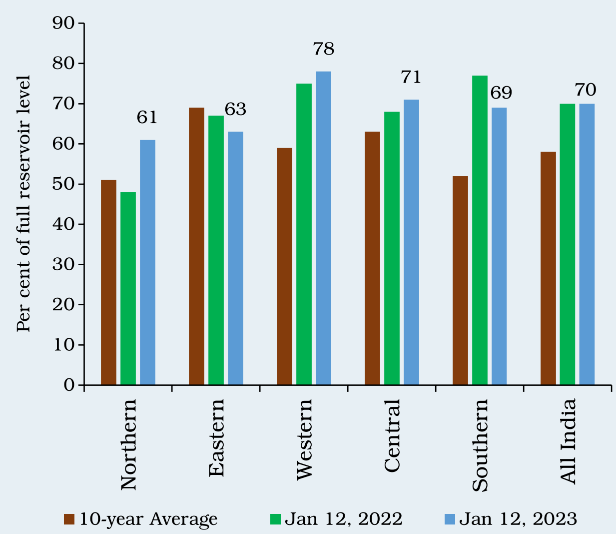


Source: IMD, GoI.

of India's rice production, witnessed deficit rainfall during most of July to August 2022, the crucial months of *kharif* sowing. Notably, states like Bihar, Uttar Pradesh, Jharkhand, and West Bengal faced a deficit of more than 20 per cent as compared to their respective normal levels of rainfall. The final *kharif* acreage as at end-September 2022 was lower by 0.8 per cent as compared with the previous year.

II.2.17 The withdrawal of SWM started around September 20, 2022 and ended on October 23, 2022. The slow withdrawal was due to cyclonic disturbances in the Bay of Bengal. As a result, most of the sub-divisions received heavy rains during September and October 2022. These rains ensured congenial soil moisture content as well as sufficient reservoir levels, which augurs well for the *rabi* season crops. The reservoir water storage level stood at 70 per cent of the full reservoir capacity as on January 12, 2023 (end of north-east monsoon) which was at par with the previous year's level and 20 per cent higher than the last 10-year average (Chart II.2.7). Aided by these factors, the *rabi* crop sowing season 2022-23 ended with a record acreage of 720.7 lakh hectares, surpassing the last year's sowing by 3.3 per cent. The jump in *rabi* crops acreage was mainly driven by wheat, rice, maize, lentil, rapeseed and mustard. Consequently, total foodgrains production in 2022-23 is estimated at 3,305.3 lakh tonne, as per the third advance estimates (3rd AE), 4.7 per cent higher than the final estimates (FE) for 2021-22 (Table II.2.4). The record foodgrains production for the seventh

Chart II.2.7: Reservoir Level (as on January 12, 2023)



Source: Central Water Commission, GoI and Ministry of Agriculture and Farmers Welfare, GoI.

Table II.2.4: Agricultural Production 2022-23

(Lakh tonne)

Crop	2021-22		2022-23		2022-23 (3rd AE) Variations (Per cent)		
	3rd AE	Final	Target	3rd AE	Over 2021-22		Over 2022-23
					3rd AE	FE	Target
1	2	3	4	5	6	7	8
Foodgrains	3,145.1	3,156.2	3,280.0	3,305.3	5.1	4.7	0.8
Kharif	1,549.3	1,553.6	1,631.5	1,551.2	0.1	-0.2	-4.9
*Rabi**	1,595.9	1,602.5	1,648.5	1,754.2	9.9	9.5	6.4
Rice	1,296.6	1,294.7	1,305.0	1,355.4	4.5	4.7	3.9
Wheat	1,064.1	1,077.4	1,120.0	1,127.4	6.0	4.6	0.7
Pulses	277.5	273.0	295.5	275.0	-0.9	0.7	-6.9
Oilseeds	385.0	379.6	413.5	410.0	6.5	8.0	-0.8
Sugarcane	4,305.0	4,394.3	4,150.0	4,942.3	14.8	12.5	19.1
Cotton #	315.4	311.2	370.0	343.5	8.9	10.4	-7.2
Jute & Mesta ##	102.2	101.5	105.0	94.9	-7.1	-6.5	-9.6

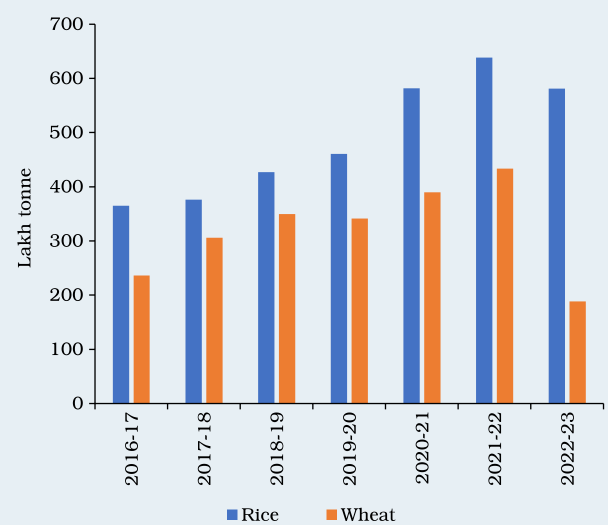
*: Including summer crops production. #: Lakh bales of 170 kg each. ##: Lakh bales of 180 kg each.

Source: Ministry of Agriculture and Farmers Welfare, GoI.

consecutive year is mainly contributed by *rabi* crops (9.5 per cent y-o-y growth) as production of *kharif* crops contracted marginally [(-)0.2 per cent]. As regards the horticulture production, the third advance estimates (3rd AE) for 2021-22 revised the overall production upward by 7.0 lakh tonne to 3,423.3 lakh tonne, 2.3 per cent higher than that of 2020-21, driven by an increase in production of both fruits and vegetables.

II.2.18 In line with the approach adopted in recent years, the minimum support prices (MSPs) announced in 2022-23 for both *rabi* and *kharif* crops ensured a minimum return of 50 per cent over the cost of production[3]. The prices increased in the range of 2.0 per cent (for gram) to 9.1 per cent (for lentils) across crops. As on March 31, 2023, the procurement of rice was 492.2 lakh tonne during the *kharif* marketing season of 2022-23, which is 2.2 per cent lower than the corresponding period of last year (Chart II.2.8). As a result, the buffer stocks of rice stood at 3.2 times the buffer norm as on March 31, 2023 (Chart II.2.9).

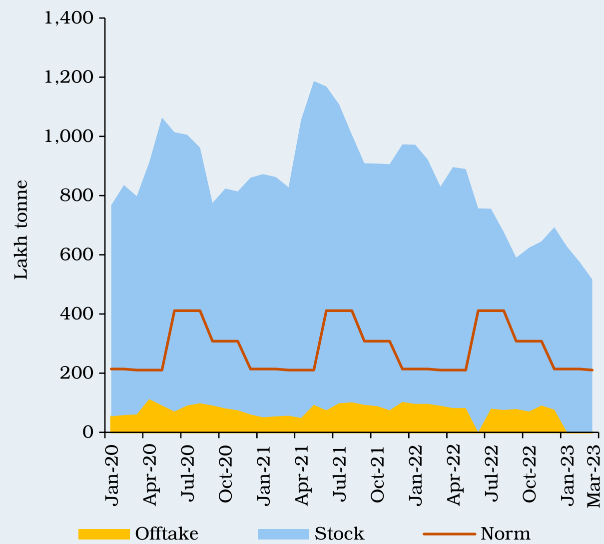
Chart II.2.8: Annual Procurement of Rice and Wheat (April to March)



Source: Ministry of Consumer Affairs, Food and Public Distribution, GoI.

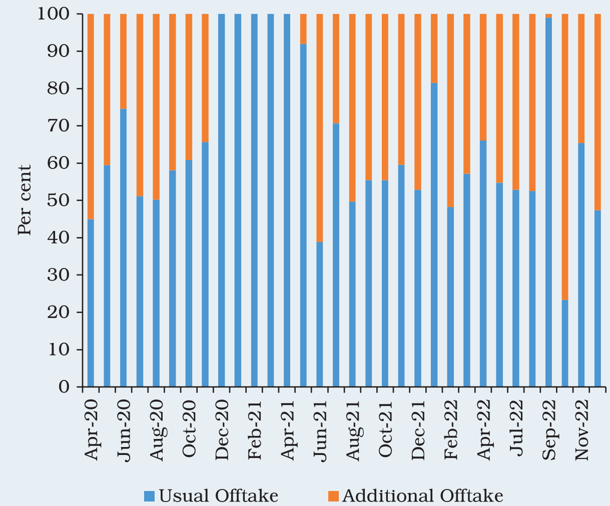
3 Actual paid out cost (A2) *plus* imputed value of family labour (FL) [A2+FL].

Chart II.2.9: Monthly Position of Stock and Buffer Norm



Source: Ministry of Consumer Affairs, Food and Public Distribution, GoI.

Chart II.2.10: Distribution of Foodgrains



Note: Additional offtake includes PM-GKAY, *AatmaNirbhar Bharat* Package (Migrants) and Non-NFSA (COVID-19).
Source: Ministry of Consumer Affairs, Food and Public Distribution, GoI.

II.2.19 Wheat stocks were 1.1 times the buffer norms (as on March 31, 2023) due to a y-o-y decline of 56.6 per cent in its procurement in the *rabi* marketing season of 2022-23. The lower procurement of wheat was mainly on account of yield loss due to persistent heatwaves during the harvesting months of March and April 2022; and the rise in wheat exports after the outbreak of the Russia-Ukraine war. The Government of India imposed restrictions on exports of wheat (on May 14, 2022), wheat-based products (on August 25, 2022) and broken rice as well as higher export duties on non-*basmati* rice except for parboiled rice to ensure domestic availability. In the months of February and March 2023, the government also offloaded 3.4 million tonne of wheat from the central pool stock to the market through *e-auctions* under the open market sale scheme (domestic) to curb inflationary pressures from wheat.

II.2.20 To offset the declining stocks of wheat, the distribution of wheat under the *Pradhan Mantri Garib Kalyan Anna Yojana* (PM-GKAY) was substituted with rice in the sixth and seventh phases of the scheme during April-December 2022. Since its inception in April 2020, the distribution of foodgrains under the scheme accounted for a significant share in the total offtake under the public distribution system (PDS) [Chart II.2.10]. With the pandemic ebbing, the foodgrains distribution under PM-GKAY was discontinued from January 1, 2023. Instead, the Union Government announced Integrated PM-GKAY scheme that made provision that the foodgrains (rice, wheat and coarse grains) provided under the National Food Security Act (NFSA), which included 5 kg. per person per month to the priority households' beneficiaries and 35 kg. per household per month to the *Antyodaya Anna Yojana* beneficiaries to about 81.35 crore beneficiaries, at subsidised prices (₹3/2/1 per kg. of rice/wheat/coarse grains, respectively), would be given free of charge in 2023.

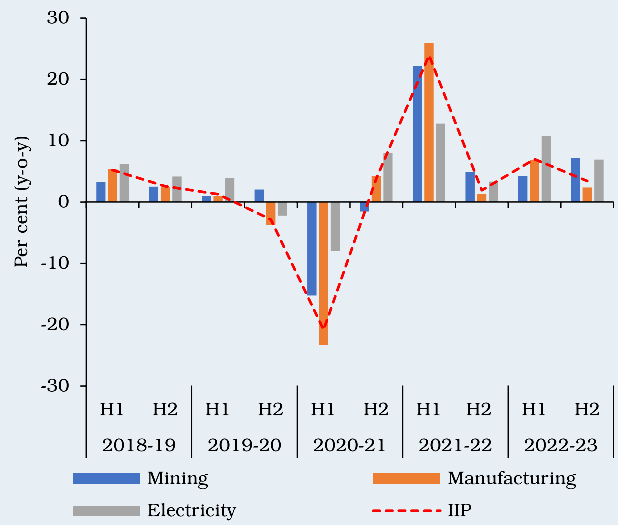
Industrial Sector

II.2.21 During 2022-23, the industrial sector's growth moderated amidst lingering global

Chart II.2.11: Organised Manufacturing Firms

*: Data are based on a short sample of 576 companies only.
PBDIT: Profit Before Depreciation, Interest and Tax.
Source: CMIE Prowess.

Chart II.2.12: Growth in Industrial Production



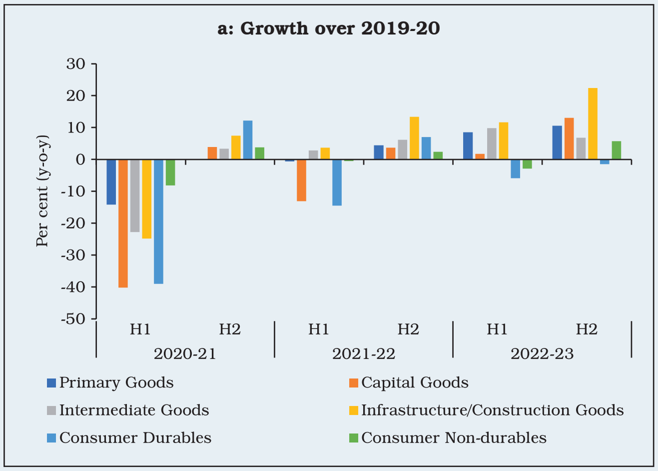
Source: Ministry of Statistics and Programme Implementation (MOSPI), GoI.

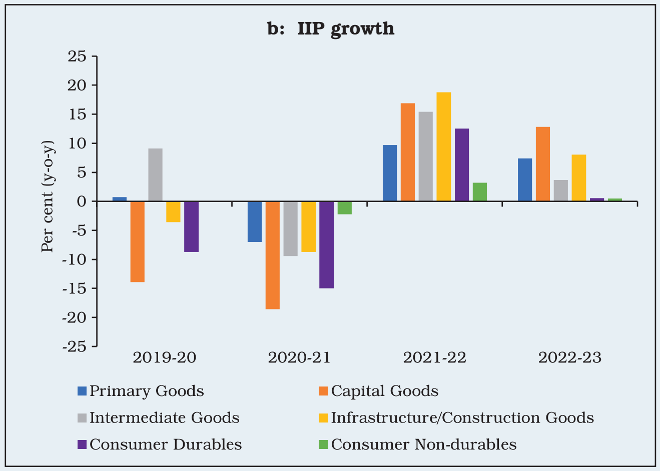
uncertainties. The organised manufacturing sector which benefitted from the lower base as well as softer raw material costs during 2021-22 faced the brunt of rising raw material costs in H1:2022-23 (Chart II.2.11). The supply chain bottlenecks following the war in Ukraine coupled with elevated raw material costs, impacted the profitability of manufacturing companies. While increased sales in Q1:2022-23 cushioned the hike in raw material costs, the global slowdown impacted sales in Q2:2022-23 adversely, resulting in profit diminishing at an accelerated pace. In Q3:2022-23, a moderation in input costs could only contain the decline in profits to some extent.

II.2.22 Industrial output measured by the index of industrial production (IIP) expanded by 5.1 per cent during 2022-23 as compared to 11.4 per cent last year. Manufacturing sector, which accounts for three-fourths of the industrial sector largely shaped the industrial sector recovery (Chart II.2.12). Within the manufacturing sector, 19 out of 23 industry groups recorded expansion in H1:2022-23, fuelled by manufacturing of motor vehicles, coke and refined petroleum products, basic metals, chemical products, and machinery and equipment. Manufacturing activity moderated to 2.4 per cent in H2:2022-23, affected by a slowdown in global demand. Labour-intensive sectors such as textiles, wearing apparel, leather and related products, computer, electronic and optical products, and electrical equipment recorded contraction in H2:2022-23, while basic metals, motor vehicles, trailers and semi-trailers, machinery and equipment, and other non-metallic mineral products recorded expansion. The automobile sector, which was riddled by supply chain bottlenecks, bounced back during 2022-23 supported by festive season sales.

II.2.23 In terms of use-based classification in H1:2022-23, all categories recorded y-o-y expansion barring consumer non-durables, while in H2:2022-23, only consumer durables registered a decline. In 2022-23, primary goods, and infrastructure/construction goods recorded robust growth on a y-o-y basis as well as over the pre-pandemic year 2019-20. While capital

Chart II.2.13: Index of Industrial Production - Use-based Classification



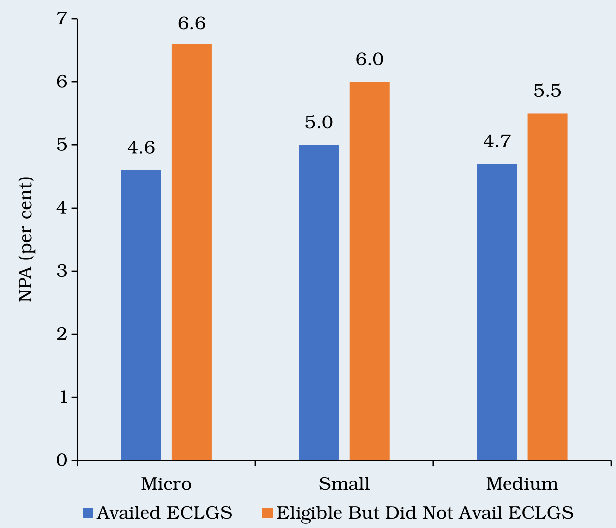


Source: Ministry of Statistics and Programme Implementation, GoI.

goods supported a rise in economic activity, production of consumer goods remained sluggish, with production of consumer durables remaining below the pre-pandemic output levels of 2019-20 and consumer non-durables remained flat during 2022-23 (Chart II.2.13).

II.2.24 The micro, small and medium enterprises (MSMEs) segment, which contributes about 29 per cent of India's GDP and employs over 11 crore workers, recorded a modest recovery. The revenue for the MSME sector is projected to exceed the pre-COVID level in 2022-23 by 25 per cent.[4] With 99.8 per cent of MSMEs being unregistered, they account for a sizeable share of the unorganised sector output and employment [National Sample Survey Organisation (NSSO), 2015-16]. Various policy measures were introduced to support the sector from the onslaught of the COVID-19 pandemic, including the Emergency Credit Line Guarantee Scheme (ECLGS), which aimed at meeting their liquidity needs for sustaining business operations. As per the assessment of the Credit Information Bureau (India) Limited (CIBIL), the scheme assisted MSME borrowers in managing their businesses better with lower non-performing assets (NPAs) for borrowers availing the facility as compared to borrowers who were eligible but did not avail of it (across all categories of micro, small and medium industries) [Chart II.2.14].

Chart II.2.14: Impact of ECLGS on MSMEs



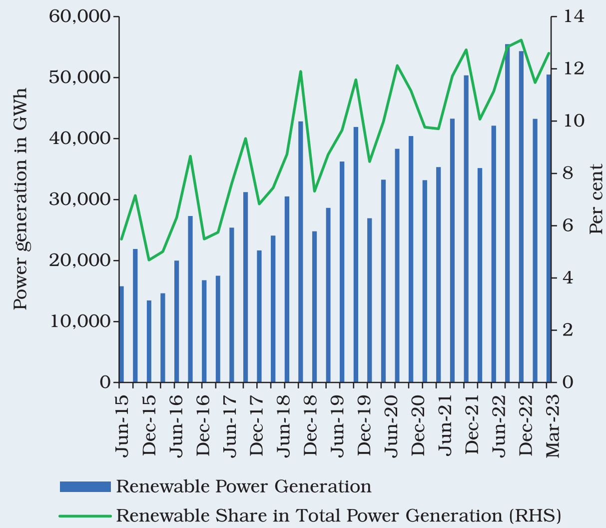
Note: Data are as on March 31, 2022.
Source: TransUnion CIBIL.

4 Credit Rating Information Services of India Limited (CRISIL).

II.2.25 The mining sector output recorded 4.3 per cent y-o-y growth in H1:2022-23, mainly on account of a double-digit growth in coal production, that became necessary to compensate for the reduced imports in response to high international prices. In H2:2022-23 mining sector remained robust with 7.1 per cent y-o-y growth, coal continued to register strong growth, while crude oil recorded a contraction in H2:2022-23. Electricity generation expanded at 10.8 per cent during H1:2022-23 led by strong growth in thermal and renewable energy but moderated to 6.9 per cent in H2:2022-23. Renewable energy, which accounts for 12.6 per cent of the overall generation, recorded a robust 21.3 per cent growth during H2:2022-23 from that of 17.3 per cent during H1:2022-23. While India missed the renewable energy capacity target of 175 gigawatt (GW) by 2022, the progress made so far is commendable as the installed capacity of renewable energy (excluding hydro), increased by 81.3 per cent between 2017-18 and 2022-23 making the share of renewables[5] (excluding hydro) in total installed capacity rise to 30.1 per cent in March 2023. The share of renewable sources in total power generation has also been rising consistently from 7.2 per cent in the quarter-ended September 2015 to 12.6 per cent in the quarter-ended March 2023 (Chart II.2.15).

II.2.26 The outstanding overdues of the electricity distribution companies (DISCOMs) owed to electricity generation companies (GENCOs) is a major issue plaguing the power sector in India. To address this, the government had introduced the late payment surcharge (LPS) scheme in May 2022, under which all dues to power generator till June 3, 2022 are being liquidated in up to 48 instalments. Accordingly, the total outstanding

Chart II.2.15: Renewable Power Generation



GWh: Gigawatt hours.
Source: Central Electricity Authority.

dues by DISCOMS came down considerably to ₹58,231 crore as on March 1, 2023 from ₹1,00,018 crore on May 18, 2022.

Services Sector

II.2.27 Services sector, which being contact-intensive faced the major brunt of COVID-19 pandemic, revived strongly in 2022-23. The high frequency indicators of services sector indicated strong growth in Q1:2022-23 supported by low base, but the momentum moderated in Q2 and Q3. In Q4:2022-23, three-wheeler sales, air passenger traffic and GST E-way bills improved while sales of passenger vehicles and construction sector moderated. Among sectors, construction, domestic trade and transport surpassed their pre-pandemic levels, while aviation, tourism and hospitality sectors, though recovering, are yet to reach the respective pre-pandemic levels (Table II.2.5).

[5] Government in March 2019 included hydro power under renewables. Prior to that only small hydro projects with less than 25 MW capacity were considered as renewables. If large hydro projects are included, the renewable share in installed capacity reaches 40.1 per cent.

Table II.2.5: High Frequency Indicators - Growth Rate

(Per cent, y-o-y)

Indicators	2021-22				2022-23			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	2	3	4	5	6	7	8	9
Urban Demand								
Automobiles Sales	108.5	-10.2	-23.2	-19.3	51.4	16.9	10.0	8.7
Passenger Vehicles Sales	317.7	-2.1	-20.2	-6.1	33.9	34.4	21.4	10.7
Agriculture / Rural demand								
Domestic Sales of Tractors	38.9	-10.6	-13.5	-25.7	15.8	4.8	10.5	18.7
Two-wheelers Sales	85.7	-12.3	-24.8	-22.4	54.4	13.6	7.2	6.7
Three-wheelers Sales	92.0	52.0	12.5	-4.0	210.9	71.2	68.2	84.4
Transport								
Vahan Total Registration	78.0	11.6	-9.5	-8.5	61.5	1.3	18.8	14.8
Domestic Air Passenger Traffic	371.1	108.5	61.5	6.7	206.2	64.1	18.5	52.2
International Air Passenger Traffic	328.0	110.4	138.5	80.8	403.3	263.9	98.1	93.6
Domestic Air Cargo	201.9	27.2	2.5	-4.4	32.1	9.9	-3	2.3
International Air Cargo	118.6	24.8	15.4	2.0	-1.7	-3.8	-11	-2.8
Freight Traffic Net Tonne Kilometre	52.8	16.6	14.1	11.1	19.4	14.5	3.7	4.7
Freight Traffic Freight Originating	40.5	12.8	7.3	7.0	11.8	8.4	3.2	3.7
Port Cargo*	26.8	6.1	1.8	-0.9	9.2	12.8	5.2	12.0
Domestic Trade								
GST E-way Bill	97.9	27.5	10.8	9.2	45.6	20.1	17.2	18.1
GST E-way Bill Intra-State	87.5	25.5	11.7	11.2	46.6	23.8	23.6	22.3
GST E-way Bill Inter-State	117.4	30.7	9.6	6.2	43.8	14.6	7.4	11.4
GST Revenue	81.9	28.2	20.3	15.9	34.5	27.5	14.2	12.6
Construction								
Steel Consumption	104.3	1.7	-6.4	-1.6	9.8	13.0	13.3	12.3
Cement Production	55.9	22.5	8.7	9.0	17.3	4.9	9.8	3.6
Tourism and Hospitality								
Hotel Occupancy Rate	71.9	118.4	56.0	0.3	140.0	21.1	13.5	32.2
Foreign Tourist Arrivals	786.7	363.6	280.7	131.7	895.4	496.5	209.5	222.4

← Contraction Expansion →

*: For Q4: 2022-23, data are for January-February 2023 as per the availability.
Source: SIAM, Anarock, CMIE, Airports Authority of India, Joint Plant Committee, and CEIC.

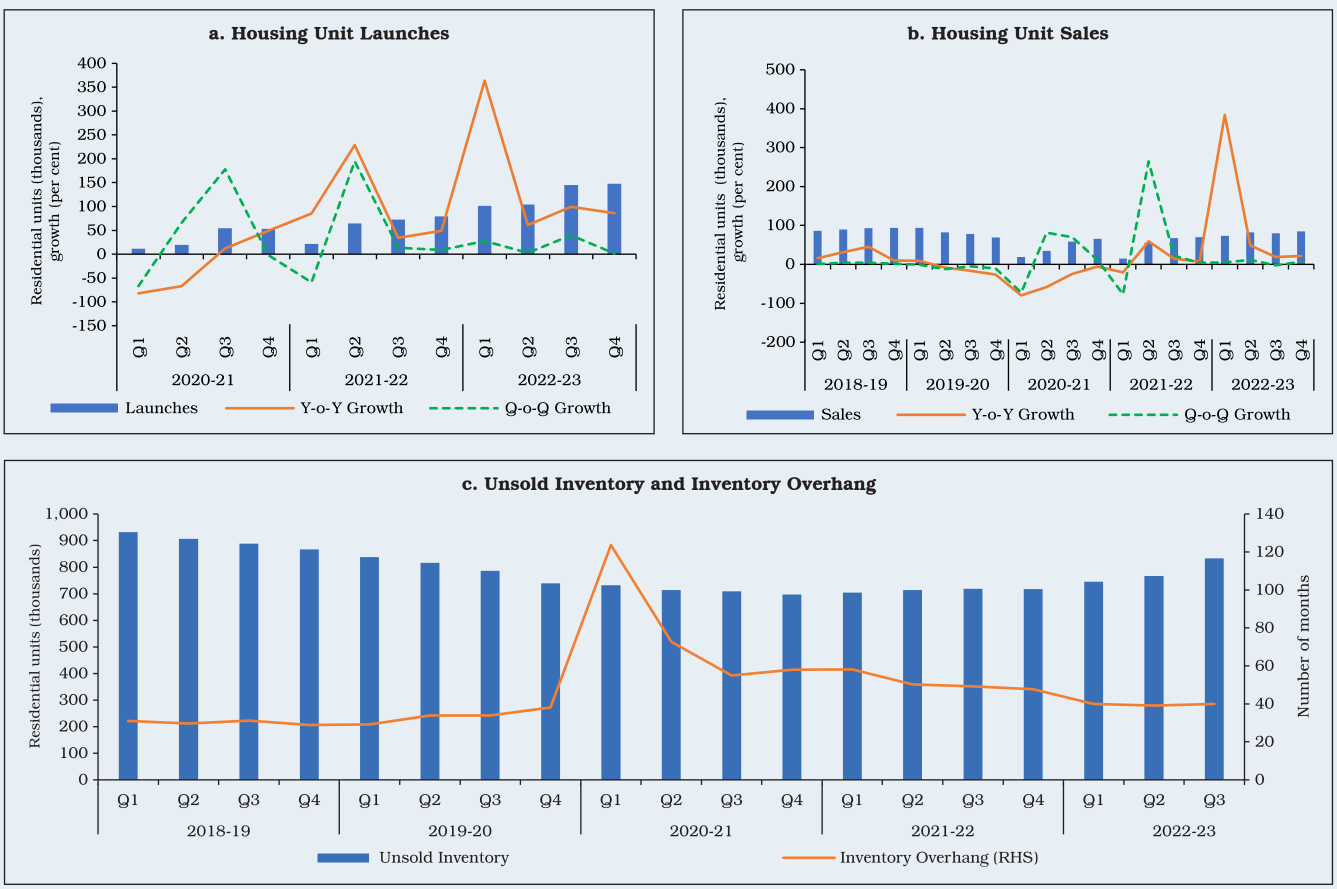
II.2.28 The construction sector remained upbeat due to sustained impetus on infrastructure spending by the government. After a robust performance in the pandemic afflicted years, the information technology sector moderated in 2022-23, with companies recording a decline in profits due to a slowing global economy. The hospitality sector bounced back in 2022-23 as demand for leisure and corporate travel boosted activity. In the financial sector, aggregate deposits and bank credit to the commercial sector recorded expansion. Public administration, defence and other services (PADO) remained resilient in 2022-23 primarily on account of a sharp pick up in other services while government expenditure – especially that of the central government remained muted during the year.

II.2.29 Pent-up demand and robust consumer sentiment for home ownership in the aftermath of the pandemic underlay strong recovery in the residential housing sector in 2022-23. In 2022-23, housing launches improved consistently in terms of completed projects after two years of intermittent shutdowns. Housing sales picked up in H1:2022-23 and recovered in Q4 after briefly losing momentum in the third quarter. As launches surpassed sales, unsold inventory increased (Chart II.2.16).

II.2.30 The pandemic boosted digitalisation across sectors. The digital adoption helped sustain economic activity by facilitating quick re-orientation of business operations. Indian technology companies, consisting of 1,08,585 companies, with 30,887 companies having a total funding of US$ 181 billion, as on March 3, 2023, overarchingly rely on the internet ecosystem for their core business activities. India also has the third largest start-up ecosystem in the world with government recognised start-ups rising to 26,542 in 2022 (Chart II.2.17).

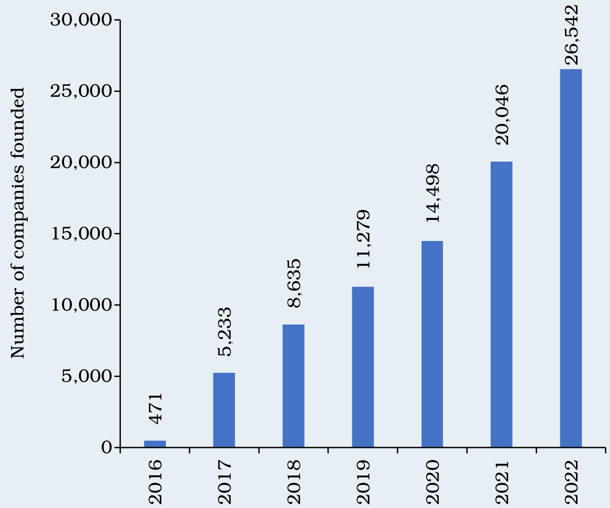
II.2.31 Aviation passenger traffic performed better than cargo traffic in H1:2022-23 and H2: 2022-23,

Chart II.2.16: Real Estate



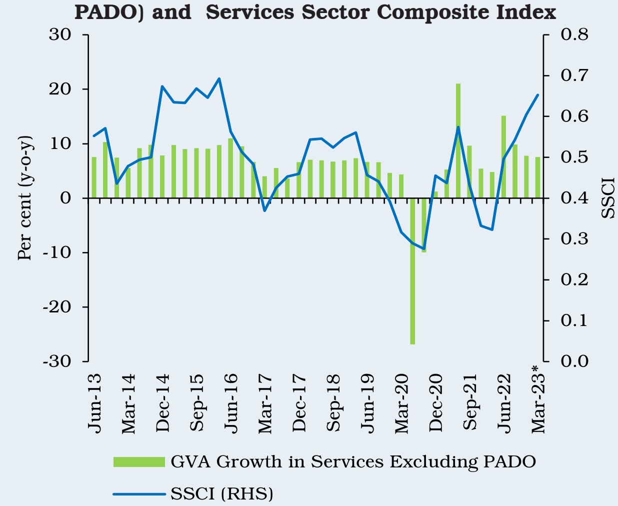
Source: PropTiger.

Chart II.2.17: Indian Start-up Ecosystem - Entrepreneurial Activity in India



Source: Department for Promotion of Industry and Internal Trade (DPIIT), GoI.

Chart II.2.18: Growth in Services Sector (Excluding PADO) and Services Sector Composite Index



*: SSCI for Mar 2023 quarter is based on partial data available. Implicit GVA growth has been used as per the second advance estimates of national income 2022-23.
Source: NSO and RBI staff estimates.

although it remained below pre-pandemic levels. Port cargo remained firm in H1:2022-23 but moderated in subsequent quarters as international trade decelerated. GST E-way bills, GST revenues and railway freight collection exhibited buoyant momentum in 2022-23 (Table II.2.5).

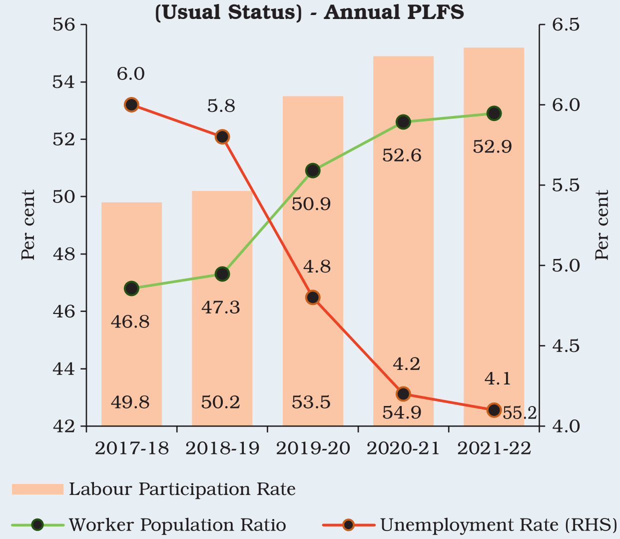
II.2.32 The Reserve Bank's services sector composite index (SSCI)[6], which tracks activity in construction, trade, transport and financial services and is a coincident indicator of GVA growth in the services sector excluding PADO, witnessed a further uptick in Q4:2022-23 (Chart II.2.18).

4. Employment

II.2.33 The labour market indicators from the annual periodic labour force survey (PLFS) suggest a declining trend in the unemployment rate amid rising labour force participation rate during 2021-22 (Chart II.2.19).

II.2.34 As per the quarterly PLFS, the labour market conditions in urban areas have shown consistent improvement during 2022-23. Labour force participation during Q3:2022-23 surpassed

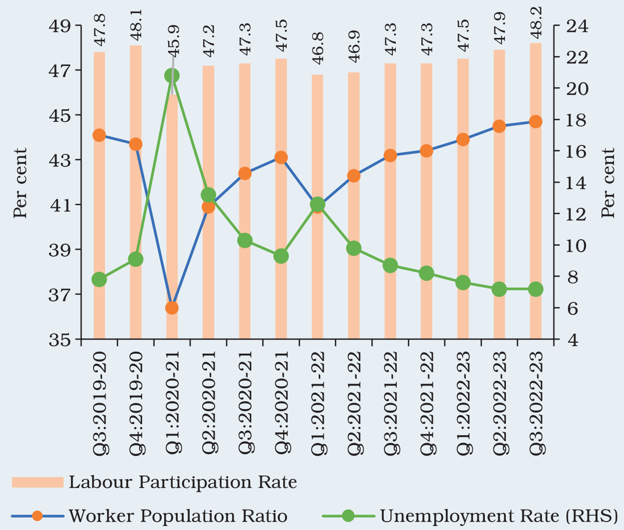
Chart II.2.19: Labour Market Indicators (Usual Status) - Annual PLFS



Note: 1. Annual period for labour market pertains to July – June.
2. Data pertain to '15 years and above' age group.
Source: MOSPI, GoI.

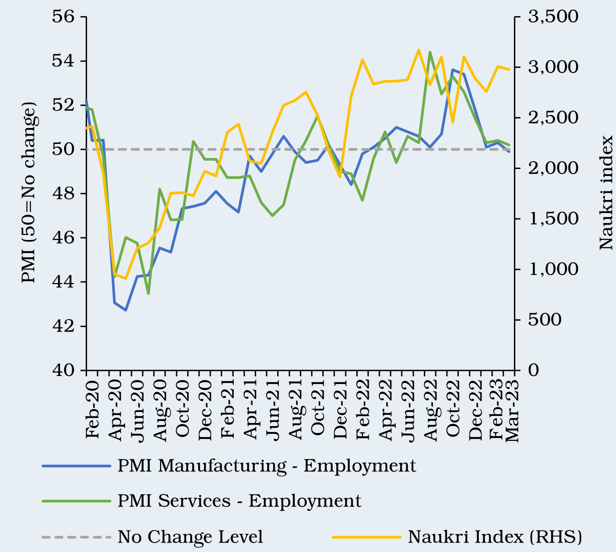
[6] SSCI is constructed by suitably extracting and combining the information collected from high frequency indicators, namely, steel consumption, cement production, cargo handled at major ports, sale/production of commercial vehicles, railway freight traffic, air passenger/ freight traffic, tourist arrivals, non-oil imports, bank credit and deposit.

Chart II.2.20: Quarterly Labour Market Indicators - Urban Areas



Source: MOSPI, GoI.

Chart II.2.21: Alternate Employment Indicators



Source: IHS Markit, Monster.com and Naukri.com.

the pre-pandemic January-March 2020 level. Worker to population ratio peaked during October-December 2022 and the unemployment rate stood at its lowest since the start of the survey in 2017-18 (Chart II.2.20).

II.2.35 Organised sector employment, as measured by payroll data, indicated recovery in job creation in 2022-23. The average net subscribers added to Employees' Provident Fund Organisation (EPFO) per month increased to 11.5 lakh in 2022-23 from 10.2 lakh in 2021-22, signalling an improvement in formal employment opportunities.

II.2.36 The various alternate employment indicators also showed steady improvement in employment conditions during 2022-23. The purchasing managers' index (PMI) for employment showed continued uptick in payroll hiring in both manufacturing and services sector. The employment index remained above 'no change' level of 50 for the manufacturing sector all through 2022-23 except for a marginal contraction in March 2023, while for services, it was positive for the entire period except for a marginal decline in May 2022. Similarly, the *Naukri* index which provides information on hiring activity based on the job listings on Naukri.com has also showed improvement in employment conditions during 2022-23 (Chart II.2.21).

5. Conclusion

II.2.37 India exhibited robust growth in 2022-23 amidst prevailing global headwinds. Sound domestic macro-fundamentals, fiscal policy thrust on capex, healthy balance sheets of the corporate sector and the financial sector, and structural reforms announced and implemented over the recent years by the government have strengthened resilience of the economy, besides stepping up the growth momentum. Subdued external demand conditions operated as a drag. Labour market conditions normalised, and unorganised sector activity returned to expansion zone in 2022-23. The universal vaccination programme of the government - one of the largest mass vaccination drives in the world, involving more than two billion doses - helped in improving consumer and business confidence.

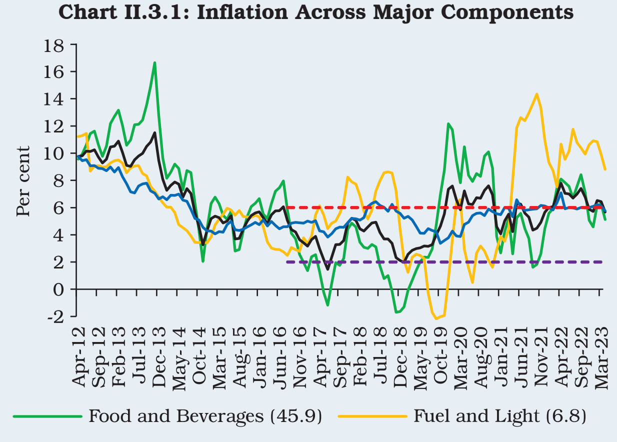
II.3 PRICE SITUATION

II.3.1 Inflation surged across advanced economies (AEs) and emerging market and developing economies (EMDEs) to multi-decadal highs in 2022, primarily driven by the soaring food and energy prices amidst renewed supply disruptions following the war in Ukraine, tighter labour market conditions in AEs, firming up of growth momentum from pandemic time lows and volatility of financial markets in EMDEs resulting from spillovers from the aggressive tightening of monetary policy by the US Fed. Globalisation of inflation, and the realisation that the price pressures are not transitory, led to synchronised tightening of monetary policy, with an emphasis on front-loading to ensure a soft landing.

II.3.2 Global commodity prices soared during the first half of 2022, driven by lingering post-COVID supply constraints, which got exacerbated by the war in Ukraine leading to global shortages in key food, energy and other commodities. The World Bank energy price index increased by 54.4 per cent over December 2021 to reach a peak in June 2022, while food prices increased by 24.9 per cent to reach a peak in May 2022 and metals and minerals by 21 per cent to a peak in March 2022. Subsequently, however, commodity prices underwent sharp corrections with the energy price index falling by 40.4 per cent in March 2023 over June 2022 levels. Similarly, food prices declined by 15.3 per cent and metals and minerals by 23.3 per cent from their respective peaks. Notwithstanding notable decline in global commodity prices in the later part of 2022 and early 2023, heightened geopolitical uncertainty, financial market volatility, re-emergence of another COVID-19 wave in some countries and the associated supply chain disruptions sustained the price pressures, limiting the pace of disinflation despite significant tightening of monetary policy.

II.3.3 In India, headline inflation[7] remained above the upper tolerance level of the inflation target over the successive months during January-October 2022. After a short-lived moderation in November and December 2022, driven by seasonal easing in food prices, inflation increased again in January-February 2023 before moderating in March 2023. Inflation reached a peak in April 2022 at 7.8 per cent driven by a sharp increase in inflation in all the three major groups - food, fuel and core (*i.e.,* excluding food and fuel) inflation - on continued supply disruptions, rise in global commodity prices and currency depreciation, the common adverse global shocks for EMDEs associated with the war in Ukraine (Chart II.3.1). Subsequently,

Chart II.3.1: Inflation Across Major Components



Note: Figures in parentheses indicate weight in CPI-Combined. April and May 2020 data were imputed by the NSO.
Source: NSO and RBI staff estimates.

[7] 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 (MoSPI), Government of India (GoI).

Table II.3.1: CPI Headline Inflation – Key Summary Statistics

(Per cent)

Item	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
1	2	3	4	5	6	7	8	9	10	11
Mean	9.4	5.8	4.9	4.5	3.6	3.4	4.8	6.2	5.5	6.7
Standard deviation	1.3	1.5	0.7	1.0	1.2	1.1	1.8	1.1	0.9	0.7
Skewness	-0.2	-0.1	-0.9	0.2	-0.2	0.1	0.5	-0.7	-0.1	-0.1
Kurtosis	-0.5	-1.0	-0.1	-1.6	-1.0	-1.5	-1.4	-0.7	-1.0	-0.6
Median	9.5	5.5	5.0	4.3	3.4	3.5	4.3	6.5	5.6	6.7
Maximum	11.5	7.9	5.7	6.1	5.2	4.9	7.6	7.6	7.0	7.8
Minimum	7.3	3.3	3.7	3.2	1.5	2.0	3.0	4.1	4.2	5.7

Note: Skewness and Kurtosis are unit-free. Annual inflation is the average of the monthly inflation rates during the year and therefore, may vary from the annual inflation calculated from the average index for the year.
Source: NSO and RBI staff estimates.

normalisation of supply chain pressures, easing of input cost pressures led by decline in global commodity prices, proactive supply management measures by the government and judicious monetary policy actions by the Reserve Bank softened the price pressures, bringing inflation to below the upper tolerance level in November and December 2022, before it surged again in January-February 2023 due to larger than expected price build-up in cereals. Core inflation generally remained elevated and sticky during the year, reflecting gradual pass-through of input cost pressures to goods inflation and subtle uptick in services inflation.

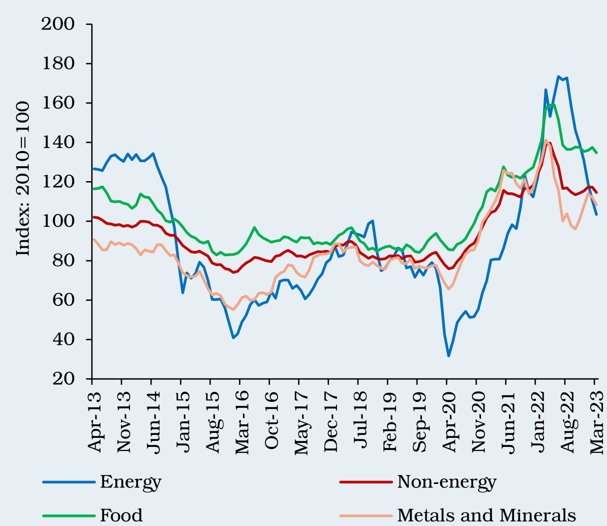
II.3.4 Average inflation in 2022-23 increased sharply from its level in 2021-22, while volatility in inflation, as measured by the standard deviation of the consumer price index (CPI) inflation, was marginally lower than a year ago (Table II.3.1). Further, the intra-year distribution of inflation showed a negative skewness reflecting higher than the average inflation prints in many months.

II.3.5 Against this backdrop, sub-section 2 assesses developments in global commodity prices and inflation. Sub-section 3 discusses movements in headline inflation in India including major turning points, followed by a detailed analysis of its primary constituents in sub-section 4. Other indicators of prices and costs are analysed in sub-section 5, followed by concluding observations.

2. Global Inflation Developments

II.3.6 The spike in commodity prices in Q1:2022-23 was primarily led by energy, food and fertiliser, following the war in Ukraine and recovering global demand (Chart II.3.2). Global crude oil prices rose sharply in Q1:2022-23, reaching a peak of US$ 117 per barrel in June 2022. Notwithstanding the decision by the organisation of the petroleum

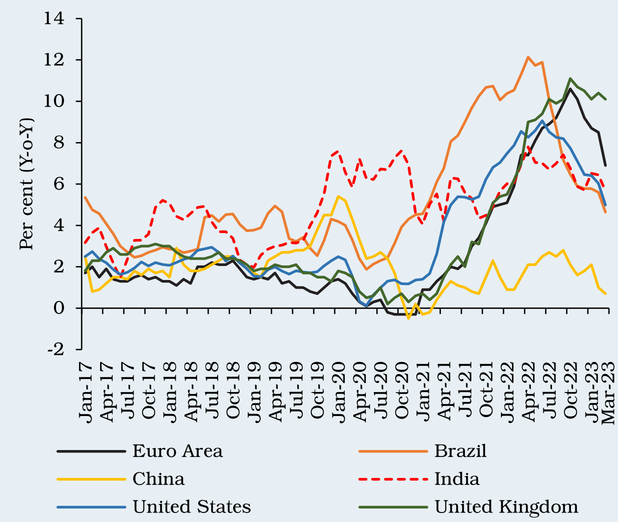
Chart II.3.2: International Commodity Prices



Source: World Bank Pink Sheet Database.

exporting countries (OPEC) and their allies (OPEC+) to reduce their production target by 2 million barrels per day in October 2022, easing of supply constraints and synchronised tightening of monetary policy that posed the risk of a global recession led to a sharp correction in crude oil prices to US$ 76.5 per barrel in March 2023 (*i.e.*, a correction of 34.5 per cent from the June 2022 peak). Natural gas prices peaked in August 2022 reflecting the conflict induced supply constraints faced by Europe but eased significantly by March 2023 in response to a milder winter and energy conservation measures in the European Union (EU). Metal prices witnessed sharp decline beginning 2022-23 as global growth slowed and demand moderated. While international food prices moderated from the May 2022 peak with easing supply conditions in edible oils and grains, they remained above the pre-conflict level due to decline in production on adverse weather conditions in major producing countries and trade restrictions. Moreover, higher natural gas and coal prices affected fertiliser production, pushing up their prices and consequently the input costs for food crops. Reflecting these global commodity price developments, consumer price inflation surged in both AEs and EMDEs, warranting synchronised monetary policy tightening during the year (Chart II.3.3).

Chart II.3.3: Inflation Across Countries

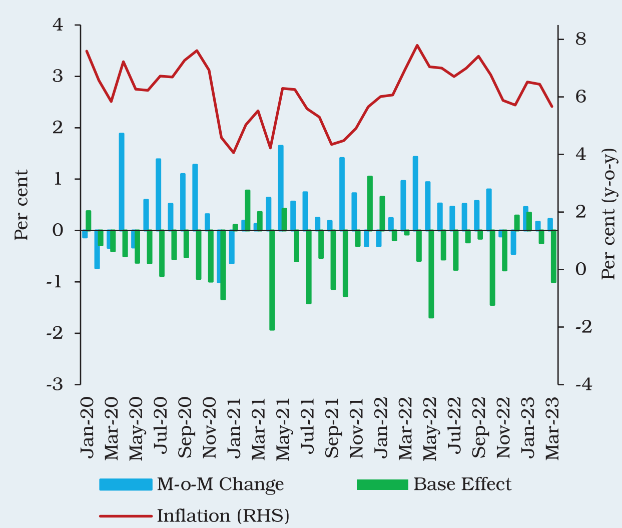


Source: CEIC.

3. Inflation in India

II.3.7 CPI headline inflation in India remained above the upper tolerance level of 6 per cent for 10 successive months since January 2022, before moderating during November-December on seasonal easing in food prices. Inflation picked up again in January-February 2023 before easing to 5.7 per cent in March 2023 (Chart II.3.4). The pick-up in headline inflation during the year was broad-based resulting from pass-through of higher global commodity prices (crude oil, metals and food prices) and adverse domestic weather conditions. After reaching a peak in April 2022 following the war in Ukraine, inflation eased with gradual improvement in global supply conditions, record domestic food production, targeted supply side measures undertaken by the government

Chart II.3.4: Movements in Headline Inflation



Note: April and May 2020 data were imputed by the NSO.
Source: NSO and RBI staff estimates.

including excise duty cuts on petrol and diesel along with lower import duties and imposition of export restrictions on some inflation sensitive agricultural items. Cumulative tightening of policy repo rate by 250 basis points (bps) during May 2022-February 2023 also aided in containing price pressures in the second half of 2022-23 (Box II.3.1).

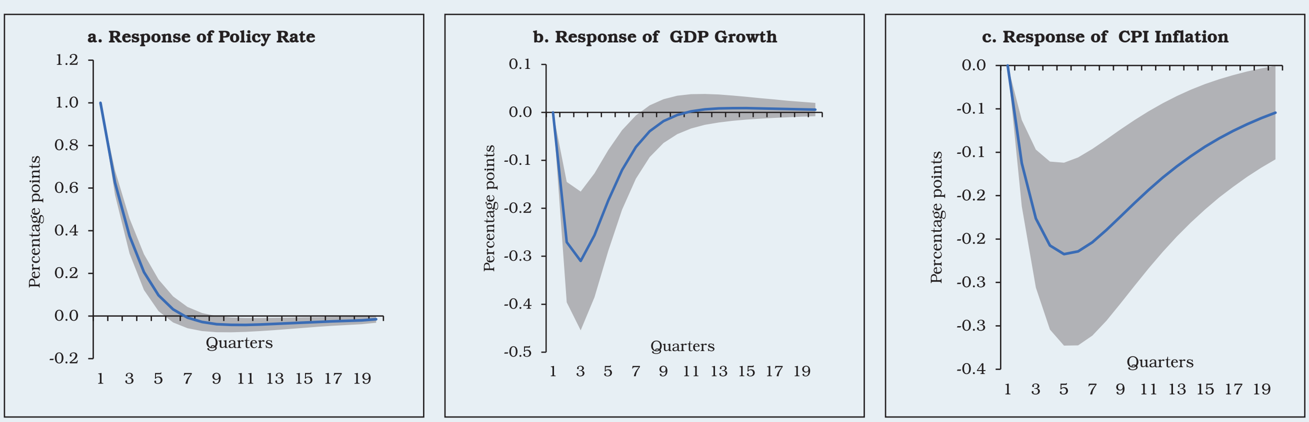
Box II.3.1
Monetary Policy and Disinflation

To tame inflation and bring it within the tolerance band as the immediate priority, the Reserve Bank raised the policy repo rate cumulatively by 250 bps between May 2022 and February 2023 while shifting policy stance to withdrawal of accommodation.

To assess the effectiveness of monetary tightening, a four variable VAR model is used with year-on-year (y-o-y) growth in real GDP, CPI (excluding food and fuel) inflation (y-o-y), gross fiscal deficit (GFD) of the central government as per cent of GDP and policy interest rate as the key variables. This is estimated for the period Q1:1998-99 to Q4:2021-22, controlling for the COVID-19 pandemic shock through a dummy variable. The impulse response results suggest a statistically significant response of growth and inflation to monetary policy shock (Chart 1). A one percentage point (pp) rise in the policy rate leads to a peak impact of 30 bps fall in GDP growth in the third quarter with the impact lasting up to the 8th quarter. The impact on inflation operates with a higher lag, with the peak impact of 22 bps materialising in the 5th quarter, and persisting for a longer time period, even beyond four years.

Using the same VAR model, a policy response experiment is conducted to assess the importance of timely and front-loaded monetary policy actions, following Cho and Moreno (2006). The counterfactual exercise is undertaken with Q1:2022-23 as the starting point and assessing the impact up to eight quarters to account for monetary policy transmission lags under three scenarios: (a) no policy change or maintaining repo rate at 4 per cent for the whole period; (b) increase in policy repo rate by 100 bps only once in Q1:2022-23; and (c) a tightening of policy as under the current scenario, *i.e.*, an increase in repo rate by 250 bps until February 2023. The simulation results from this exercise suggest that under the no policy change scenario, inflation would have remained above 6 per cent throughout, reaching a peak of 7.3 per cent by the end of 8th quarter (Chart 2). Under the second scenario, inflation would have been lower by about 25 bps as compared to the no policy change scenario. However, under the current tight monetary policy (scenario c), inflation is estimated to have eased by more than 50 bps as compared to a rise in inflation of about 90 bps under policy repo rate left unchanged at 4 per cent. The efforts to control inflation by maintaining current policy stance might have sacrificed growth by about 65 bps. The significance of front-loaded policy action is evident from the fact that inflation would have been higher by 90 bps without the cumulative

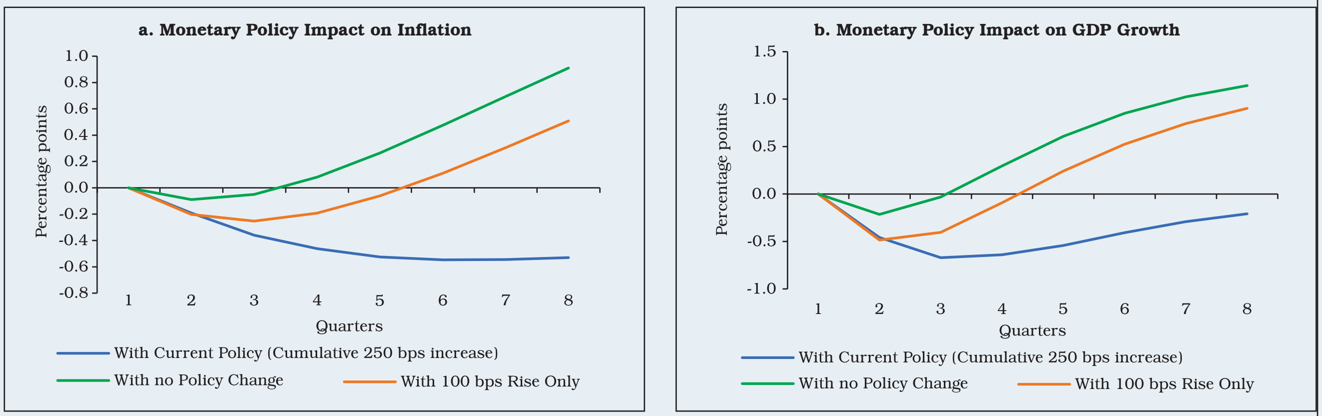
Chart 1: Impulse Response to One Percentage Point Increase in Policy Rate



Source: RBI staff estimates.

(Contd.)

Chart 2: Impact of Monetary Policy on GDP Growth and Inflation



Source: RBI staff estimates.

increase in the repo rate by 250 bps, whereas with only one-off 100 bps increase in the repo rate, inflation would have been lower by only 25 bps.

Reference:

Cho, S., and Moreno, A. (2006), 'A Small-sample Study of the New-Keynesian Macro Model, '*Journal of Money, Credit and Banking'*, Vol. 38, Issue 6, 1461-1481.

II.3.8 Inflation in food and beverages was the primary source of headline inflation build up, with its contribution to headline inflation increasing to 46.4 per cent in 2022-23 from 35.9 per cent in the previous year. Higher global food prices, supply shortages and adverse domestic weather conditions led to the pick-up in food prices, driven by cereals, vegetables, milk and spices.

II.3.9 Inflation in fuel and light averaged at 10.3 per cent in 2022-23, driven by a sharp pick-up in prices of kerosene and liquefied petroleum gas (LPG) which, in turn, reflected the impact of rise in global energy prices following the war in Ukraine. After remaining in deflation until October 2022, electricity prices recorded an inflation of 3.1 per cent in November 2022 due to unfavourable base effect and increase in tariffs in a few states.

II.3.10 Inflation excluding food and fuel, or core inflation, remained persistently elevated at around 6 per cent during the year. The price pressures were broad-based, reflecting pass-through of input cost pressures and recovering domestic demand (Box II.3.2). A combination of factors - supply shocks, recovering demand, inflation expectations, exchange rate depreciation, fiscal stance - impacted the inflation trajectory (RBI, 2023)[8]. After a sharp pick-up in April 2022, however, price pressures moderated to some extent, aided by supply side measures by the government, including excise duty cuts in petrol and diesel effected on May 22, 2022. The main drivers of the ascent in core inflation were clothing and footwear, housing, transport and communication, health, household goods and services, and recreation and amusement.

II.3.11 During 2022-23, headline inflation averaged 6.7 per cent, 115 bps higher than a year ago (Appendix Table 4).

[8] RBI (2023), 'A Recalibrated Quarterly Projection Model (QPM 2.0) for India', RBI Bulletin, February.

Box II.3.2
Recent Inflation Dynamics in India – Role of Supply *vis-à-vis* Demand

Distinguishing between the role of demand and supply in driving inflation is critical to guide the conduct of monetary policy in managing the difficult growth-inflation trade-offs. As the persistence of supply shocks raise the risks of high inflation with suppressed economic growth (Shapiro, 2022a), it is imperative to understand the relative contribution of supply shocks driving inflation.

In the literature, matching price and volume data from personal consumption expenditures (PCE) as in the case of the US (Shapiro, 2022a and 2022b) and quarterly national accounts data for household consumption expenditure (where matching price and volume data are not available) [OECD, 2022] have been used to distinguish between demand and supply shocks. This is done by identifying the direction of price and volume shocks for different items by running a bi-variate vector auto regressive (VAR) model on a rolling window and interpreting their residuals. Price and volume residuals with the same signs are assumed to reflect demand – higher demand pushes up both prices and volumes in the same direction and *vice versa* – while residuals with opposite signs correspond to supply shocks – lower supply means a reduction in volume with an increase in price.

As matching prices and volume data are not available for the CPI items for India, the 23 CPI sub-groups data on prices are mapped to CMIE (Centre for Monitoring Indian Economy) CPHS (Consumer Pyramid Expenditure Survey) consumption expenditure data.[9] Next, the CMIE CPHS expenditure categories are deflated by the corresponding CPIs to derive a proxy for volume. To get a homogeneous base, these 23 mapped CPI sub-groups and corresponding CMIE CPHS expenditure categories are rebased to January 2014=100 and then de-seasonalised. The sample period for the analysis is January 2014 to December 2022 based on CMIE CPHS data. In line with OECD, 2022, a two-equation VAR model for prices and quantities is run for a 5-year rolling window as follows:

$$P_{i,t} = z_{i,t-1}\,\gamma + \varepsilon^{p}_{i,t} \qquad \text{...(1)}$$

$$Q_{i,t} = z_{i,t-1}\,\gamma + \varepsilon^{q}_{i,t} \qquad \text{...(2)}$$

where $P_{i,t}$ and $Q_{i,t}$ are the log values of the price and quantity indices, respectively, of category *i* in month *t* and $z_{i,t-1}$ is a vector of lags of the log price and log quantity indices of category *i* in month *t* and $\varepsilon^{p}_{i,t}$ and $\varepsilon^{q}_{i,t}$ are the price and quantity residuals for category *i* in month *t*.

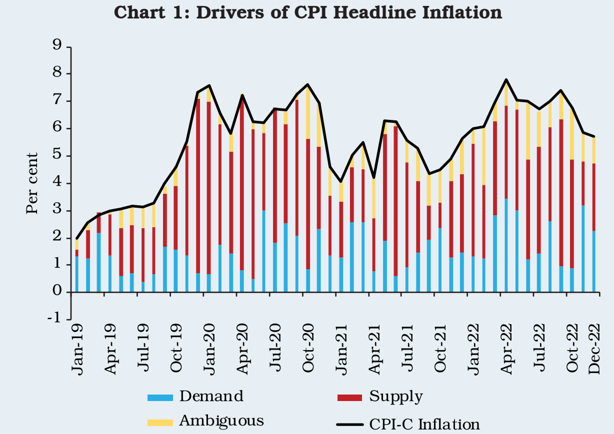
The one-period ahead forecasts of both price and quantity are generated for each of the 23 matched categories and compared with their actual values.

These 23 sub-groups are categorised each month during January 2019-December 2022 into demand, supply and ambiguous[10] components, after which the CPI weights of these sub-groups are used to calculate their contributions to CPI inflation. These contributions to CPI inflation are then aggregated into demand driven, supply driven and ambiguous components to quantify the extent of demand and supply driven inflation. The results show that vegetables, milk, pulses, oils and fat, sugar, egg, and meat and fish within the food group experience frequent supply-side pressures, while non-alcoholic beverages, health, household goods and services and recreation and amusement are mainly impacted by demand side factors. Overall, the average contributions of demand side factors to inflation, which was 35.2 per cent in 2019, dropped during the COVID-19 shock to 24.6 per cent in 2020, and then recovered gradually to 31.8 per cent in 2021 and 30.5 per cent in 2022. During excess rain induced supply shocks in October-November 2019 as well as during different phases of COVID-19, supply side factors became predominant. On an average, supply side factors contributed around 55 per cent to CPI headline inflation during the entire sample period (Chart 1).

(Contd.)

9 The expenditure shares derived for different sub-groups from CMIE CPHS data are comparable to CPI weights for most of the sub-groups except housing rentals.

10 If the signs of the residuals for forecasted price and quantity are same, it is interpreted as demand driven and if it is opposite in sign, it is interpreted as supply driven. Further, if either of the actual values is close enough to its predicted value (residual is statistically indistinguishable from zero), *i.e.*, if unexpected change in price or quantity lies between the 45th and 55th percentiles of the residuals in each rolling 5-year window, the category is classified as ambiguous.



Source: NSO, CMIE and RBI staff estimates.

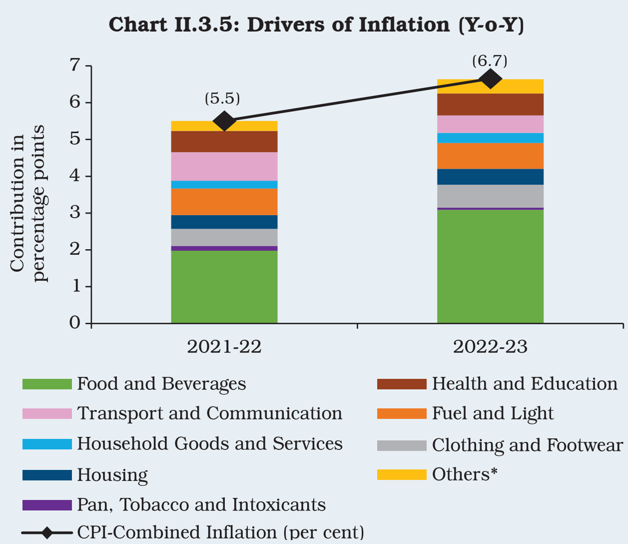
Post the war in Ukraine, besides the supply side factors, the role of demand side factors in driving inflation has also increased, reaching around 42.5 per cent during March-May 2022 and 54.2 per cent in November 2022 led by a pick-up in festive demand. This empirical finding supports timely introduction of monetary tightening phase in May 2022, and its continuation through the year with a cumulative increase in the policy repo rate by 250 basis points. Thus, sequencing of the Reserve Bank's policy actions was appropriately timed to judiciously balance the growth-inflation trade-offs.

References:

1. Shapiro, A. H. (2022a), 'A Simple Framework to Monitor Inflation', *Federal Reserve Bank of San Francisco*, Working Paper 2020-29.
2. Shapiro, A. H. (2022b), 'How Much do Supply and Demand Drive Inflation?', *Federal Reserve Bank of San Francisco Economic Letter*, 15.
3. OECD (2022), 'Supply- and Demand-driven Inflation in OECD Economies', *Economic Outlook*, Vol. 2022, Issue 2.

4. *Constituents of CPI Inflation*

II.3.12 During 2022-23, CPI headline inflation was primarily driven by food and beverages, followed by fuel and light, clothing and footwear, health and education and transport and communication (Chart II.3.5).



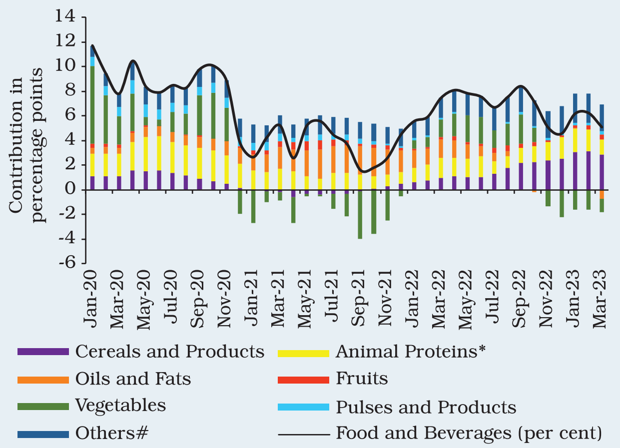
*: Includes recreation and amusement, and personal care and effects.
Note: April and May 2020 data were imputed by the NSO.
Source: NSO and RBI staff estimates.

Food

II.3.13 Inflation in food and beverages (weight: 45.9 per cent in CPI) hovered in a wide range of 4.6 per cent to 8.4 per cent in 2022-23 reflecting a combination of shocks - conflict induced global food and fertiliser price surge, adverse impact of heat wave on domestic *rabi* crop production and elevated farm input cost pressures - and seasonal price behaviour. Increase in the prices of vegetables, animal proteins, and cereals and products were the key drivers of hardening food inflation in the first half, while easing of vegetables and oils and fats prices drove the moderation in inflation in the second half (Chart II.3.6).

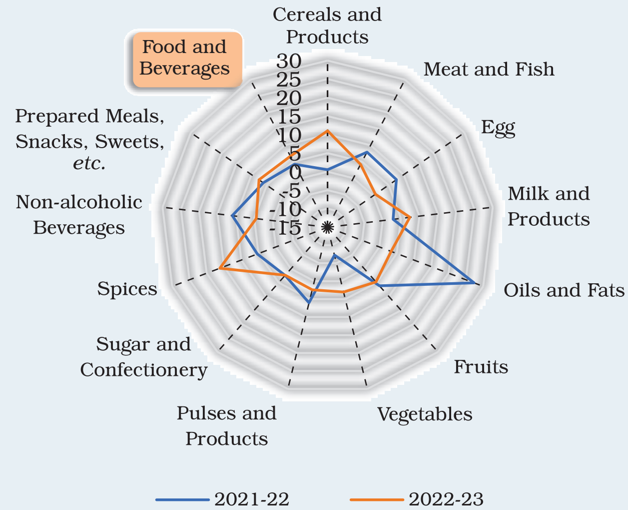
II.3.14 Food and beverages inflation averaged 6.7 per cent in 2022-23 as compared with 4.2 per cent in 2021-22. Within the food group, inflation increased in five sub-groups while it moderated for the remaining seven sub-groups (Chart II.3.7). Prices of cereals, vegetables, milk, prepared meals, snacks, sweets, *etc.* and spices witnessed

Chart II.3.6: 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.
Note: For April 2020, indices for meat and fish and prepared meals, *etc.* and for May 2020 index for prepared meals, *etc.* were imputed by the NSO.
Source: NSO and RBI staff estimates.

Chart II.3.7: Inflation in Major Food Sub-groups



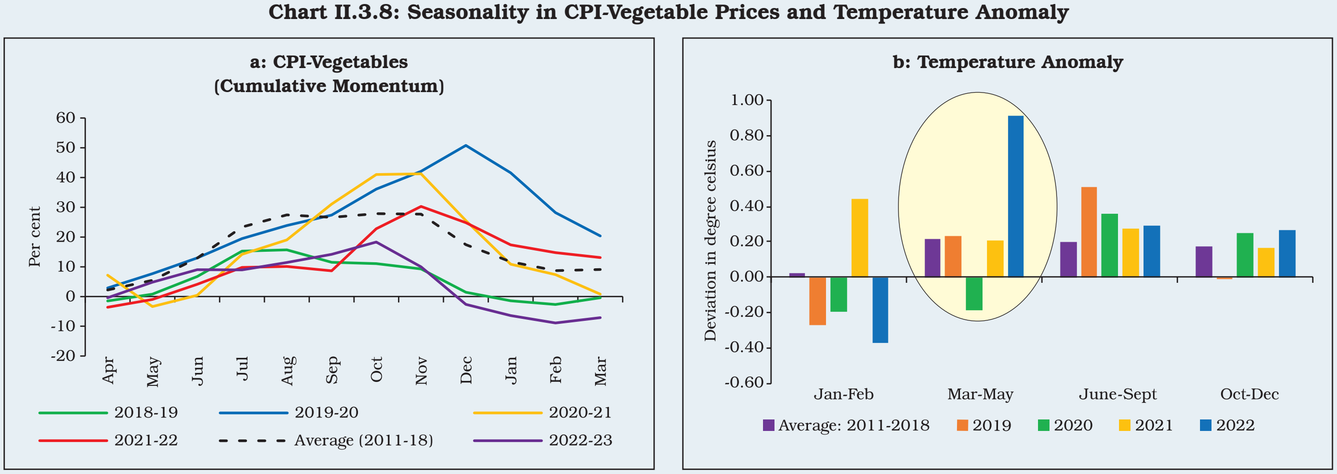
Source: NSO and RBI staff estimates.

higher inflationary pressures during a major part of the year, driving up overall food inflation.

II.3.15 Early onset of summer, heat waves and excess rains pushed up vegetable prices (weight: 13.2 per cent in CPI-Food and beverages) in H1:2022-23 which ebbed with fresh crop arrivals in November 2022 (Chart II.3.8a and II.3.8b). As a result, after rising till October 2022, the cumulative momentum of vegetable prices moderated sharply in November and turned negative since December 2022, recording an average inflation of 3.0 per cent during the year 2022-23.

II.3.16 Onion prices moderated during April-May 2022 on account of robust *rabi* harvest [an increase of 17.4 per cent in 2021-22 as per the 3rd advance estimates (AE) over 2020-21 final estimates (FE)] and record procurement of 2.5 lakh tonne by the Centre for price stabilisation buffer

Chart II.3.8: Seasonality in CPI-Vegetable Prices and Temperature Anomaly



Note: For chart b, temperature anomaly is defined as deviation from 30-year average (1981 to 2010).
Source: NSO, EnviStats India 2022, Ministry of Statistics and Programme Implementation (MoSPI) and RBI staff estimates.

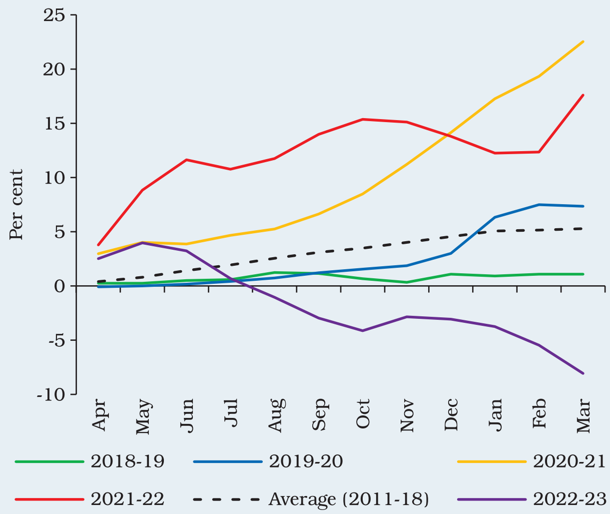
for 2022-23 (higher by 0.5 lakh tonne compared to 2021-22). Price pressures, however, emerged in the subsequent months (barring September 2022) until November 2022 due to seasonal uptick in demand and loss of *kharif* output on account of both deficit and excess rainfall in key *kharif* onion-producing states. Tomato prices exhibited significant volatility in 2022-23 with a sharp summer pick-up during April-June 2022 followed by significant corrections in the next two months and another spell of increase during September-October 2022 owing to vagaries of monsoon. The volatility in the prices was driven by extreme weather events, including heat waves in north India, uneven distribution of monsoon throughout the country and excess rainfall in major producing states of Maharashtra, Andhra Pradesh and Karnataka which led to crop damage and delayed arrivals in the market. Decline in production [(-) 4.0 per cent in 2021-22 3rd AE over 2020-21 FE] also tightened supply in the early part of 2022. Potato prices increased during April-October 2022 (barring September) on account of lower production [(-) 5.0 per cent in 2021-22 3rd AE over 2020-21 FE], reflecting the impact of unseasonal rains during November-December 2021 and delay in arrivals of fresh crops. The government allowed free import of potato from Bhutan in July 2022 without any licence till June 30, 2023 to restrain positive price pressures. As cold storages released fresh stocks in the market, prices corrected from November 2022 onwards.

II.3.17 Prices of cereals and products (weight of 21.1 per cent in the CPI-Food and beverages) recorded steady growth in 2022-23, primarily driven by increase in rice and wheat prices. Wheat prices firmed up as domestic production declined in 2021-22 [(-) 1.7 per cent as per 2021-22 FE over 2020-21 FE] due to heat waves in major wheat producing states of Punjab and Haryana and decline in stock levels to below the buffer norms intermittently since August 2022. Price pressures were amplified by higher international prices due to global supply shortages which led to higher volume of exports (11.8 per cent year on year during April-November 2022), leading to reduction in domestic supply of wheat. The sharp increase in domestic prices led the government to impose restrictions on wheat exports since May 2022 and later additional curbs on exports of wheat products since August 2022 even as exports under the government-to-government channel continued. Price pressures in rice reflected substitution of wheat distribution under the *Pradhan Mantri Garib Kalyan Anna Yojana* (PMGKAY) by rice along with a rise in volume of exports (by 5.2 per cent, y-o-y, in 2022-23) and decline in estimated *kharif* production [(-) 0.9 per cent in 2022-23 3rd AE over 2021-22 FE]. Supply-side measures by the government - imposition of 20 per cent export duty on non-basmati rice and prohibition of export of broken rice in September 2022 along with robust buffer stocks (which stood at 3.2 times the norm as on April 1, 2023) helped in keeping the price increase range bound.

II.3.18 In the case of animal protein-rich items such as eggs, meat and fish (weight of 8.8 per cent in CPI-Food and beverages), price pressures were seen in meat and fish in Q1:2022-23 due to increase in feed and transportation costs (Chart II.3.9 a). Price pressures moderated subsequently due to a fall in seasonal demand on account of *Sravana* month and approval of an additional import of 0.55 million tonne of genetically modified soybean meal by the government in May 2022. However, price pressures re-emerged in September-October, before moderating thereafter. Egg prices remained volatile and were driven by rising feed costs as well. In the case of milk and products, prices increased throughout the year as major milk co-operatives, *viz., Amul* and *Mother Dairy* revised their retail prices upward by ₹ 2 per litre multiple times during the year citing rising feed cost pressures (Chart II.3.9 b).

II.3.19 Price pressures in oils and fats (weight of 7.8 per cent in CPI-Food and beverages) eased gradually since June 2022 as global prices of edible oils, particularly palm oil, declined sharply (Chart II.3.10). Edible oil prices increased sharply during March-May 2022 on account of a rise in global prices as the Ukraine conflict and imposition of export ban on crude palm oil by Indonesia in April 2022 severely impacted the supply of edible oils in the global market. Moreover, depreciation of the Indian Rupee on the back of high dependence on imports of edible oils also added to the rising domestic prices. The price momentum eased gradually with the softening of global prices, lifting of export ban and removal of export levy till October 31, 2022 by Indonesia. The government also undertook several supply-side measures which included extending zero per cent basic customs duty (BCD) on crude palm oil, sunflower and soybean oil till March 2024, reduction in BCD on refined soybean, and sunflower and palm oil to 17.5 per cent and 12.5 per cent (from 32.5 per cent and 17.5 per cent), respectively, and reduction of import duty on refined palm oil to zero till March 2024. In addition to these, the government also imposed stock limits on edible oils and oilseeds till December 31, 2022 and exempted BCD and agricultural infrastructural development cess (AIDC) on allocated Tariff Rate Quota (TRQ) for import of 20 lakh metric tonne of crude soybean

II.3.10: CPI-Oils and Fats (Cumulative Momentum)

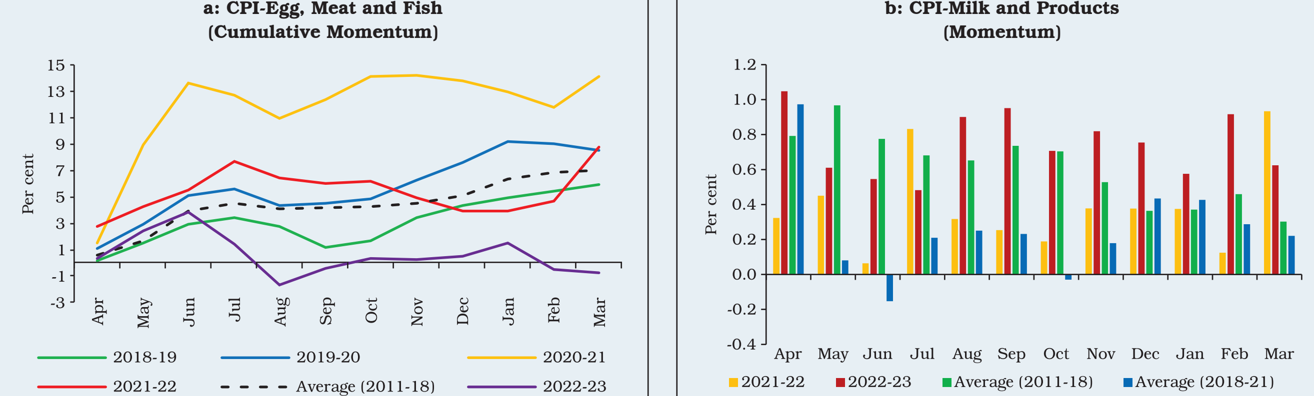


Source: NSO and RBI staff estimates.

Chart II.3.9: CPI - Animal Protein – Seasonality in Prices

a: CPI-Egg, Meat and Fish (Cumulative Momentum)

b: CPI-Milk and Products (Momentum)



Note: For April 2020, index number for meat and fish was imputed by the NSO.
Source: NSO and RBI staff estimates.

oil and sunflower oil for 2022-23. These measures together led to a steady decline in the prices of edible oils.

II.3.20 Inflation in prices of pulses (weight of 5.2 per cent in CPI-Food and beverages) remained muted in 2022-23 on account of extension of imports of *tur* and *urad* under 'free category' till March 31, 2024, extension of zero AIDC on imports of lentils till March 2024 and higher overall production in 2021-22 (Chart II.3.11). But prices increased since August 2022 on account of a decline in estimated *kharif* production of both *tur* and *urad* by 18.7 per cent and 3.2 per cent, respectively, as per 3rd AE of 2022-23 over 2021-22 FE. Recent measures to boost food security, including raising government limit for procurement of *tur, urad* and *masur* from farmers to 40 per cent from 25 per cent and robust sowing of *rabi* crop contained price pressures since October.

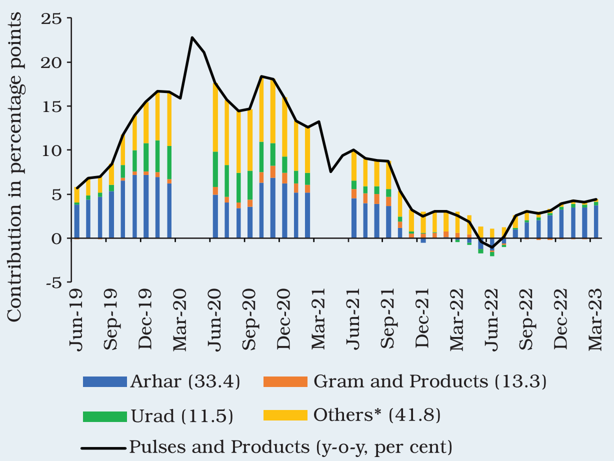
II.3.21 Inflation in fruits (weight of 6.3 per cent in CPI-Food and beverages) remained largely range bound during the year, primarily driven by movements in seasonal fruits prices. Spike in mango prices due to crop damage caused by heat waves and unseasonal rains led to sharp increase in price pressures in April 2022 which tapered off gradually with the increase in arrivals. Inflation in banana, papaya and other fresh fruits, however, remained elevated, driving up fruits inflation during February-March 2023.

II.3.22 Among other food items, spices witnessed double digit inflation throughout the year 2022-23 averaging 16.2 per cent due to overall decline in domestic production [(-) 2.7 per cent as per 3rd AE of 2021-22 over FE 2020-21] in key spices particularly dry chillies, cumin and coriander.

Fuel

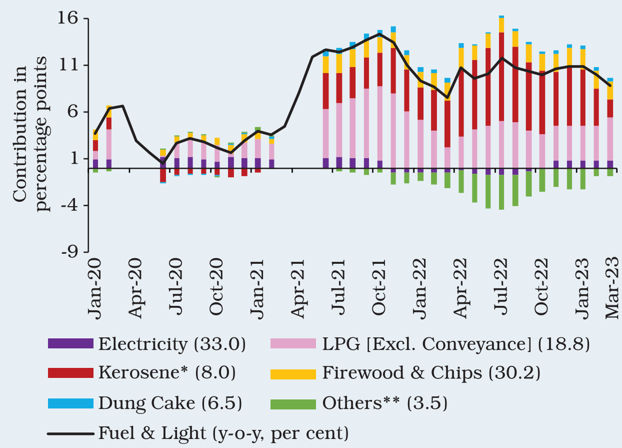
II.3.23 The contribution of the fuel group (weight of 6.8 per cent in CPI) to headline inflation decreased to 10.5 per cent in 2022-23 from 13.1 per cent in the previous year. Fuel inflation remained in double digit for a major part of the year driven by hardening of domestic LPG and kerosene prices in line with sharp increase in international prices (Chart II.3.12 and Chart II.3.13). Nevertheless,

Chart II.3.11: Component-wise Contribution in CPI-Pulses Inflation



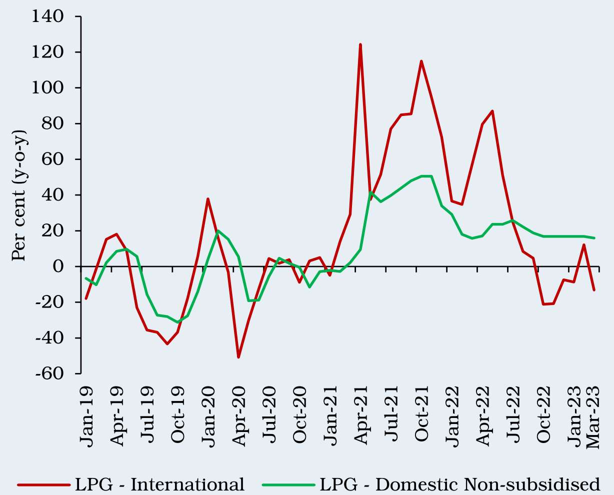
*: Includes *moong, masur*, peas, *khesari*, *besan* and other pulses products.
Note: 1. Figures in parentheses indicate weight in CPI-pulses and products.
2. Item level CPI data were not released by the NSO during March-May 2020.
Source: NSO and RBI staff estimates.

Chart II.3.12: Drivers of Fuel Inflation



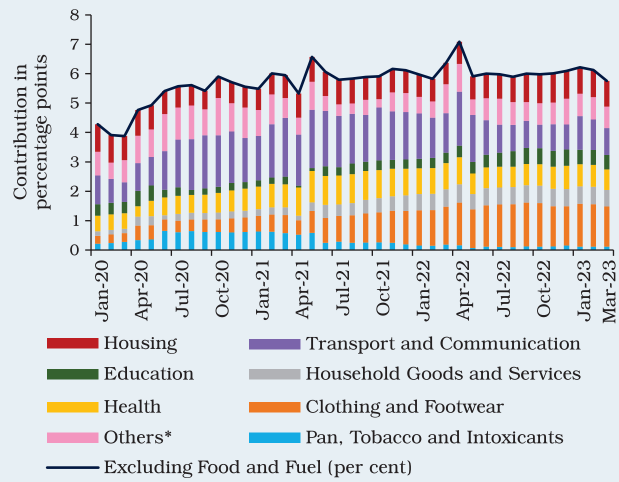
*: Includes kerosene PDS and kerosene from other sources.
**: Includes diesel, coke, coal, charcoal, and other fuel.
Note: 1. Figures in parentheses indicate weight in CPI-Fuel and light.
2. Item level CPI data were not released by the NSO during March-May 2020.
Source: NSO and RBI staff estimates.

Chart II.3.13: Movements in LPG Retail Prices



Note: Domestic non-subsidised LPG prices are the average of prices in four metros (Delhi, Mumbai, Kolkata and Chennai).
Source: Bloomberg and Indian Oil Corporation Limited (IOCL).

Chart II.3.14: Drivers of CPI Excluding Food and Fuel Inflation



*: Includes recreation and amusement and personal care and effects.
Note: April and May 2020 data were imputed by the NSO.
Source: NSO and RBI staff estimates.

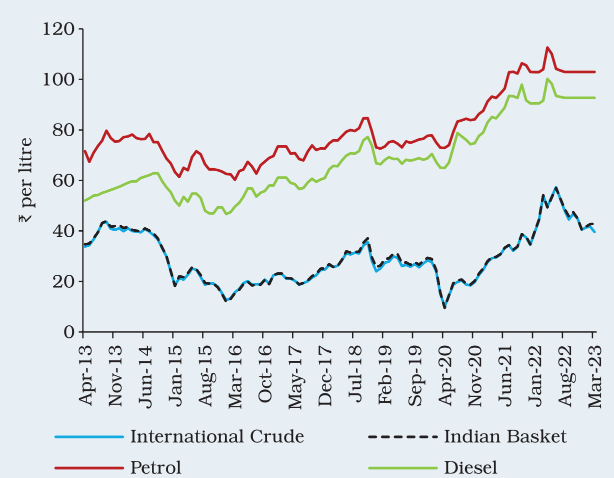
inflation moderated from its intra-year peak of 11.8 per cent in July 2022 as global crude oil prices moderated and price increases in LPG and electricity broadly remained muted.

Inflation Excluding Food and Fuel

II.3.24 Inflation excluding the volatile food and fuel items, *i.e.*, core inflation, picked up to an average of 6.1 per cent in 2022-23 - a marginal increase from 2021-22, with a peak of 7.1 per cent in April 2022 (Chart II.3.14) [Appendix Table 4]. Core inflation remained sticky at around 6 per cent since May 2022 despite the excise duty cuts on petrol and diesel in May 2022, followed by a reduction in value added tax (VAT) by many state governments, with broad-based pressures observed across goods and services.

II.3.25 Among the major constituents, inflation in transport and communication moderated gradually after the sharp spike in Q1:2022-23, reflecting increase in domestic prices of petrol and diesel in line with international prices (Chart II.3.15). Within transport and communication, prices of personal transport vehicles (*viz.,* motor car, motor cycle and bicycle) increased, reflecting gradual pass-through of input costs pressures alongside a recovery in demand, while transport fares also increased with revisions in bus and taxi fares following the rise in the prices of petrol and diesel. Inflation in the health sub-group remained

Chart II.3.15: Oil Price Trends



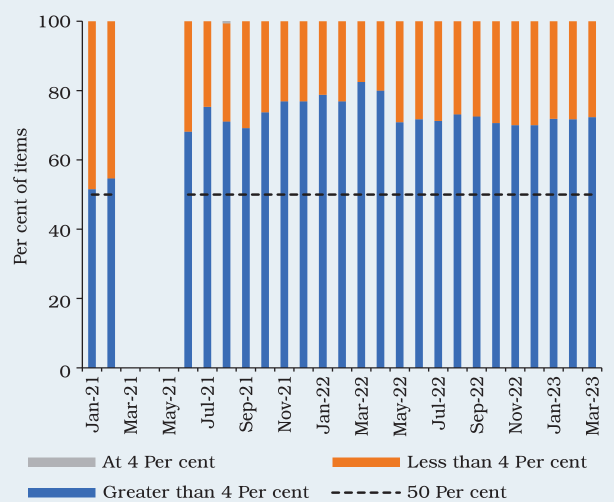
Note: International crude oil price represents the average price of WTI, Brent and Dubai Fateh.
Source: World Bank Pink Sheet Database, IOCL, and Petroleum Planning and Analysis Cell.

subdued as compared with the last year as the pandemic induced demand gradually eased with reduction in COVID-19 cases and normalisation of medical supplies. Broad-based increase in core prices was observed on account of pass-through of input costs to retail prices as more than 70 per cent of items registered higher than 4 per cent inflation rates during 2022-23 (Chart II.3.16).

II.3.26 Housing inflation remained muted, averaging at 4.3 per cent in 2022-23, reflecting subdued rental demand on account of hybrid work culture. Net of housing, inflation excluding food and fuel averaged at 6.6 per cent in 2022-23, the same level as observed a year ago.

II.3.27 Inflation in clothing and footwear remained a major pressure point, averaging 9.5 per cent in 2022-23. The spike in inflation largely reflected lagged pass-through of input cost pressures emanating from rising international prices of cotton (as measured by the Cotton A Index) and lower domestic cotton arrivals on falling crop yield in major cotton producing states on account of weather disruptions and pest attacks.

Chart II.3.16: Inflation – Core Items



Note: Item level CPI data were not released by the NSO during March-May 2020.
Source: NSO and RBI staff estimates.

5. Other Indicators of Inflation

II.3.28 From a sectoral perspective, inflation measured by the CPI for industrial workers (CPI-IW), remained elevated averaging at 6.1 per cent in 2022-23, largely due to the increase in food and fuel prices. Inflation based on the CPI for agricultural labourers (CPI-AL) and rural labourers (CPI-RL) averaged even higher at 6.8 per cent and 7.0 per cent, respectively, during 2022-23, driven by elevated inflation in food, fuel and clothing.

II.3.29 Inflation measured by the wholesale price index (WPI) rose sharply in H1: 2022-23, reaching a peak of 16.6 per cent in May 2022. The increase mirrored global trend of rising crude oil and other commodity prices following the war in Ukraine. Softening of global commodity prices, particularly in energy, food and metals in the latter half of the year led to consistent moderation in WPI inflation from its May 2022 peak to 1.3 per cent in March 2023, falling below the CPI headline inflation. The sharp moderation in October-March 2022-23 was driven by easing of price pressures in all three major groups – primary articles (weight of 22.6 per cent in WPI basket), fuel and power (weight of 13.2 per cent) and manufactured products (weight of 64.2 per cent). Although WPI and CPI inflation diverge sporadically reflecting differences in the composition of the basket as well as weighting pattern, they exhibit a long-run relationship[11]. Within WPI primary articles, food inflation

[11] RBI (2021), 'CPI-WPI Inflation Post-Lockdown: Long-run Cointegration and Short-run Error Correction', Box II.2, Monetary Policy Report, October, pp. 30.

eased significantly during November-December 2022 primarily driven by sharp seasonal easing in prices of fruits and vegetables. However, spices emerged as a new pressure point and witnessed double digit inflation throughout the year. Notwithstanding a persistently high inflation recorded by fuel and power in 2022-23, there was a gradual moderation from its June 2022 level, in line with the easing of global fuel and energy prices. With the broad-based increase in input cost pressures from higher global commodity prices, manufactured products inflation ruled in double-digits during April-May 2022, largely driven by non-food manufactured products inflation. Subsequently, however, there was a gradual easing of inflation in line with moderating cost pressures. Reflecting the sharp rise in WPI inflation and elevated CPI inflation, the gross domestic product (GDP) deflator inflation hardened to 11.6 per cent in H1: 2022-23 from 8.6 per cent in H1: 2021-22. As WPI inflation eased since October 2022, GDP deflator inflation moderated to 6.6 per cent in Q3: 2022-23 from 10.3 per cent in Q2: 2022-23. Overall for 2022-23, GDP deflator inflation moderated to 8.3 per cent from 8.5 per cent a year ago.

II.3.30 There was a significant hike in minimum support prices (MSPs) for *kharif* and *rabi* crops in 2022-23, a range of 4.4-8.9 per cent for *kharif* crops and 2.0-9.1 per cent for *rabi* crops. Soybean (yellow) witnessed the maximum MSP increase among the *kharif* crops, while the increase was the highest for lentil (*masur*) among the *rabi* crops.

II.3.31 Wage growth for agricultural and non-agricultural labourers remained subdued during 2022-23, averaging 5.8 per cent and 4.9 per cent, respectively. Nevertheless, there was an increase in the pace of wage growth for agricultural and non-agricultural labourers, reaching an intra-year peak of 7.7 per cent in January 2023 and 5.6 per cent in November 2022, respectively, before moderating in March 2023.

6. Conclusion

II.3.32 Common shocks emanating from the war in Ukraine – high food, energy, and other commodity prices – and the globalisation of inflation to multi-decadal high levels exerted sustained upside price pressures in India, leading to inflation remaining above the upper tolerance level of 6 per cent over 10 consecutive months (January-October 2022). Inflation eased somewhat during November-December 2022 on seasonal easing in food prices, before rising again during January-February 2023 and moderating to 5.7 per cent in March 2023. Monetary tightening by major economies and associated volatility in financial markets led to imported inflation pressures. Input cost pressures from high industrial raw materials prices, transportation costs, and global logistics and supply chain bottlenecks impinged on core inflation. The upward pressures from an early onset of summer, heat waves and unseasonal rains on food prices in the first half receded in the second half of the year with the robust *kharif* harvest and seasonal fresh crop arrivals as well as some easing in global food prices. The proactive supply side interventions by the government also helped contain price pressures. Timely beginning of the monetary policy tightening cycle with a cumulative increase in the policy repo rate by 250 bps since May 2022 helped ease demand pressures, anchor inflation expectations and contain the second-round impact of successive supply shocks. But for the timely monetary actions, inflation is estimated to have been higher by 90 bps. Geopolitical dynamics and possible weather disturbances overcast the outlook for inflation in India.

II.4 MONEY AND CREDIT

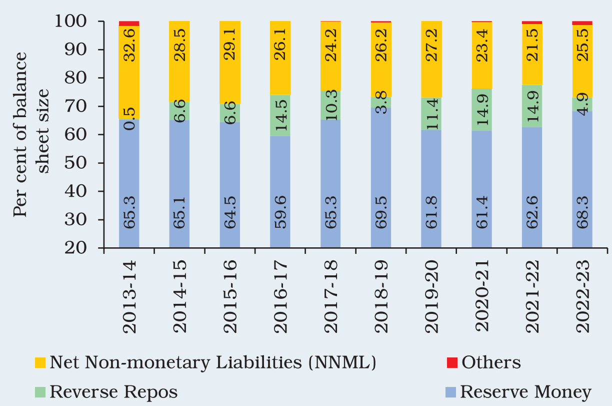
II.4.1 Monetary and credit conditions evolved in sync with the monetary policy stance and the changing state of the economy during the course of the year. Reserve money (RM), adjusted for the first-round effects of the increase in cash reserve ratio (CRR)[12], expanded at a marginally higher pace as compared with the previous year. Money supply (M_3) growth during the year broadly remained in sync with its largest component - aggregate deposits - partly in response to higher deposit rates following the cumulative increase in policy repo rate by 250 basis points (bps) and gradual withdrawal of surplus liquidity, details of which are set out in Chapter III. Deposit growth, however, did not keep pace with the robust growth in credit with banks taking recourse to the certificates of deposits (CDs) market for funding asset expansion. The growth in currency with the public (CwP) moderated during the year, falling below the growth of aggregate deposits for the first time since 2013-14, partly in response to the rising opportunity cost of holding currency in an environment characterised by increasing deposit rates as also the growing adoption of different modes of payment for effecting transactions. Reflecting return of consumer optimism and improvement in business sentiments, the velocity of money, which had dipped, regained the pre-pandemic level, in line with a broadly stable trend over the past decade.

II.4.2 Against this backdrop, sub-section 2 delves into the dynamics underlying movements in RM and, thereby, the shifts in the Reserve Bank's balance sheet. Sub-section 3 examines developments in money supply in terms of its components and sources, throwing light on the movements in assets and liabilities of the banking sector. The underpinnings of bank credit are covered in sub-section 4, followed by concluding observations.

2. Reserve Money [13]

II.4.3 Reserve money (RM) depicts the stock of monetary liabilities in the central bank's balance sheet. As on March 24, 2023, RM constituted more than 68 per cent of the Reserve Bank's balance sheet size (Chart II.4.1). The remaining[14] part largely consists of risk buffers and revaluation accounts [forming bulk of the net non-monetary liabilities (NNML)], which are maintained by the Reserve Bank as the country's savings for a

Chart II.4.1: Reserve Bank's Balance Sheet-Components (Liabilities)



NNML: Net non-monetary liabilities comprise economic capital (such as capital, reserves, contingency fund, asset development fund, currency and gold revaluation account, investment revaluation account and foreign exchange forward contracts valuation account), RBI employee provident fund account and IMF quota subscriptions and other payments *minus* other assets.

Source: RBI.

[12] CRR was increased from 4.0 per cent to 4.5 per cent, effective May 21, 2022.

[13] In sub-section 2, growth and other ratios pertaining to end of financial year/quarter/month are based on the last Friday of the respective financial year/quarter/month (except for 2022-23, for which data pertain to March 24, 2023).

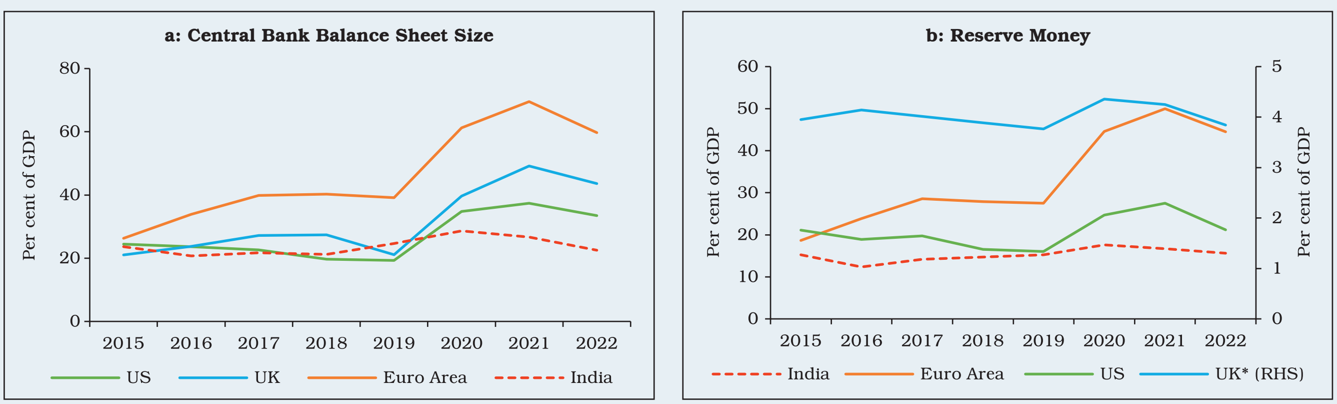
[14] They are not reckoned in the computation of RM in sync with cross-country practices, following the IMF's Monetary and Financial Statistics Manual and Compilation Guide.

potential use in a 'rainy day',[15] as well as liquidity surplus deposited by the banking sector under reverse repos/standing deposit facility (SDF) with the Reserve Bank.

II.4.4 In order to alleviate COVID-19 related stress in the financial markets and specific segments of the economy, the Reserve Bank had used a number of targeted and system-level liquidity measures as part of unconventional monetary policies, which led to stable expansion in its balance sheet size. As a per cent of GDP, the Reserve Bank's balance sheet size expanded to 28.6 per cent in 2020-21 from 24.6 per cent in 2019-20, before moderating to 26.7 per cent in 2021-22 and further to 22.5 per cent in 2022-23 (Chart II.4.2a). The expansion in the Reserve Bank's balance sheet was, however, relatively subdued as compared with that in the US, the UK and the Euro Area. During the same period, the reserve money as per cent of GDP in India also remained stable *vis-à-vis* other major economies as the liquidity measures were carefully designed and targeted with in-built terminal dates, reducing the challenge of exiting from post-COVID unconventional policies (Chart II.4.2b).

II.4.5 On the component side (liabilities), RM comprises currency in circulation, bankers' deposits with the Reserve Bank, and other deposits with the Reserve Bank. During 2022-23, the growth in RM decelerated to 10.0 per cent from 12.3 per cent a year ago, as well as from its decennial average of 11.5 per cent (2013-22) which indicates that excessive base money growth was not a causative factor behind the higher average inflation experienced during 2022-23. Adjusted for the first-round impact of change in CRR, RM expanded by 7.5 per cent in 2022-23 as compared to 7.3 per cent a year ago, reflecting gradual and calibrated withdrawal of COVID-19 induced surplus liquidity over the span of two years[16] (Chart II.4.3 and Appendix Table 4).

Chart II.4.2: Central Bank Balance Sheet and Reserve Money (Cross-country)

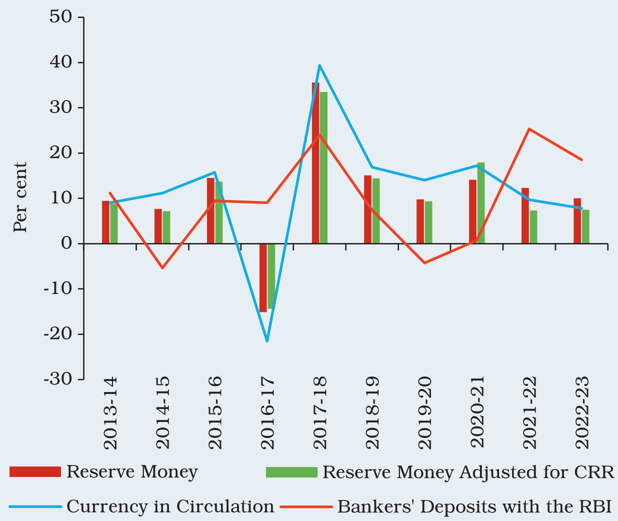


*: Monetary base for UK is sterling notes and coins in circulation outside the Bank of England and banks' operational deposits with it.
Note: 1. Nominal GDP data for India for 2022-23 are second advance estimates.
2. Data for India are on the financial year basis (*i.e.*, 2022 refers to 2022-23), while that of other countries are as per the calendar year.
Source: FRED (St. Louis Fed), CEIC, GoI, and RBI staff calculations.

15 Report of the Expert Committee to Review the Extant Economic Capital Framework of the Reserve Bank of India, August 2019 (Chairman: Dr. Bimal Jalan).

16 CRR was increased from 3.0 per cent to 3.5 per cent, effective March 27, 2021; to 4.0 per cent, effective May 22, 2021; and further to 4.5 per cent, effective May 21, 2022.

Chart II.4.3: Reserve Money - Components (Y-o-Y Growth)



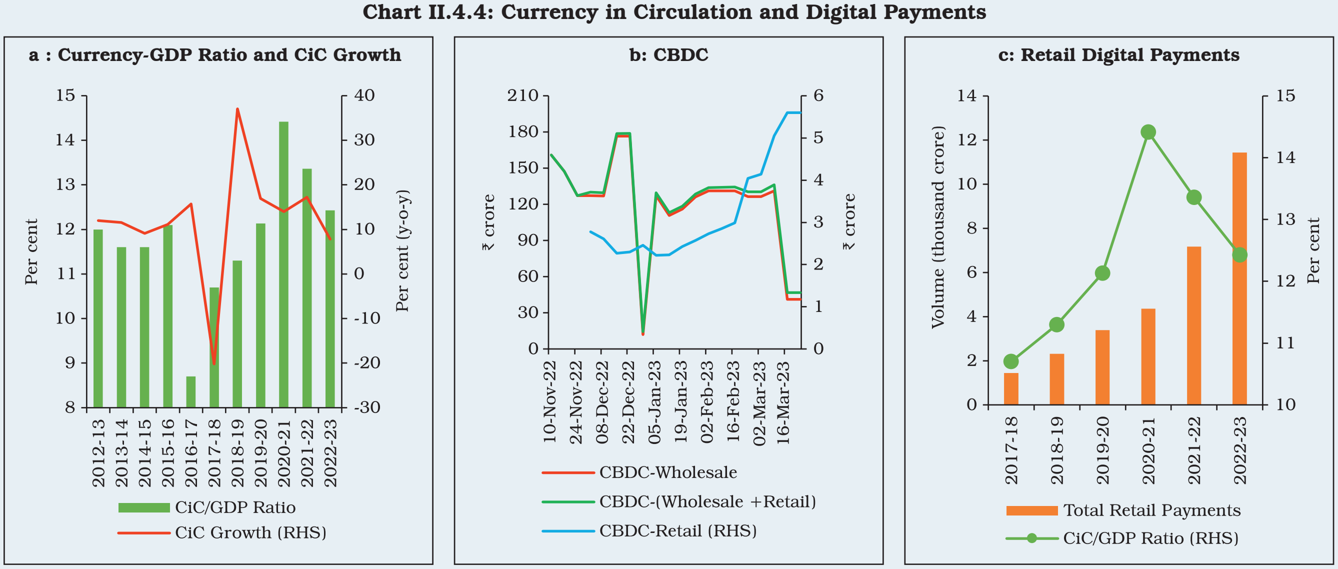
Source: RBI.

II.4.6 Among the components of RM, currency in circulation (CiC) - the major constituent (share: 78.4 per cent) - increased by 7.8 per cent during 2022-23, at a lower pace than the growth in RM. Amidst moderation in CiC-GDP ratio, the digital payments in India increased significantly in the post-pandemic period with faster digital onboarding of new users, facilitated by digitalisation, through various initiatives of the Reserve Bank such as operationalisation of the Payments Infrastructure Development Fund (PIDF) and launch of Central Bank Digital Currency (CBDC) during the year, details of which are covered in Chapters VI, VIII and IX of this Report (Chart II.4.4).

II.4.7 Even though the currency-GDP ratio in India is moderating, it remains relatively at elevated levels *vis-à-vis* other major economies, widely referred to as currency demand paradox, particularly in the context of the exponential growth achieved in digital payments as a substitute of cash for effecting transactions (Chart II.4.5). Since cash and digital modes are generally expected to substitute each other, the simultaneous rise in both seems counterintuitive (Box II.4.1).

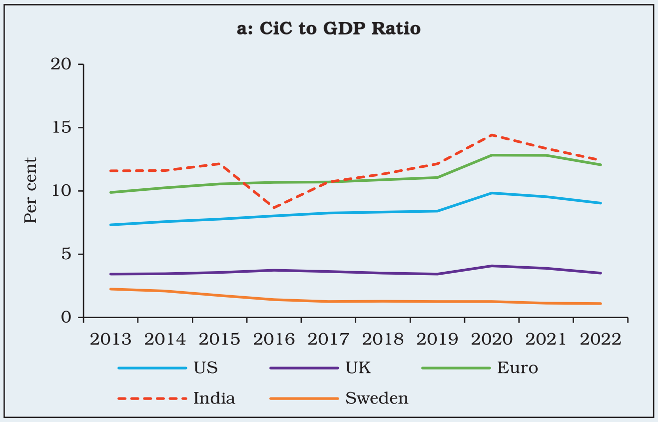
II.4.8 The demand for CiC normally follows a predictable intra-month pattern - expansion during the first fortnight due to transactions by households, followed by a contraction in the second fortnight on account of flow back of currency from households to the banking

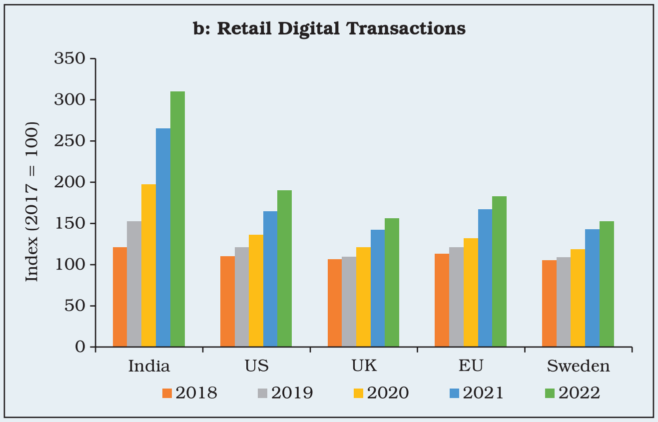
Chart II.4.4: Currency in Circulation and Digital Payments



Note: Nominal GDP data for India for 2022-23 are second advance estimates.
Source: RBI and GoI.

Chart II.4.5: Currency in Circulation and Retail Digital Transactions (Cross-country)





Note: 1. Nominal GDP data for India for 2022-23 are as per the second advance estimates of national income 2022-23.
2. Data for India are on the financial year basis (*i.e.*, 2022 refers to 2022-23), while that of other countries are as per the calendar year.

Source: CEIC, Statista, RBI staff estimates and GoI.

system. It also exhibits a quarterly pattern driven by a seasonal spurt in Q1 associated with *rabi* procurement and *kharif* sowing, followed by a contraction in CiC in Q2 due to seasonal slack in economic activity in cash-intensive sectors such as construction and agriculture. CiC expands in Q3, reflecting increased demand for currency for festivals and *kharif* harvest. Expansion in CiC

Box II.4.1
The Currency Demand Paradox in India

Given the perceived substitutability between currency and digital payment modes for effecting transactions, their parallel growth in a country appears counterintuitive, giving rise to a currency paradox (Bailey, 2009). Further, COVID-19 has intensified this paradox as the rising uncertainties increased cash demand, despite accelerated migration to digital modes of payments (Ardizzi *et al.,* 2020). In India, while the Unified Payments Interface (UPI)-led retail digital payments grew at a compounded annual growth rate (CAGR) of 50 per cent and 27 per cent in terms of volume and value, respectively (during 2016-17 to 2021-22), the currency in circulation (CiC) to GDP ratio also rose and peaked at 14.4 per cent in 2020-21. This phenomenon is, however, not new, or unique to India and has been observed since 2007 for several nations. The persistent affinity for cash has been attributed to factors such as the decline in opportunity costs of holding currency, *i.e.,* interest rates, precautionary holdings amid uncertainty, presence of a large informal economy and direct benefit transfers (DBTs) by the government, promoting both cash and digital modes, as routing of benefits digitally tends to be followed by cash withdrawals.

The increase in currency demand during COVID-19 in India was primarily for precautionary motive as the strong growth in CiC was driven by the demand for high denomination notes that witnessed a jump in its share to 90 per cent of total CiC in 2021-22 from the average of 82 per cent during 2010-16. In addition, there was a decline in the share of low denomination notes, partly due to the substitution of small-value payments by the UPI and mobile wallets, corroborated by their narrowing ticket sizes. Lower transactional cash demand was also evident from the sharper decline in the number of cash withdrawals at ATMs than in the withdrawal values, leading to increased withdrawal sizes. Given these factors, the trends in CiC-GDP ratio alone may not be adequate to assess the efficacy of the ongoing digital transformation. Illustratively, a counterfactual assessment shows that the CiC-GDP ratio would have been 12 per cent in 2020-21 and 11.9 per cent in 2021-22 relative to the actual ratio of 14.4 per cent and 13.4 per cent, respectively, had it not been for the pandemic-induced fall in the base (GDP) and uncertainty-driven surge in currency levels.[17]

(Contd.)

[17] To gauge the pandemic's impact on currency usage, counterfactuals for CiC-GDP ratios for 2020-21 and 2021-22 are computed using CAGR of CiC and GDP values from 2011-12 to 2019-20.

Empirical analysis of the long-run currency demand function using autoregressive distributed lag (ARDL) models covering the sample period from Q2:2009 to Q2:2022 provides some interesting perspectives. Data used for the analysis are sourced from Baker *et. al.*, (2016) for economic uncertainty and the Reserve Bank for other variables. All variables employed for empirical analysis, except interest rates, have been converted to natural logarithm with seasonal adjustment for relevant variables. Appropriate dummies were added to control for demonetisation (Q4: 2016, Q1:2017) and the first COVID-induced nationwide lockdown (Q2:2020). As per the Augmented Dickey-Fuller (ADF) test, all variables are stationary at levels or first differences.

The baseline model indicates that nominal income (LYN) is the dominant driver of cash demand (LCIC) [positive relationship], while short-term interest rates, proxied by deposits rates of major banks (INT), have a negative association with currency usage (Table 1). Further, access to digital modes, proxied by digital payments value (LDIGVAL), tends to dampen currency usage (models 2 and 3). The substitution effect, *albeit* significant, is lower than the income effect, suggesting that digital transactions can offset the impact of income on currency demand to lower the currency-to-deposit ratio over time. The precautionary effect on currency usage captured through the economic policy uncertainty index (LEPU) [positive] indicates a preference for cash during uncertain periods.

The assessment shows that the sudden uptick in CiC growth during COVID-19 can be attributed to the precautionary and store-of-value motives even as the transactional use of cash has progressively been substituted by digital modes. Recent data suggests a turnaround in the pandemic-induced precautionary demand for cash. For the week ending March 24, 2023, the CiC grew by 7.8 per cent (y-o-y), *i.e.,* recording single-digit growth for 86 weeks since August 2021 (barring April 2022) and averaging overall at 8.5 per cent. Concurrently, digital payment modes continue to maintain strong growth momentum post-COVID.

Table 1: Long Run Coefficients of Currency Modelling Regression [Dependent Variable: LCIC (Natural Log of Currency in Circulation)]

	Model 1 (Baseline)	Model 2	Model 3
1	2	3	4
Model Type	*ARDL (3,1,0)*	*ARDL (3,3,0,2)*	*ARDL (3,2,0,2,1)*
Nominal Income (LYN)	0.88*** (0.04)	1.19*** (0.20)	1.26*** (0.18)
Interest Rate (INT)	-0.06*** (0.01)	-0.07*** (0.01)	-0.07*** (0.01)
Digital Payments Value (LDIGVAL)		-0.30** (0.16)	-0.32** (0.15)
Economic Policy Uncertainty (LEPU)			0.06* (0.00)
Intercept	1.53** (0.81)	1.96** (0.84)	0.83 (0.80)
Error Correction	-0.24*** (0.01)	-0.24*** (0.01)	-0.27*** (0.01)
Bounds Test: F statistic	48.52	33.89	33.73
Model Tests			
Adjusted R-squared	0.99	0.99	0.99
Akaike Information Criterion (AIC)	-4.81	-5.06	-5.08
Schwartz Information Criterion (SIC)	-4.46	-4.52	-4.50
Durbin-Watson Stat.	2.18	1.84	2.04

*** : Significant at 1 per cent level. ** : Significant at 5 per cent level.
* : Significant at 10 per cent level.
Note: Figures in parentheses denote standard errors.
Source: RBI staff estimates.

References:

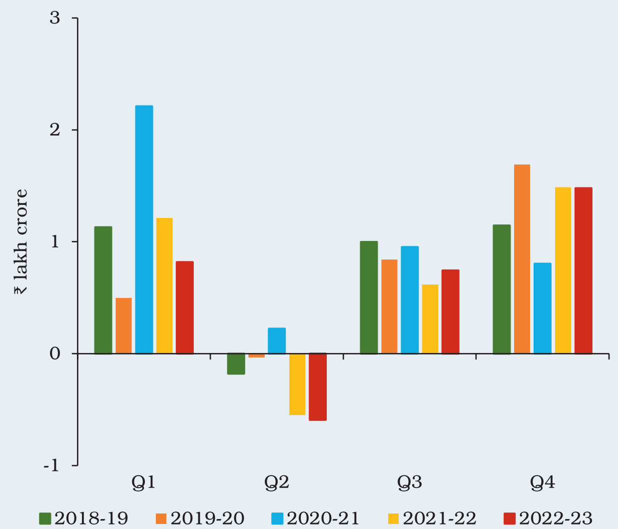
1. Ardizzi, G., A. Nobili and G. Rocco (2020), 'A Game Changer in Payment Habits: Evidence from Daily Data During a Pandemic', Bank of Italy, *Occasional Paper* No. 591.
2. Bailey, A. (2009), 'Banknotes in Circulation-Still Rising. What Does this Mean for the Future of Cash?', Speech at *The Banknote Conference, Washington DC*, Vol. 6.
3. Baker, S. R., Bloom, N., and Davis, S. J. (2016), 'Measuring Economic Policy Uncertainty', *The Quarterly Journal of Economics*, 131(4), 1593-1636.

in Q4 tracks the harvest of *rabi* crops, various festivals and the wedding season. During 2022-23, variations in CiC during Q3 and Q4 were also influenced by assembly elections in six states (Chart II.4.6).

II.4.9 Another component of RM, bankers' deposits with the Reserve Bank (share: 20.1 per cent) increased by 18.5 per cent in 2022-23 as compared with 25.3 per cent during the same period in the previous year, as CRR was raised by 50 bps during the year as against 100 bps hike in the previous year (Chart II.4.3).

II.4.10 On the sources side (assets), RM comprises net domestic assets (NDA) and net

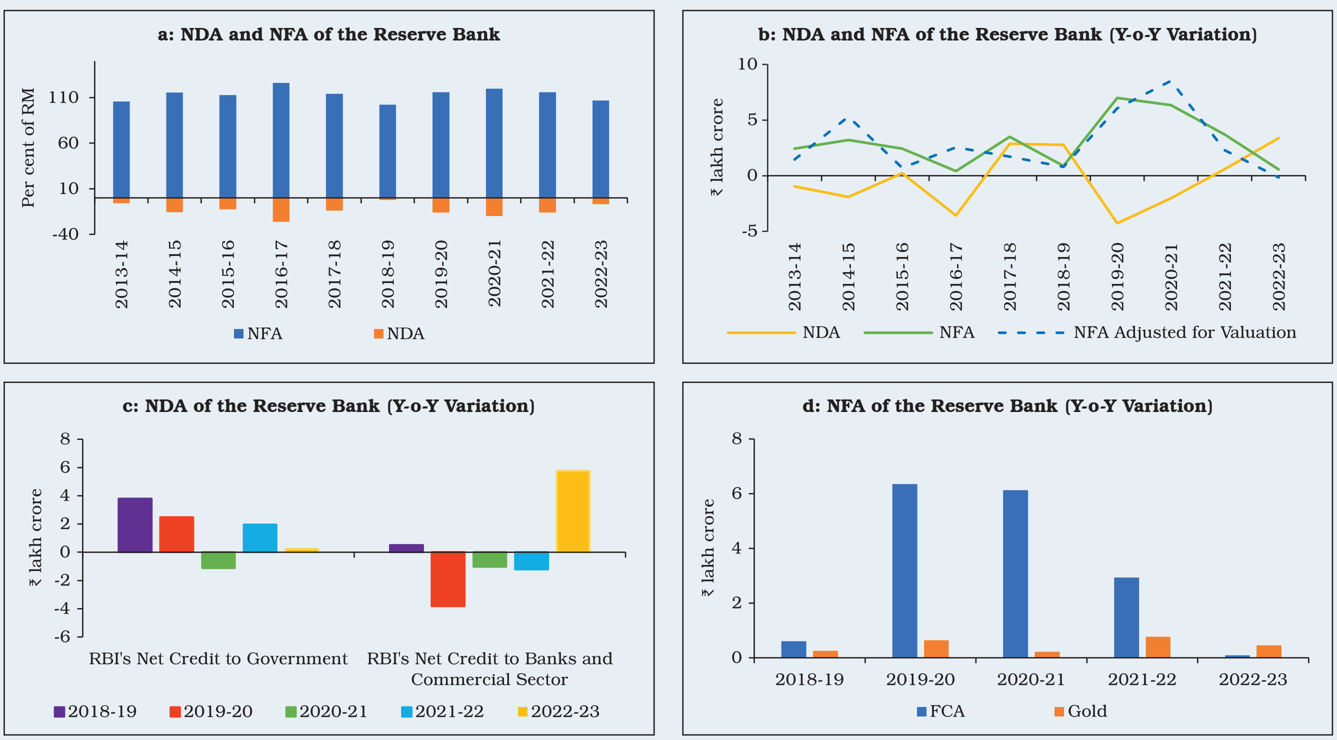
Chart II.4.6: Quarterly Variation in Currency in Circulation



Source: RBI.

foreign assets (NFA) of the Reserve Bank. NDA comprises of net Reserve Bank credit to banks, government and commercial sector (mainly primary dealers), while the constituents of NFA are gold and foreign currency assets[18] (FCA). During 2022-23, the expansion in RM was driven mainly by NFA, contributing to around 67 per cent, which in turn tracked variations in foreign currency assets; while NDA's contribution reflects Reserve Bank's net claims on banks and commercial sector arising from the liquidity management operations.[19] Adjusted for valuation, NFA, however, recorded a decline during the year (Chart II.4.7).

Chart II.4.7: Reserve Money - Sources (Assets)



Source: RBI.

18 Including special drawing rights (SDRs) transferred from the Government of India (GoI). The SDR holdings remaining with the GoI and reserve tranche position (RTP) in IMF, which represent India's quota contribution to IMF in foreign currency, are not a part of the Reserve Bank's balance sheet.

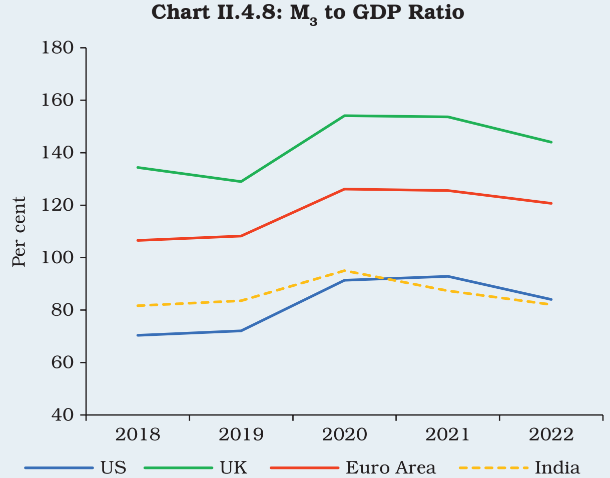
19 Details relating to liquidity management operations are covered in Chapter III of this Report.

3. Money Supply [20]

II.4.11 Finance is an important enabler of economic development and the supply of money matching the demand becomes crucial for greasing the wheels of the economy, wherein reserve money forms the monetary funding base over which deposits get multiplied through the banking channel, supporting the credit creation process. Money supply, commonly proxied by broad money (M_3), largely consists of currency with the public (CwP) and aggregate deposits (AD) on the components side (liabilities). Money supply viewed in the context of economic activity - M_3 to nominal GDP ratio - indicates that India witnessed a faster normalisation of COVID-19 induced stimulus, with the ratio reverting to the pre-pandemic steady levels unlike other major economies (Chart II.4.8).

II.4.12 The muted expansion of money supply prior to the pandemic, characterised by its prolonged deceleration during 2010-2017 led by its major constituent - aggregate deposits - provided space for undertaking adequate pandemic-induced stimulus without posing the risk of high money supply growth (Chart II.4.9).

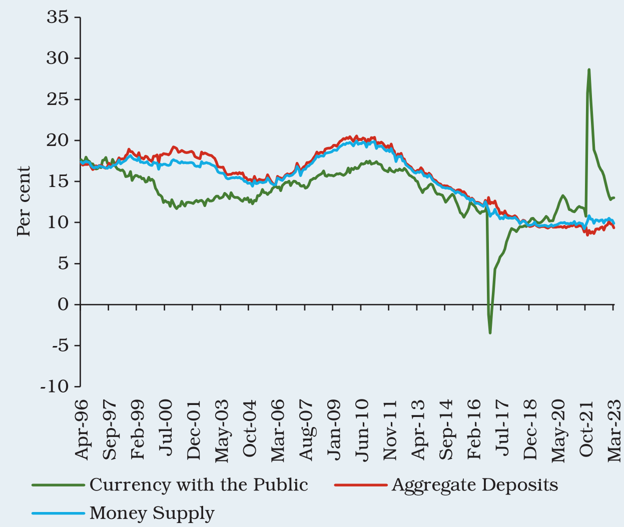
Chart II.4.8: M_3 to GDP Ratio



Note: 1. Nominal GDP data for India for 2022-23 are second advance estimates.
2. Data for India are on the financial year basis (*i.e.*, 2022 refers to 2022-23), while that of other countries are as per the calendar year.

Source: CEIC, RBI and GoI.

Chart II.4.9: Money Supply (M_3) Components - 5-Year Annualised Growth Rate (Seasonally Adjusted)



Source: RBI staff calculations.

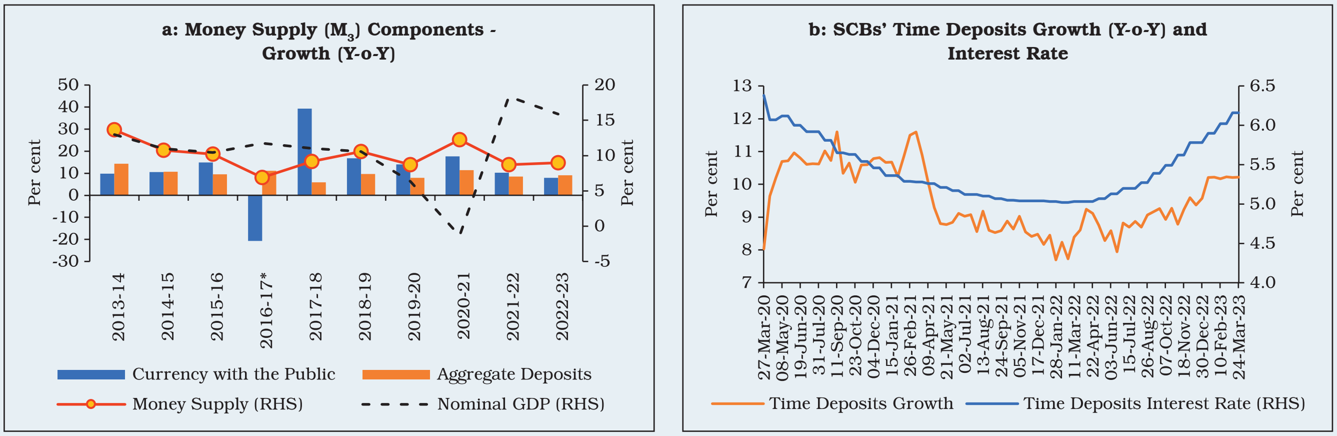
II.4.13 During the year, growth in deposits outpaced that of currency with the public (CwP) in a break from trend since 2013-14 (excluding demonetisation year 2016-17). During the year, broad money recorded a growth of 9.0 per cent as on March 24, 2023 (8.7 per cent a year ago) driven mainly by time deposits,[21] partly supported by the rise in deposit interest rates in response to a cumulative 250 bps increase in the policy rate, in line with the stance of withdrawal of accommodation (Chart II.4.10).

II.4.14 On the sources side (assets), bank credit to the commercial sector, followed by net bank credit to the government led the expansion in M_3

[20] In sub-sections 3 and 4, growth and other ratios pertaining to end of financial year/quarter/month are based on the last reporting Friday of the respective financial year/quarter/month.

[21] As usual, demand deposits remained volatile, largely mirroring the variations in currency with the public.

Chart II.4.10: Money Supply and SCBs' Time Deposits



*: March 31, 2017 over April 1, 2016.

Note: 1. Nominal GDP data for India for 2022-23 are second advance estimates.

2. Time deposits interest rates refer to weighted average domestic term deposit rates for outstanding rupee term deposits of SCBs.

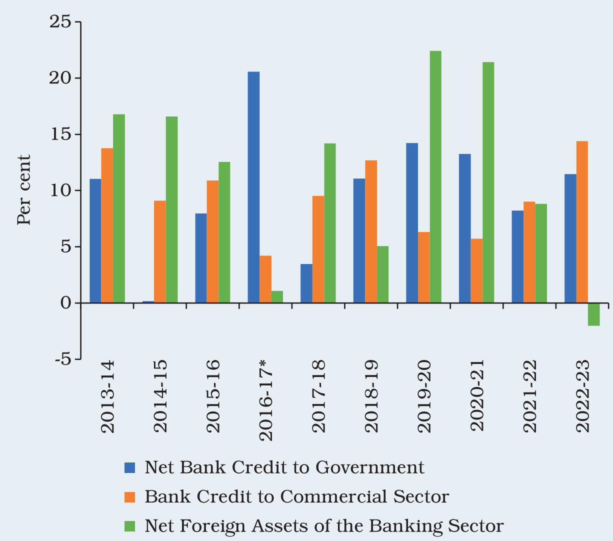
Source: RBI.

in 2022-23. The former – the largest constituent of M_3 – grew at a faster pace of 14.4 per cent during 2022-23 as compared with 9.0 per cent in the previous year, reflecting active usage of funds for credit creation. The net bank credit to government increased by 11.5 per cent in 2022-23 (8.2 per cent a year ago) amidst higher investments in government securities[22] by banks, seeking the benefit of increase in limit for holding securities (including SLR securities) under held to maturity (HTM) category from 22.0 per cent to 23.0 per cent[23] of NDTL, effective April 8, 2022; and also in view of moderation in credit offtake from the peak of 17.8 per cent recorded in October 2022. The net foreign assets of the banking sector declined during the year, mirroring the behaviour of commercial banks amidst global spillovers and the associated volatility in the forex market (Chart II.4.11 and Table II.4.1).

Key Monetary Ratios

II.4.15 The behaviour of velocity of money and money multiplier often reflects the response of economic agents to shocks as also the impact

Chart II.4.11: Money Supply Sources - Growth (Y-o-Y)



*: March 31, 2017 over April 1, 2016.

Source: RBI.

[22] Excess holdings of statutory liquidity ratio (SLR) securities provide collateral buffers to banks for availing funds under the liquidity adjustment facility (LAF) and are also a component of the liquidity coverage ratio (LCR).

[23] The HTM limits would be restored from 23.0 per cent to 19.5 per cent in a phased manner by March 31, 2025, starting from the quarter ending June 30, 2024.

Table II.4.1: Monetary Aggregates

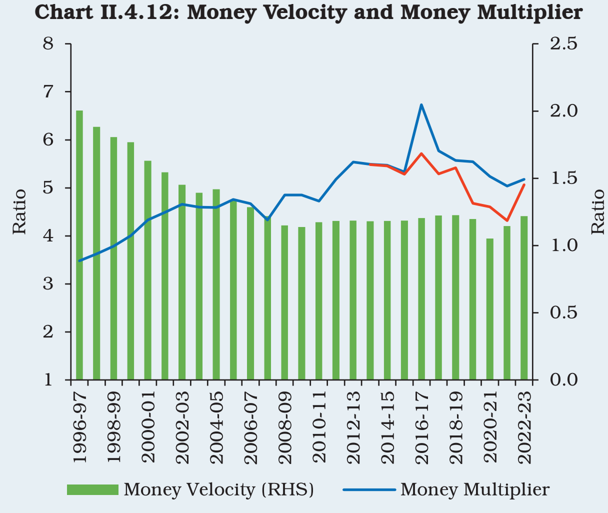
Item	Outstanding as on March 24, 2023 (₹ crore)	Year-on-Year Growth Rate (Per cent)		
		2020-21	2021-22	2022-23 (as on March 24, 2023)
1	2	3	4	5
I. Reserve Money (RM)	43,13,542	14.2	12.3	10.0
II. Money Supply (M_3)	2,23,33,227	12.3	8.7	9.0
III. Major Components of M_3				
III.1. Currency with the Public	32,78,334	17.7	10.2	7.9
III.2. Aggregate Deposits	1,89,89,563	11.3	8.4	9.1
IV. Major Sources of M_3				
IV.1. Net Bank Credit to Government	69,16,058	13.2	8.2	11.5
IV.2. Bank Credit to Commercial Sector	1,44,23,483	5.7	9.0	14.4
IV.3. Net Foreign Assets of the Banking Sector	4,86,22,73	21.4	8.8	-2.0
V. M_3 Net of FCNR(B)	2,21,79,106	12.6	8.9	8.9
VI. Money Multiplier*	5.2	4.8	3.8	4.7

*: In columns 3, 4 and 5, data indicate incremental money multiplier.
Note: Data are provisional.
Source: RBI.

of policy changes. In India, the transaction velocity of money, *i.e.,* nominal GDP divided by broad money, was broadly stable since 2010-11, barring the pandemic year 2020-21 when it declined, but has recovered and regained its pre-pandemic level in 2022-23. On the other hand, money multiplier (MM), which peaked in 2012-13 at 5.5, broadly stabilised thereafter, and stood at 5.2 as on March 24, 2023, below its decennial average[24] of 5.5 (2012-22), partly on account of the rising role of non-banks in meeting the credit requirements of the economy. Adjusted for reverse repo - analytically akin to banks' deposits with the central bank - the money multiplier turned out to be marginally lower at 5.1 as on March 24, 2023, indicating convergence of MM and adjusted MM amidst improvement in credit demand conditions, leading to a sharp decline in the amount parked under reverse repo/SDF by banks (Chart II.4.12).

II.4.16 Of the two behavioural ratios driving MM, the reserve-deposit ratio[25] was more or less stable during the past decade (2013-2023) broadly tracking the CRR, while the currency-deposit ratio depicted a broad rising trend, reflecting higher precautionary household savings in the

Chart II.4.12: Money Velocity and Money Multiplier

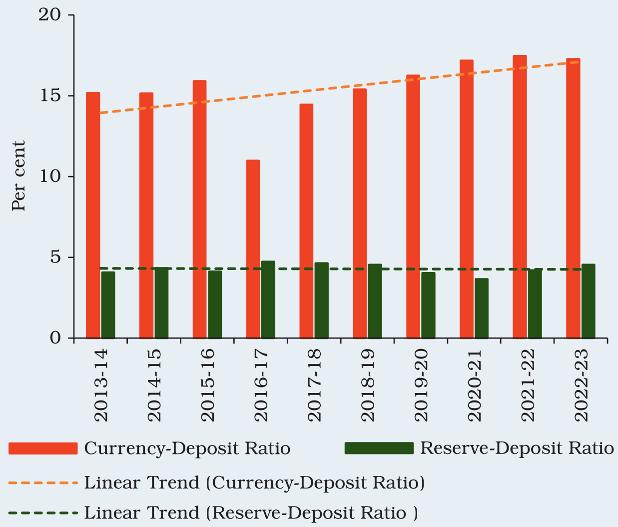


Note: Nominal GDP data for India for 2022-23 are second advance estimates.
Source: RBI staff calculations.

24 Excluding the year of demonetisation 2016-17.

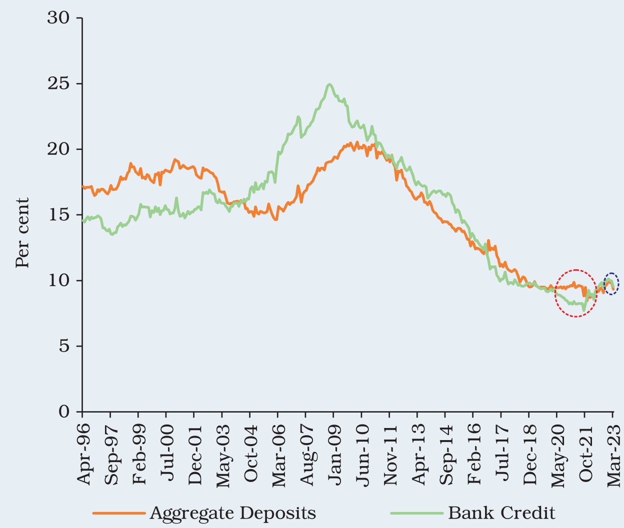
25 As on March 24, 2023, the reserve-deposit ratio was at 4.6 per cent (4.2 per cent a year ago), reflecting the impact of CRR increase by 50 bps to 4.5 per cent, effective May 21, 2022.

Chart II.4.13: Behavioural Ratios Underlying Money Multiplier



Source: RBI staff calculations.

Chart II.4.14: Aggregate Deposits and Bank Credit - 5-Year Annualised Growth Rate (Seasonally Adjusted)



Source: RBI staff calculations.

form of currency, which in turn lowered the money multiplier. During 2022-23, in a break from the recent past, the currency-deposit ratio moderated and stood at 17.3 per cent, though it was still above its decennial average (2013-22) of 16.0 per cent (Chart II.4.13), reflecting the tightening cycle of interest rates since May 2022, apart from a shift away from precautionary 'dash for cash' by economic agents following the normalisation of the economy post-COVID.

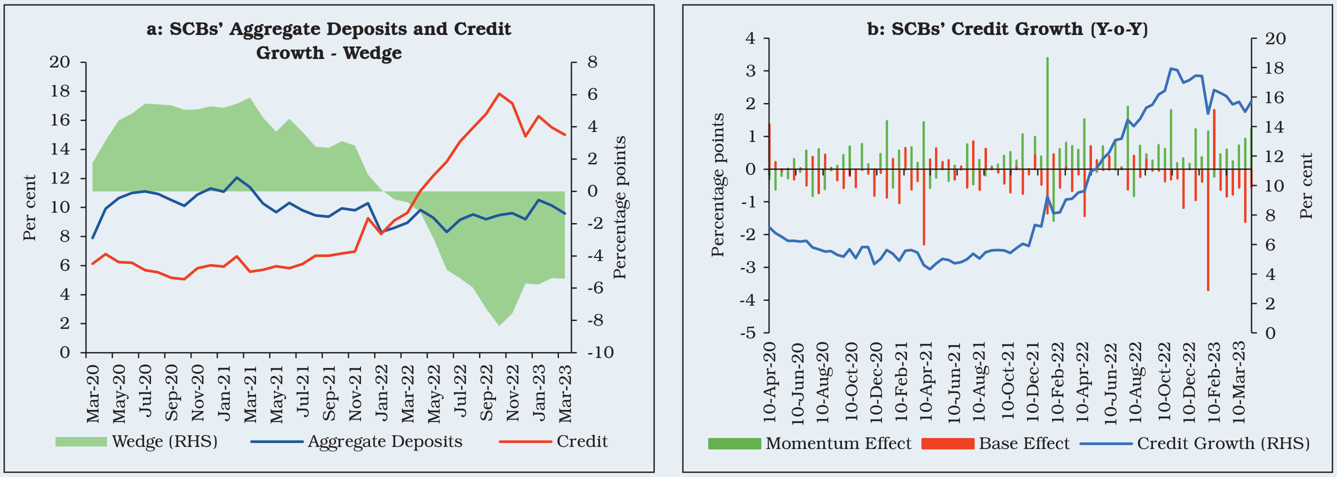
4. Credit

II.4.17 The 5-year seasonally adjusted annualised growth in deposits and credit closely tracked each other from July 2011, which coincided with the improved access to foreign capital flows (foreign portfolio investments and external commercial borrowings) on the back of favourable growth differential of India relative to the advanced economies (AEs) and the emerging market economies (EMEs). In the wake of the pandemic, however, a divergence in the rate of growth of credit and deposits reappeared, with deposit growth outpacing credit growth since February 2020. Even though the gap narrowed by November 2021, the wedge continued (Chart II.4.14 and Chart II.4.15a).

II.4.18 The deposit growth has generally been more stable than credit growth in the recent past (Chart II.4.15a). Further, the momentum in scheduled commercial banks' (SCBs') credit offtake has been mostly positive since end-August 2021 with the gradual withdrawal of lockdowns/ restrictions imposed to contain the spread of COVID-19 infections (Chart II.4.15b). As on March 24, 2023, SCBs' credit-deposit ratio stood at 75.8 per cent (72.4 per cent as at end-March 2022).

II.4.19 During 2022-23, amidst buoyant demand for credit growth, the issuances of certificates of deposits (CDs) by banks have risen significantly as compared to the previous year, reflecting additional demand for liquidity by banks to bridge the funding gap between buoyant credit offtake and modest deposit growth. In the primary market, fund mobilisation through CD issuances has been robust at ₹6.73 lakh crore during the year, markedly higher than ₹2.33 lakh crore for the corresponding period of last year. On the other hand, due to the hardening of interest

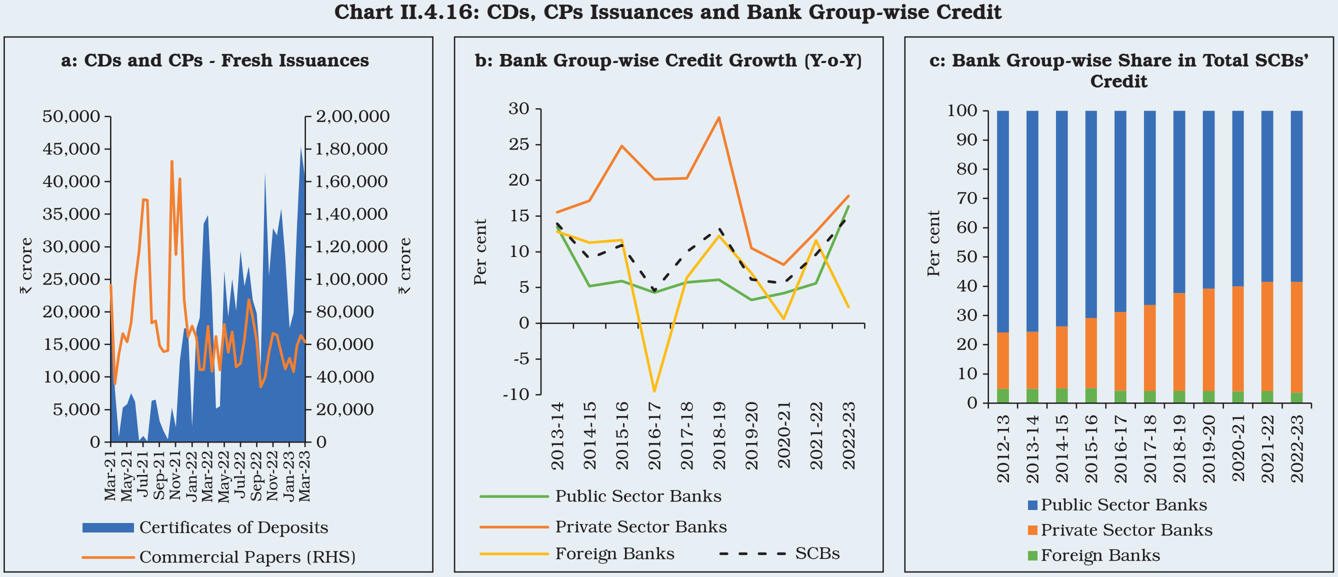
Chart II.4.15: SCBs' Deposits and Credit



Source: RBI.

rates on commercial papers (CPs) in sync with policy rate hike, firms have reduced their reliance on CPs during 2022-23 as evidenced by the significant deceleration in CP issuances during the year, as their appetite for bank credit improved (Chart II.4.16a). The pick up in credit offtake during the year was broad based, with SCBs' credit growth at 15.0 per cent as on March 24, 2023 (9.6 per cent a year ago). Among bank groups, both public sector banks (PSBs) and private sector banks (PVBs) recorded an acceleration in credit growth. The y-o-y credit growth of PSBs at 16.4 per cent (5.6 per cent a year ago) as on March 24, 2023 was lower than that of PVBs at 17.8 per cent (12.8 per cent a year ago), leading to a marginal increase in the share of PVBs in total SCBs' credit over last year. However, the share of PSBs in total SCBs' credit remains the largest among bank-groups (Chart II.4.16b and Chart II.4.16c).

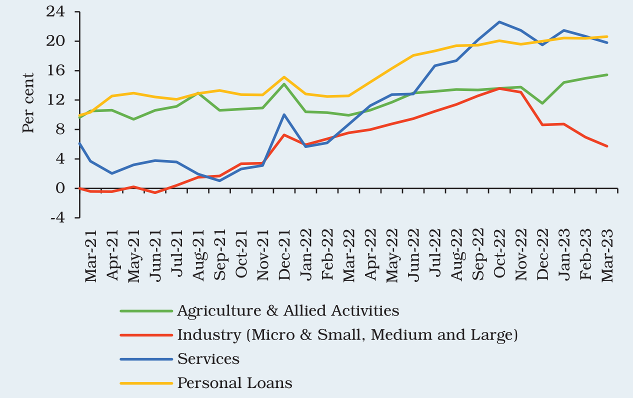
Chart II.4.16: CDs, CPs Issuances and Bank Group-wise Credit



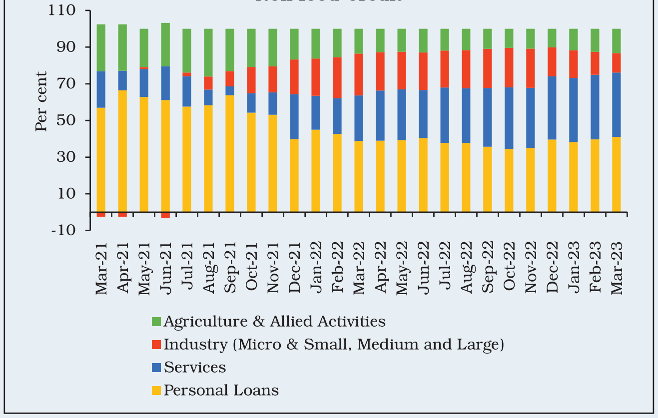
Source: RBI.

Chart II.4.17: Sector-wise SCBs' Non-food Credit

a: SCBs' Non-food Credit Growth (Y-o-Y) - Sector-wise



b: Share of Major Sectors in SCBs' Incremental Non-food Credit



Source: RBI.

II.4.20 According to the data on sectoral deployment of bank credit[26], the agriculture sector credit growth was supported by various measures taken by the government and the Reserve Bank. The micro and small industries/medium industries credit growth benefitted from the guarantee cover under the Emergency Credit Line Guarantee Scheme (ECLGS). Credit growth to large industries posted a turnaround during the year - led by capital-intensive industries such as infrastructure, supported by the government's higher capex spending. However, it moderated by the end of the year. The infrastructure credit growth was led by roads sector, which continued to post decent credit growth over a high base. Commodity-intensive industries such as metals recovered during the year. Within services, bank credit to non-banking financial companies (NBFCs) consolidated with

Chart II.4.18a: Credit-to-GDP Gap

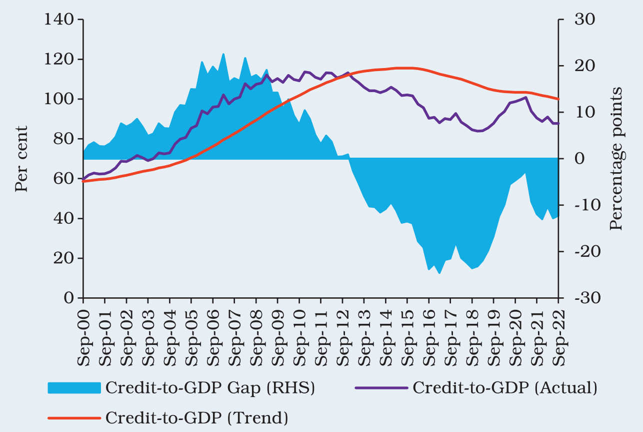
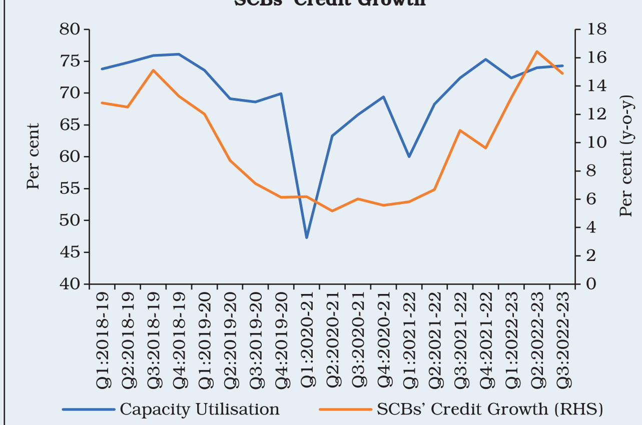


Chart II.4.18b: Capacity Utilisation of Manufacturing and SCBs' Credit Growth



Source: Bank for International Settlements (BIS) and RBI.

26 While non-food credit data are based on fortnightly Section 42 return, which covers all SCBs, sectoral non-food credit data are based on sector-wise and industry-wise bank credit (SIBC) return, which covers select banks accounting for about 93 per cent of total non-food credit extended by all SCBs. Data pertain to the last reporting Friday of the month.

Table II.4.2: Sectoral Credit Growth – SCBs

(Per cent, Y-o-Y)

Sector	2020-21*	2021-22#	2022-23											
			Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Non-food Credit	**5.5**	**9.7**	**11.4**	**12.7**	**13.7**	**15.1**	**16.0**	**16.9**	**18.3**	**17.6**	**15.3**	**16.7**	**15.9**	**15.4**
I. Agriculture & Allied Activities	**10.5**	**9.9**	**10.6**	**11.7**	**13.0**	**13.2**	**13.4**	**13.4**	**13.6**	**13.8**	**11.5**	**14.4**	**14.9**	**15.4**
II. Industry (Micro & Small, Medium and Large)	**-0.4**	**7.5**	**8.0**	**8.8**	**9.5**	**10.5**	**11.4**	**12.6**	**13.6**	**13.1**	**8.6**	**8.7**	**7.0**	**5.7**
II.1. Micro & Small	7.5	23.0	30.0	33.0	29.6	28.3	28.2	27.1	20.4	19.6	13.7	15.2	13.2	12.3
II.2. Medium	31.4	54.4	53.7	49.3	47.4	36.8	35.6	36.2	31.0	29.7	15.4	18.1	13.5	19.6
II.3. Large	-3.1	2.0	1.3	2.0	3.3	5.2	6.4	7.9	10.9	10.5	6.9	6.5	5.0	3.0
II.3.1 Infrastructure	1.1	9.1	9.7	9.8	9.5	11.1	11.0	10.9	10.9	10.5	5.3	2.3	0.6	-0.7
II.3.1.1 Power	-1.1	7.1	8.1	9.3	8.7	9.7	9.4	8.1	7.5	7.7	2.4	2.8	0.6	-1.1
II.3.1.2 Telecommunications	-21.9	13.4	13.8	12.8	13.1	11.4	17.2	16.3	18.4	22.9	5.3	-12.8	-11.8	-14.6
II.3.1.3 Roads	24.7	19.5	17.3	17.6	17.8	16.4	15.3	13.4	13.8	13.4	12.5	8.7	6.8	5.3
II.3.2 Basic Metals & Metal Products	-8.8	-5.5	-4.4	-2.3	0.6	5.6	5.7	10.6	14.1	15.3	19.1	22.0	19.7	19.1
II.3.3 Chemicals & Chemical Products	-7.0	6.2	10.4	15.6	15.1	20.2	23.5	22.5	25.1	19.1	15.8	17.6	15.2	10.2
II.3.4 Textiles	6.0	9.3	7.1	5.1	5.3	3.8	4.0	4.9	4.4	3.0	0.4	0.8	0.3	1.7
II.3.5 All Engineering	-5.7	9.4	9.7	9.1	11.1	11.3	11.3	13.8	13.8	11.1	8.4	6.2	6.7	4.3
II.3.6 Food Processing	8.5	10.7	10.7	11.5	14.0	9.8	9.5	8.0	6.9	7.4	4.1	4.7	5.8	5.6
III. Services	**3.7**	**8.7**	**11.2**	**12.7**	**12.8**	**16.7**	**17.4**	**20.2**	**22.6**	**21.5**	**19.5**	**21.5**	**20.7**	**19.8**
III.1. Trade	12.8	10.8	13.2	13.2	16.7	14.2	16.9	21.3	17.0	16.0	13.9	16.8	16.7	17.8
III.2. NBFCs	-0.2	7.8	14.7	17.8	18.1	24.6	25.5	29.3	34.9	33.0	34.5	31.0	32.4	30.2
IV. Personal Loans	**10.3**	**12.6**	**14.4**	**16.3**	**18.1**	**18.7**	**19.4**	**19.4**	**20.1**	**19.6**	**20.0**	**20.4**	**20.4**	**20.6**
IV.1. Housing	9.6	12.9	13.7	13.6	15.1	16.2	16.4	16.0	16.2	16.2	16.1	15.4	15.0	15.0
IV.2. Vehicle Loans	8.5	9.3	11.4	14.1	17.7	19.2	19.5	19.9	22.1	22.5	24.7	25.5	23.4	24.9

← Contraction   Expansion →

*: March 2021 over March 2020. #: March 2022 over March 2021.

Note: 1. Data are provisional.

2. Bank credit growth since December 3, 2021 to November 18, 2022 are adjusted for past reporting errors by select SCBs.

Source: RBI.

increased credit offtake during 2022-23 whereas the trade sector credit growth reflected a return of positive sentiment in business activities. Retail loans posted a sustained rise, outperforming overall credit growth, aided by housing and vehicle loans. Further, the share of personal loans and services sector in the incremental non-food credit rose gradually during the year, indicating an improvement in credit demand conditions in these sectors (Chart II.4.17 and Table II.4.2).

II.4.21 The credit-to-GDP gap narrowed considerably from its previous peak, reflecting the improved credit demand in the economy in the face of rising capacity utilisation in the manufacturing sector (Chart II.4.18a and Chart II.4.18b).

5. Conclusion

II.4.22 Key monetary and credit aggregates moved in line with the Reserve Bank's monetary policy stance and the state of aggregate demand in the economy. Return of consumer optimism and improvement in business outlook during the year could help sustain credit growth ahead, though banks may have to step up deposit mobilisation efforts in an atmosphere of declining system-wide surplus liquidity.

II.5 FINANCIAL MARKETS

II.5.1 The global financial markets witnessed bouts of turbulence for most part of the year as uncertainties amplified following the geopolitical tensions, deterioration of global growth and trade outlook, global surge in inflation and synchronised tightening of monetary policy. A semblance of market stability was visible by Q4:2022 when inflation appeared to have peaked, global food and commodity prices softened and global supply chain pressure eased. The global financial asset valuations, however, remained volatile during Q1:2023 due to a weaker global growth prospect in 2023 and concerns over financial stability following a banking turmoil in the US and Europe.

II.5.2 Amidst aggressive tightening of monetary policy by the US Fed accompanied by a hawkish stance, strengthening of the US dollar against major currencies, and sell-off by foreign portfolio investors (FPIs), the EMEs experienced volatility in their equity and currency markets. The prices of most commodities and crude oil, rose significantly in Q2:2022 in response to the severe disruptions in supplies following the war in Ukraine. The prices came off subsequently as global demand conditions weakened, even as reopening of China after ending its zero-COVID policy exerted renewed pressure.

II.5.3 The Indian financial markets remained resilient notwithstanding persistent impact of global spillovers. India's stock market outperformed most of its EME peers in 2022-23 on the strength of macroeconomic fundamentals and favourable growth prospects. However, primary segment of the equity market witnessed moderation in fundraising amid volatile market conditions. The 10-year Government security (G-sec) yield hardened, however, remained range-bound amid changing outlook for monetary policy and inflation. The rupee came off its lows witnessed in Q3:2022-23 and traded largely range-bound in the fourth quarter, amidst softening of the US dollar. The buoyant demand for bank credit and early signs of a revival in the investment benefitted from higher profitability of scheduled commercial banks, along with improved asset quality, robust capital levels and liquidity buffers.

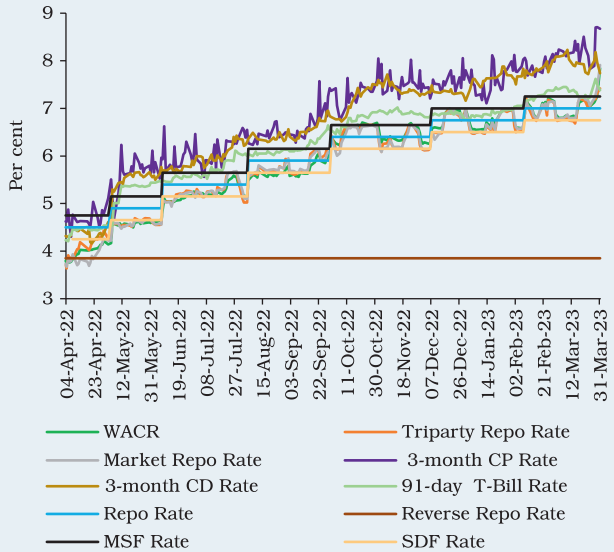
II.5.4 Against this backdrop, money market developments are detailed in sub-section 2. Government security (G-sec) yields are discussed in sub-section 3. Sub-section 4 presents developments in the corporate bond market. Sub-section 5 profiles developments in the domestic equity market, followed by a discussion on movements in the Indian rupee in the foreign exchange market in sub-section 6. The last sub-section offers concluding observations along with some forward-looking perspectives.

2. Money Market

II.5.5 The money market trends during 2022-23 reflected the ebbing surplus liquidity in the system, buoyancy in credit demand and tightening financial market conditions following the cumulative increase in policy repo rate by 250 basis points (bps).

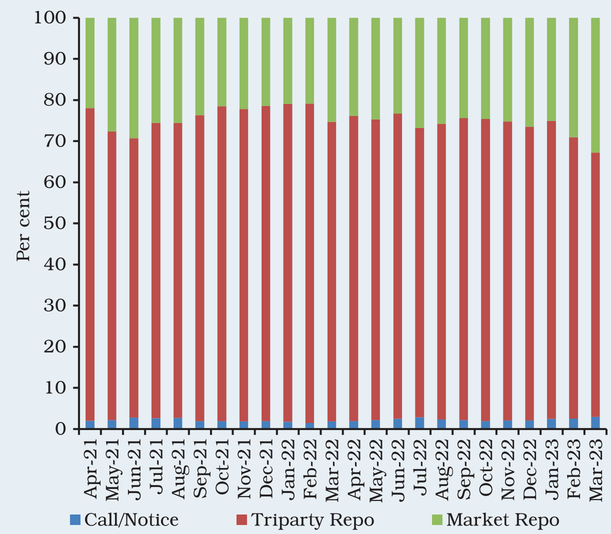
II.5.6 The weighted average call rate (WACR) - the operating target of monetary policy - moved gradually upward from below the floor of the policy corridor [*i.e.*, standing deposit facility (SDF) rate] towards the policy repo rate in sync with the rate hike cycle and shift in the stance of monetary policy. As credit growth gradually rose above deposit growth, money market rates firmed up. The average spread of the WACR relative to the policy rate declined to (-)12 bps in 2022-23, from (-)75 bps in 2021-22, in accordance with the withdrawal

Chart II.5.1: Money Market Rates and Policy Corridor



Source: RBI, CCIL, CCIL-Ftrac, FBIL and RBI staff calculations.

Chart II.5.2: Share of Major Segments in Money Market Volume



Source: CCIL and RBI staff calculations.

of accommodation stance of the Reserve Bank.[27] In Q4 of 2022-23, the spread reduced to (-)1 basis point (Chart II.5.1).

II.5.7 Volatility in the call money segment, measured by the coefficient of variation[28] of the WACR, increased to 18.1 in 2022-23 from 4.1 in the previous year.

II.5.8 Average daily volume in the money market[29] increased by 18 per cent to ₹5,36,456 crore during 2022-23 from ₹4,55,224 crore in 2021-22. Of the total money market volume, market share of triparty repo decreased to 72 per cent from 74 per cent last year while the volume in market repo increased to 26 per cent from 24 per cent last year; on the other hand, the share of uncollateralised call money segment remained same at around 2 per cent. In the call money segment, average daily volumes (excluding Saturdays) increased by 37 per cent during the year to ₹12,432 crore (from ₹9,060 crore during 2021-22) partly on account of the increase in cash reserve ratio (CRR) from 4.0 per cent to 4.5 per cent in May 2022 and the gradual decline in surplus liquidity in the system (Chart II.5.2).

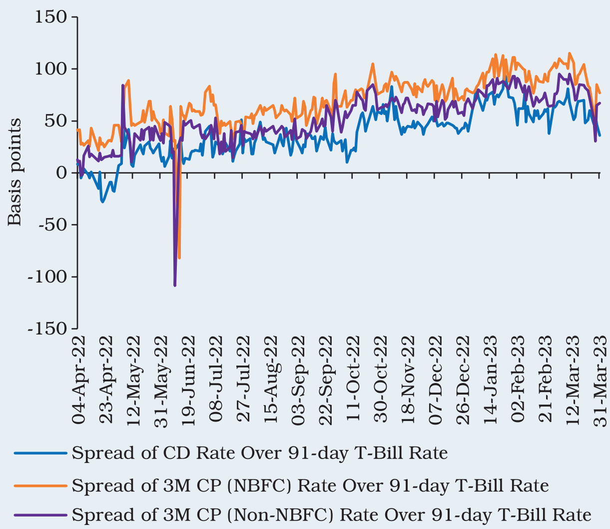
II.5.9 Interest rates on other money market instruments, *viz.,* 91-day Treasury Bills (T-bills), certificates of deposit (CDs) and commercial papers (CPs) generally moved in sync with the overnight rates (call, triparty repo and market repo) and mostly traded around the repo rate till the first rate hike on May 4, 2022; thereafter, remained above the repo rate. The average daily spread of CD rates and CP rates (issued by NBFCs and non-NBFCs) over T-bill rates increased substantially during the year as compared to the previous year (Chart II.5.3). In Q4: 2022-23, the rates increased

[27] Details related to liquidity management operations are covered in Chapter III of this Report.

[28] Coefficient of variation is measured as a ratio of standard deviation to the mean.

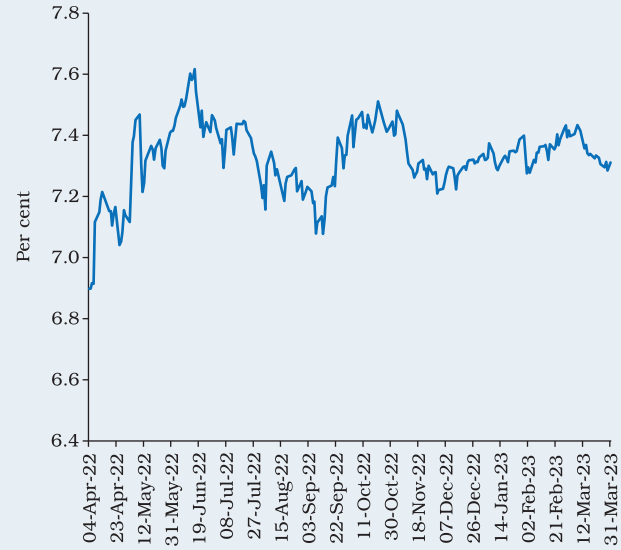
[29] Call money, triparty repo and market repo of both overnight and term segments, excluding Saturdays.

Chart II.5.3: Spread of 3-month CP and CD Rate over 91-day T-bill Rate



Source: Bloomberg, FBIL and RBI staff calculations.

Chart II.5.4: 10-year Generic G-sec Yield



Source: Bloomberg.

above the repo rate, reflecting increase in risk premia, coinciding with the reduction in surplus liquidity.

II.5.10 In the primary market, fresh issuance of CDs increased to ₹6.73 lakh crore during 2022-23 as compared with ₹2.33 lakh crore in 2021-22 as banks took recourse to CDs in an atmosphere of deposit mobilisation trailing credit demand even after raising term deposit rates by a considerable magnitude. New issuance of CPs in the primary market, however, decreased to ₹13.73 lakh crore in 2022-23 from ₹20.19 lakh crore in 2021-22.

3. G-sec Market

II.5.11 Notwithstanding initial market concerns about the size of the combined borrowing programme of the centre and the states, the borrowing programme was completed in an orderly manner with a range bound term spread (details are covered in Chapter VII). During the course of the year, however, both domestic and global developments impacted the evolution of yields. During Q1:2022-23, G-sec yields hardened in response to the announcement of normalisation of the LAF corridor to 50 bps with introduction of the SDF as the new floor of the policy corridor. The repo rate hike of 40 bps and raising of CRR requirement to 4.50 per cent in an off-cycle monetary policy committee (MPC) meeting held in May 2022, against the backdrop of successive high domestic CPI prints, contributed to rise in yields. The 10-year generic yield reached a high of 7.62 per cent on June 16, 2022 and closed the April-June 2022 quarter at 7.45 per cent (Chart II.5.4).

II.5.12 During Q2:2022-23, longer-term yields softened on account of fall in global crude oil prices and market expectations of inclusion of Indian G-secs in global bond indices. Towards the end of the quarter, however, yields started hardening due to rise in global yields and domestic inflation continuing above the upper tolerance level of the inflation target. Over the quarter, the domestic yield curve witnessed flattening as short-term yields increased more than the longer-term yields on account of rate hike expectations. The

10-year generic yield closed the quarter at 7.40 per cent. Yields softened in Q3:2022-23, tracking international crude oil prices and global yields on market assessment of global inflation peaking and associated expectations of lower pace of rate increases in the US. During Q4:2022-23, initially G-sec yields traded rangebound. However, yields rose later tracking global yields, higher than expected CPI and perceived hawkish stance of the MPC. The yields softened by end of 2022-23 tracking global yields and fall in Brent crude oil prices. The 10-year generic yield closed 2022-23 at 7.31 per cent.

II.5.13 With the introduction of the fully accessible route (FAR)[30] with effect from April 1, 2020, FPIs have three routes to invest in G-secs, *viz.,* the general route with investment limits set under the medium-term framework (MTF), voluntary retention route (VRR) and FAR. The limit for FPI investments in G-secs under the MTF for the year 2022-23 was set at ₹4,04,780 crore. The number of securities included under the FAR scheme increased from 17 securities (with outstanding stock of ₹17,58,043 crore as on April 1, 2022) to 26 securities (with outstanding stock of ₹27,96,589 crore as on March 31, 2023). During 2022-23, FPIs registered a net sell of ₹22,641 crore in G-secs under the general route. FPIs also withdrew ₹1,980 crore in G-secs under VRR, which has a combined investment limit of ₹2,50,000 crore for G-secs and corporate bonds. However, FPIs invested ₹31,129 crore under the FAR route during the same period. FPIs sold a net amount of ₹100 crore of state government securities[31] (SGS) during the same period and in the aggregate invested ₹6,408 crore in G-secs and SGSs, across MTF, FAR and VRR segments during 2022-23.

4. Corporate Debt Market

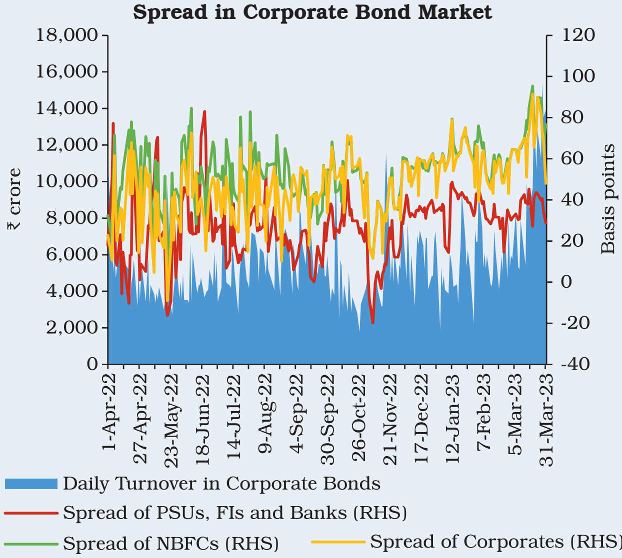
II.5.14 Corporate bond yields hardened during 2022-23 tracking the rise in benchmark G-sec yields and widening of credit spreads. The monthly average yield on AAA-rated 3-year bonds of public sector undertakings (PSUs), financial institutions (FIs) and banks hardened by 193 bps while those on NBFCs and corporates hardened by 215 bps and 220 bps, respectively, in March 2023 *vis-à-vis* March 2022. The monthly average yield on AAA-rated 3-year bonds stood at 7.75 per cent for PSUs, FIs and banks; 8.12 per cent for NBFCs; and 8.07 per cent for corporates in March 2023.

II.5.15 During 2022-23, the monthly average risk premium or spread on AAA-rated 3-year bonds (over 3-year G-sec) increased from 21 bps to 36 bps for PSUs, FIs and banks; 35 bps to 73 bps for NBFCs and 25 bps to 68 bps for corporates. The widening of spreads was visible across tenures and rating segments of corporate bonds. The average daily secondary market turnover in the corporate bond market increased to ₹5,549 crore during 2022-23 from ₹5,430 crore during the previous year (Chart II.5.5). The widening of risk premia is reflective of greater risk aversion or risk-off sentiment in global markets in view of the heightened uncertainty about future macroeconomic outlook, implying higher expected return as a compensation for the extra risk in investment (Box II.5.1).

[30] Under FAR, certain categories of central government securities were opened fully for non-resident investors without any restrictions, apart from being available to domestic investors as well.

[31] As decided in the 32nd Conference of the State Finance Secretaries held on July 7, 2022, the nomenclature of the 'State Development Loan (SDL)' has been changed to 'State Government Security (SGS)'.

Chart II.5.5: Turnover and AAA-rated 3-Year Yield Spread in Corporate Bond Market



Source: SEBI and FIMMDA.

II.5.16 Primary corporate bond issuances rose in the domestic market, while overseas bond issuances moderated in 2022-23. Domestic corporate bond issuances increased to ₹7.6 lakh crore during 2022-23 from ₹6.0 lakh crore during the previous financial year. Private placements remained the preferred channel for corporates, accounting for 98.8 per cent of total resources mobilised through the bond market. The size of outstanding corporate bonds increased by 4.6 per cent y-o-y to ₹42 lakh crore (*i.e.*, 15.4 per cent of GDP) at end-March 2023. Investments by FPIs in outstanding stock of corporate bonds decreased to ₹1.04 lakh crore at end-March 2023 from ₹1.21 lakh crore at end-March 2022. Consequently,

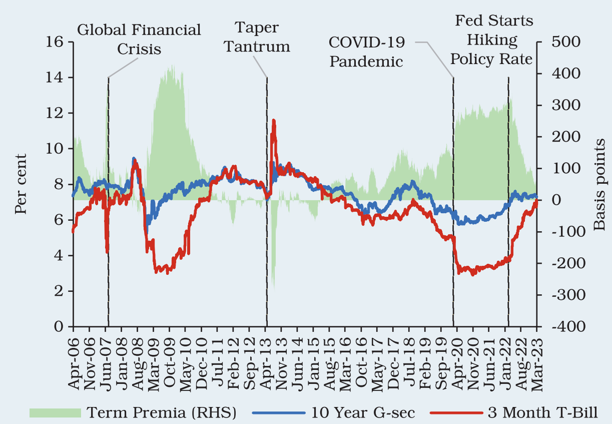
Box II.5.1 Drivers of Term Premia and Risk Premia in Financial Markets

The slope of the yield curve or term premia is defined as the difference in yields between long-term bond and short-term bond. Term premia is considered to be sensitive to the expected future path of growth, inflation, and monetary policy (Kopp, 2018). Movements in time varying term premia and risk premia, conditioned by both global and domestic factors, contain information about the future macroeconomic outlook and market expectations about the future interest rates. In advanced economies, term premia and risk premia are considered to be inversely related as decrease in term premia may imply a slowing economy, which may translate into an increase in credit spreads (Lepone *et. al.*, 2009; Collin *et. al.,* 2001).

An empirical exercise is undertaken to identify the key drivers of term premia and risk premia and their inter-relationship in India. For the exercise, as a broad proxy, term premia is measured as the difference between 10-year G-sec yield and 3-month treasury bill yield. The yield curve has flattened in India since March 2022; however, it has continued to remain upward sloping during 2022-23 (Chart 1).

A forward stepwise selection (FSS) regression technique is used that selects and ranks the variables based on their incremental contribution to goodness of fit or R^2. This process is repeated until adding additional variables does not result in significant increase in R^2 values.

Chart 1: Term Premia



Source: Bloomberg and RBI staff estimates.

Systemic liquidity conditions, G-secs turnover, growth in index of industrial production (IIP) and global economic policy uncertainty are identified as the important drivers of term premia in India. Deficit liquidity conditions tend to raise short-term bond yields in turn leading to a fall in term premia, while higher G-sec turnover entails higher demand for G-secs and lower long-term yields leading to a fall in the term premia (Table 1). Stronger IIP growth steepens

(Contd.)

Table 1: Drivers of Term Premia

Ranking	Variables	Sign
1	Net LAF (Systemic Liquidity)	-
2	G-secs Turnover (G-sec Market Liquidity)	-
3	IIP Growth (Economic Activity)	+
4	Global Economic Policy Uncertainty Index	+

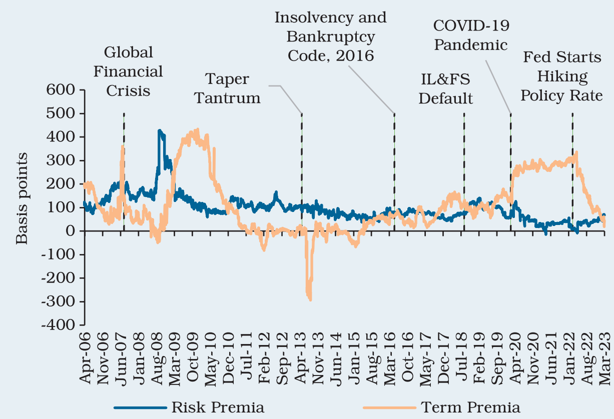
Note: All the above reported variables are statistically significant at 5 per cent level of significance. Other variables used in the FSS regression included CPI inflation (cycle component), net FPI flows in debt market, net government of India market borrowings, and USD/INR exchange rate, but were found to be statistically insignificant. The sample covers the period from November 2012 to September 2022.
Source: RBI staff estimates.

the slope of the yield curve, while an increase in global uncertainty also raises the term premia.

Term premia may be correlated with risk premia, the latter measured as the difference between yield on AAA-rated 3-year corporate bond and similar maturity G-sec yield (Chart 2). The correlation between risk premia and term premia came out to be -0.58, for the sample period.

Estimates using FSS regression reveal that higher term premia lowers risk premia. Other than term premia, variables used in the FSS regression to determine the drivers of risk premia, *i.e.,* India VIX, inflation, change in oil prices, net LAF, US credit spreads and exchange rate volatility (1-month), are found to be statistically insignificant.

Chart 2: Risk Premia and Term Premia



Source: Bloomberg and RBI staff estimates.

References:

1. Collin-Dufresn, P., Goldstein, R. S., & Martin, J. S. (2001), 'The Determinants of Credit Spread Changes', *The Journal of Finance*, 56(6), 2177-2207.

2. Kopp, E., & Williams, P. D. (2018), 'A Macroeconomic Approach to the Term Premium', *International Monetary Fund Working Paper,* No. 2018/140.

3. Lepone, A., & Wong, B. (2009), 'Determinants of Credit Spread Changes: Evidence from the Australian Bond Market', *Australasian Accounting, Business and Finance Journa*l, 3(2), 26-35.

utilisation of the approved limit by FPIs declined to 15.52 per cent at end-March 2023 from 19.94 per cent at end-March 2022.

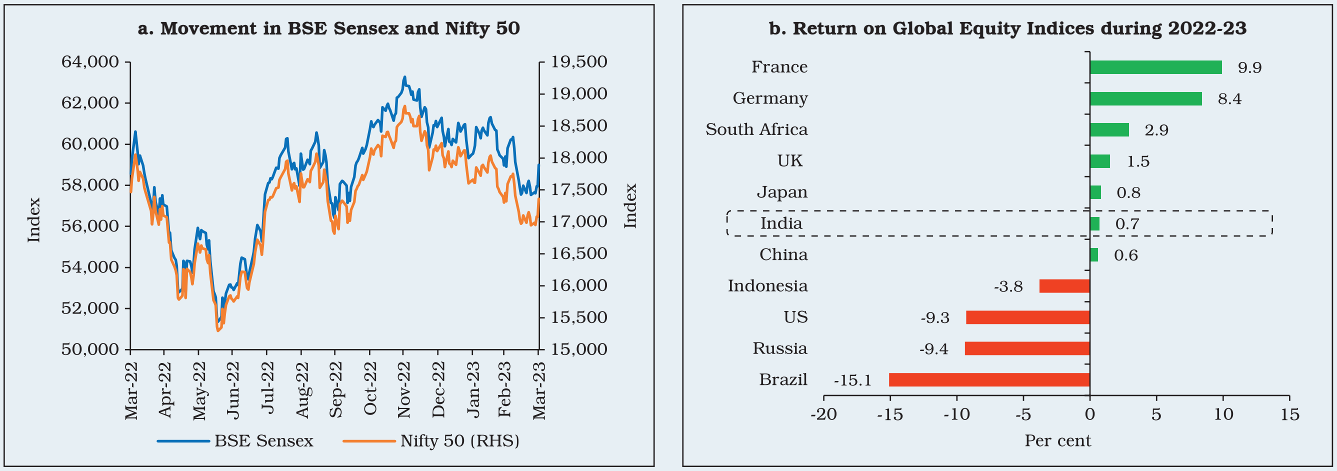
5. Equity Market

II.5.17 The Indian equity market exhibited resilience during 2022-23 despite an environment characterised by heightened global uncertainties. Outperforming most of the EME peers during 2022-23, the BSE Sensex increased by 0.7 per cent to close at 58,992 and the Nifty 50 decreased by 0.6 per cent to close at 17,360 (Chart II.5.6a and Chart II.5.6b). The India VIX, which captures short-term volatility of Nifty 50, averaged 17.5 during 2022-23 as compared with an average of 17.8 during 2021-22.

II.5.18 The Indian equity market registered losses in Q1:2022-23 amid concerns over rising global inflation, monetary policy tightening in the US and COVID-19 related lockdowns in China. Hawkish commentaries by the US Fed fuelled broad based risk-off sentiments. Domestic equities plunged in June 2022 as policy rate hike by the US Fed coupled with unrelenting inflation pressures raised fears of a global economic slowdown triggering sell-offs across the markets.

II.5.19 The benchmark indices bounced back in July 2022, as the decline in global commodity prices and moderating inflation concerns lifted risk appetite, leading to a fall in global bond yields and rise in equity prices. Further, release of robust

Chart II.5.6: Equity Market



Source: BSE, NSE and Bloomberg.

Q1:2022-23 earnings results of Indian corporates restored investors' confidence. FPIs turned net buyers in Indian equity market in July 2022 after a gap of nine months. Notwithstanding weak cues from global markets, Indian equities gained further in August 2022 supported by strong macro-economic data releases and softening of domestic inflation.

II.5.20 The uptrend, however, reversed in September 2022 as increase in policy rate by the US Fed and major global central banks led to another round of sell-off in global equity markets, with FPI flows turning negative in Indian equities during the month. The decline in Indian equity indices was, however, mild relative to other global equity markets.

II.5.21 Indian equities rebounded in October 2022 as global risk appetite improved with the positive economic data releases and FPIs turned net buyers in the Indian equity market. Furthermore, strong Q2: 2022-23 earnings results from the Indian banking and financial sector corporates boosted the market sentiment. The benchmark Indian equity indices scaled fresh peaks during November 2022, supported by improved risk sentiments amidst moderating global and domestic inflation prints coupled with less hawkish US Federal Open Market Committee (FOMC) minutes.

II.5.22 The Bombay Stock Exchange (BSE) Sensex closed at a new all-time high of 63,284 on December 1, 2022 but declined subsequently tracking weak cues from global markets. The risk appetite was dented by indications of further tightening of monetary policy by major global central banks coupled with a resurgence of COVID-19 cases in China.

II.5.23 After remaining range bound in the first half of January 2023, domestic equity markets initially moved higher in the second half tracking positive corporate earnings releases and reduction in windfall tax on crude oil. However, sentiments turned negative towards the end of the month, following the unusual price movement in the stocks of a business conglomerate.

II.5.24 The Union Budget 2023-24 announcements relating to increase in capital expenditure and select direct tax reliefs, statements by financial sector regulators re-affirming soundness of domestic financial and macroeconomic conditions helped boost market sentiments in early February. However, markets came under pressure in the second half amid weak global cues. The risk appetite was dented, following release of the hawkish minutes of the FOMC meeting which stated concerns over elevated inflation and reaffirmed its commitment to bring inflation under control, which led to a sharp rise in the US Treasury yields.

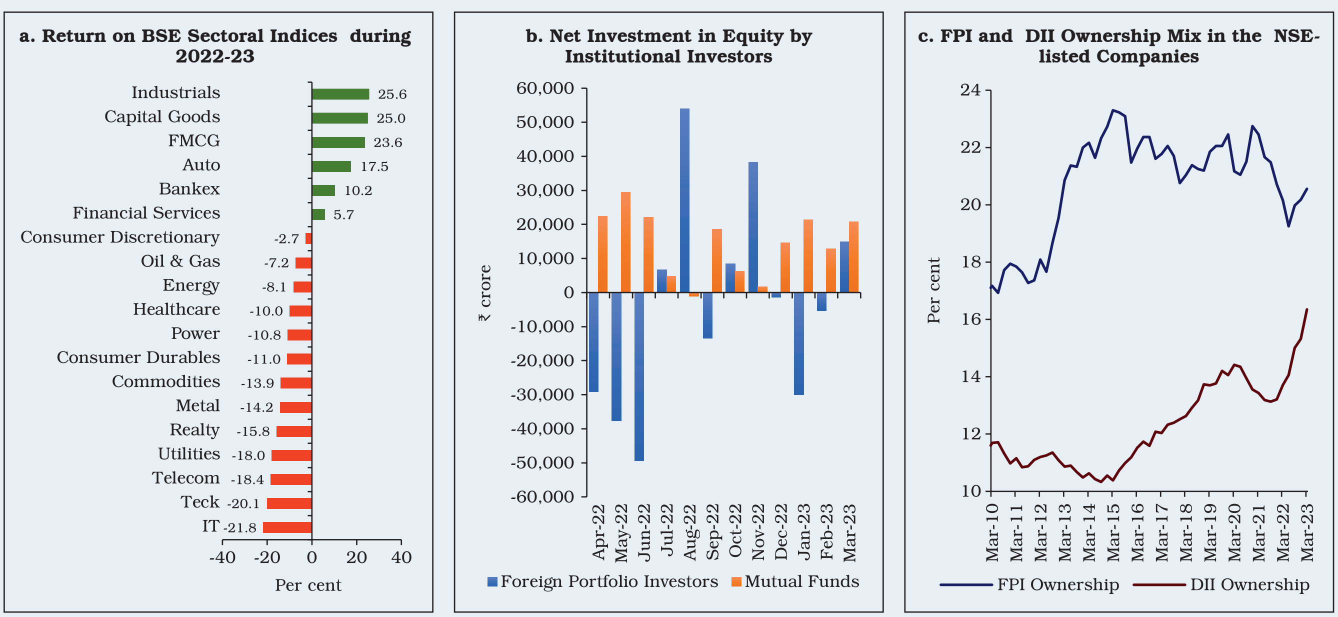
II.5.25 Domestic equities gained in early March 2023 buoyed by positive domestic and global economic data releases. Subsequently, concerns over financial stability in the wake of rapid monetary policy tightening came to the forefront amid banking sector turmoil in the US and Europe. However, markets recovered towards month-end, as contagion fears receded on assurances from several stakeholders and regulators regarding the health of the global banking sector.

II.5.26 On a sectoral basis, companies across industrials, capital goods, fast moving consumer goods, auto and banking outperformed others during the period 2022-23 (Chart II.5.7.a).

II.5.27 FPI flows remained volatile during the year. FPIs made net sales of ₹43,943 crore in the Indian equity market during 2022-23 in comparison with net sales of ₹1.3 lakh crore in the previous financial year. Flows from mutual funds, however, remained supportive. Mutual funds made net purchases of ₹1.7 lakh crore on Indian stock exchanges in 2022-23 (Chart II.5.7.b). The ownership of FPIs in Indian equities (NSE-listed companies) has been declining from the peak share of 23.3 per cent in March 2015 to 20.6 per cent by end-March 2023 as domestic institutional investors (DII) inflows have outpaced FPI inflows (Chart II.5.7.c).

II.5.28 The share of domestic institutional investors (including domestic mutual funds, insurance companies and pension funds*)* in

Chart II.5.7: Sectoral Performance and Institutional Investments in Equity Market



FMCG: Fast Moving Consumer Goods.
Note: Teck includes media and publishing, information technology and telecommunications sectors.
Source: NSDL, CDSL, Prime Database and SEBI.

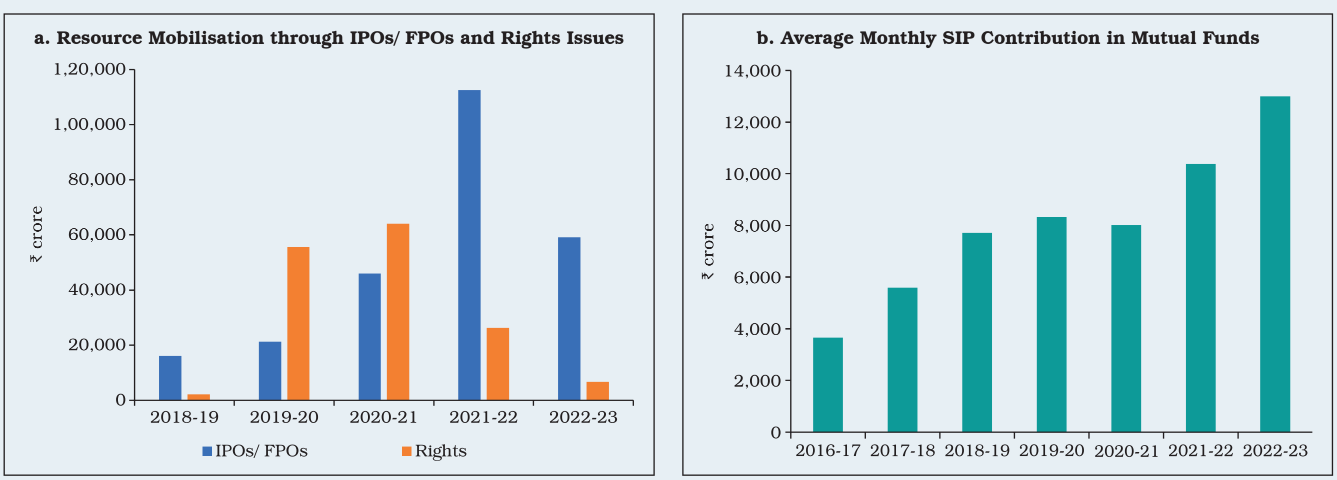
market capitalisation of Indian equities increased further to 16.4 per cent at end-March 2023 from 13.7 per cent at end-March 2022. The share of retail and high net-worth individuals in Indian equities, however, moderated to 9.4 per cent at end-March 2023 from 9.6 per cent at end-March 2022.

Primary Market Resource Mobilisation

II.5.29 The primary segment of the equity market witnessed moderation in fundraising during 2022-23 amid volatile market conditions. Resource mobilisation through initial public offers (IPOs), follow-on public offers (FPOs) and rights issues declined by over 50 per cent to ₹0.66 lakh crore during 2022-23 as against ₹1.39 lakh crore mobilised during the previous year (Chart II.5.8.a and Appendix Table 5). During 2022-23, mobilisation of ₹59,072 crore were made through 165 IPO/ FPO issues, including the Life Insurance Corporation's mobilisation of ₹20,557 crore *via* IPO. The small and medium enterprises (SME) segment of the BSE and NSE witnessed significant traction in 2022-23, with 125 SME IPO issues garnering ₹2,333 crore as against 70 SME IPO/ FPO issues mobilising ₹958 crore during 2021-22. Resource mobilisation through rights issues decreased to ₹6,751 crore during 2022-23 as compared with ₹26,327 crore during the previous year. Resource mobilisation through preferential allotment and qualified institutional placement (QIP) decreased marginally to ₹92,044 crore during 2022-23 as against ₹92,135 crore during 2021-22.

II.5.30 Net resources mobilised by mutual funds decreased by 69.1 per cent to ₹0.76 lakh crore during 2022-23 as against ₹2.47 lakh crore mobilised during the previous financial year. Equity-oriented mutual fund schemes witnessed net mobilisation of ₹1,44,775 crore in 2022-23 as against net mobilisation of ₹1,54,094 crore in the previous year. Average monthly contributions to mutual funds through systematic investment plan (SIP) increased to ₹12,998 crore in 2022-23 from ₹10,381 crore in the previous financial year. Assets under management (AUM) of equity-oriented mutual funds increased by 10.9 per cent to ₹15.2 lakh crore at end-March 2023 from ₹13.7 lakh crore at end-March 2022. Debt-oriented schemes, however, witnessed net redemptions of ₹2.1 lakh crore during 2022-23 as investors

Chart II.5.8: Resource Mobilisation



Source: SEBI and AMFI.

withdrew to avoid price risk amid hardening bond yields (Chart II.5.8.b).

6. Foreign Exchange Market

II.5.31 In the foreign exchange market, turnover increased across both interbank and merchant segments as compared to the previous year.

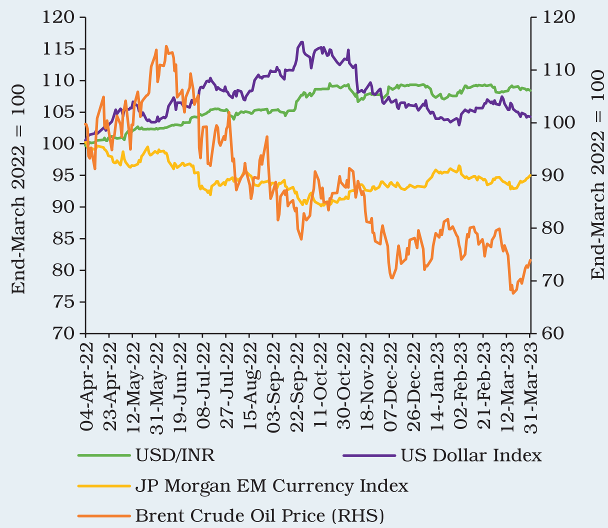
II.5.32 The Indian rupee remained under pressure during Q1:2022-23 amid risk-off sentiments emanating from geopolitical tensions in the Eastern Europe and strengthening of US dollar, as the US Fed stepped up its monetary tightening and began trimming its balance sheet in June 2022. In June 2022, the US Fed raised its benchmark rate by an outsized 75 bps, first time since 1994. US financial conditions tightened as US treasury yields rose to multi-year highs, equities plummeted, and US dollar gained on safe haven demand. The US dollar Index rose by 6.5 per cent during the quarter, its best quarter since 2016. The Indian rupee was under pressure as Brent crude oil remained elevated and volatile during the quarter, averaging around US$ 112 per barrel. The FPIs withdrew around US$ 14 billion during the quarter which also weighed on the Indian rupee. Overall, the Indian rupee weakened by 4.0 per cent during the quarter.

II.5.33 In Q2:2022-23, the US Fed continued to tighten monetary policy with outsized rate hikes to tackle sticky and persistently high inflation, exacerbating volatility across asset classes. The US dollar made strong advances amid growing energy security concerns in Europe and hawkish US Fed commentary at Jackson Hole symposium. A massive sell-off in the United Kingdom assets, triggered by sweeping unfunded tax cuts in a bid to boost economic growth, saw the British pound sinking to record lows, while the US dollar Index surged to a fresh two-decade high of 114.78 on September 28, 2022, amid safe haven demand. India’s widening trade deficit put further pressure on the rupee. However, this quarter also witnessed a halt and somewhat reversal of the nine successive months of equity related FPI outflows (October 2021 to June 2022). Softening in Brent crude oil prices by 23.0 per cent during Q2:2022-23 provided support to the rupee. However, the rupee weakened by 2.9 per cent during the quarter ended September 2022.

II.5.34 The US dollar strength continued during the first half of Q3:2022-23 amid resilient US labour market data and continuation of zero-COVID-19 policies in China. The Indian rupee came under pressure, broadly in line with other emerging market currencies and touched a fresh intra-day low of ₹83.29/USD on October 20, 2022. The MSCI emerging market currency Index slipped to its lowest level since June 2020. However, the US dollar depreciated in November 2022 as inflation in the US showed signs of peaking, spurring talks of a Fed pivot. US financial conditions eased significantly post release of CPI data showing moderation. Further, risk assets got a reprieve as the US Fed moderated its pace of hiking to 50 bps in December 2022 after four consecutive 75 bps hikes. The Brent crude oil prices softened further in December giving up gains made in 2022 weighed by demand concerns as reopening of China was marred by a surge in COVID-19 cases. The rupee recovered from its lows and traded largely range bound for the rest of the quarter and closed lower by 1.7 per cent (Chart II.5.9).

II.5.35 In Q4:2022-23, the US dollar Index continued to soften and touched a low of 100.82 on February 2, 2023, amid improved risk on sentiments following slowing of the pace of rate hikes by US Fed to 25 bps. However, tight labour market conditions and inflation remaining more persistent than previously anticipated, renewed concerns over rates rising higher, leading to

Chart II.5.9: Movement in Rupee, US Dollar, Crude Oil Price and EM Currency Index



Source: Bloomberg.

strengthening of the US dollar Index. However, Indian rupee remained supported as the current account deficit improved and Brent crude oil prices remained range bound. During the quarter, Indian rupee gained 0.7 per cent.

II.5.36 During 2022-23, forward premia has trended lower as interest rate differential between India and US narrowed amid aggressive rate hikes by the US Fed. The difference between policy rates shrunk by 200 bps during 2022-23 with the US Fed hiking rates by 450 bps during the period *vis-à-vis* a hike of 250 bps by the Reserve Bank.

II.5.37 In tandem with the movements in nominal exchange rate of the Indian rupee, the 40-currency nominal/real effective exchange rate (NEER/REER) moved with a depreciating bias during 2022-23. On an average basis, the 40-currency NEER and REER depreciated by 2.0 per cent and 1.8 per cent, respectively, during the year.

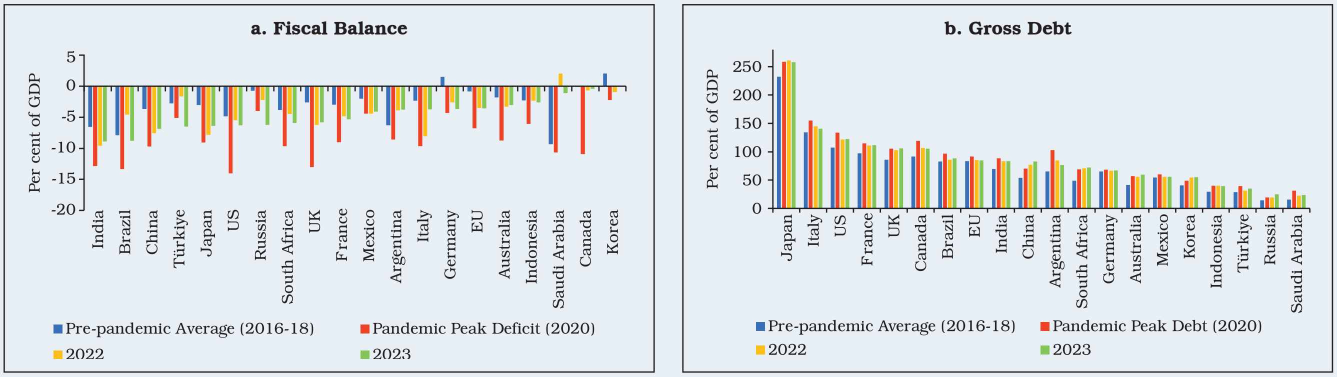
7. Conclusion

II.5.38 Domestic financial market movements remained orderly, notwithstanding persisting impact of global spillovers during the year. Relentless strengthening of the US dollar and aggressive tightening of monetary policy by the US Fed impacted portfolio flows, as in other EMEs. Indian equity market exhibited signs of decoupling, on sustained support from domestic institutional investors; the INR exhibited orderly adjustment with lower volatility relative to many other EMEs. The money market trends moved in alignment with the tightening of policy rate cumulatively by 250 bps and the change in policy stance towards withdrawal of accommodation. Notwithstanding initial concerns about the size of the combined borrowing programme of the centre and the states, the movements of yields in the G-sec market remained range bound. Going forward, financial markets will be conditioned by domestic macroeconomic outlook as also the future path of US monetary policy and the strength of the US dollar.

II.6 GOVERNMENT FINANCES

II.6.1 The escalation of geopolitical conflict following the war in Ukraine led to a sharp rise in food and energy prices, prompting governments across the world to implement targeted measures, including energy tax cuts, price subsidies and cash transfers, to mitigate the impact of the cost of living crisis on households and businesses. Fiscal deficit and debt, however, moderated in most of the G20 countries in 2022, reflecting the unwinding of pandemic-related measures (Fiscal Monitor, October 2022, IMF) [Chart II.6.1]. In India, extensive targeted fiscal measures were undertaken to contain inflation during 2022-23, while pursuing fiscal consolidation accompanied by large increase in capex aimed at bolstering macro-economic stability and supporting growth and investment activity.

Chart II.6.1: Fiscal Balance and Gross Debt in G20 Countries



US: United States of America. UK: United Kingdom. EU: European Union.

Note: Data for India has been sourced from the World Economic Outlook (WEO), IMF to ensure comparability with other countries. However, this may be at variance with data reported in Union Budget documents or the Reserve Bank's publications as the IMF follows different accounting practices and conventions than those followed by the Government of India.

Source: World Economic Outlook, April 2023, IMF.

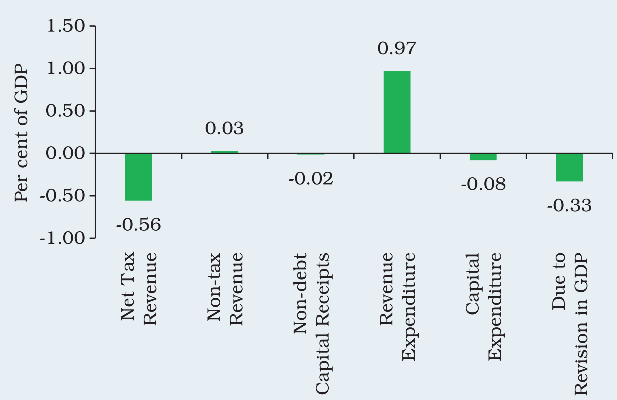
II.6.2 Against this backdrop, sub-sections 2 and 3 present the position of central government finances in 2022-23 and 2023-24, respectively. Sub-sections 4 and 5 outline the developments in state government finances during 2022-23 and 2023-24. General government finances are discussed in sub-section 6. The final section sets out concluding remarks.

2. Central Government Finances in 2022-23

II.6.3 The gross fiscal deficit (GFD) of the Union government declined from 6.75 per cent of GDP in 2021-22 to 6.45 per cent of GDP in 2022-23 revised estimates (RE)[32], in line with the budgeted target of 6.44 per cent. There were, however, sizeable deviations in revenues and expenditure from their budgeted levels (Chart II.6.2).

II.6.4 On the back of soaring crude oil and commodity prices, the central government announced several measures during April-May 2022 to shield domestic consumers from high prices - additional fertiliser subsidy was approved for the period from April to September 2022; excise duty on petrol and diesel was reduced by ₹8 and ₹6 per litre, respectively; LPG subsidy of ₹200 per 14.2 kilogram LPG cylinder was announced

Chart II.6.2: Contribution to Fiscal Deviation in 2022-23 RE *vis-à-vis* BE



BE: Budget Estimates. RE: Revised Estimates.

Note: Negative contribution denotes increase in receipts or cut in expenditure or an upward revision in GDP from BE to RE as these help in attainment of budgeted fiscal deficit target. Conversely, positive contribution denotes lower receipts or higher expenditure from BE to RE, as these contribute to slippage from the budgeted fiscal deficit target.

Source: Union Budget documents and RBI staff estimates.

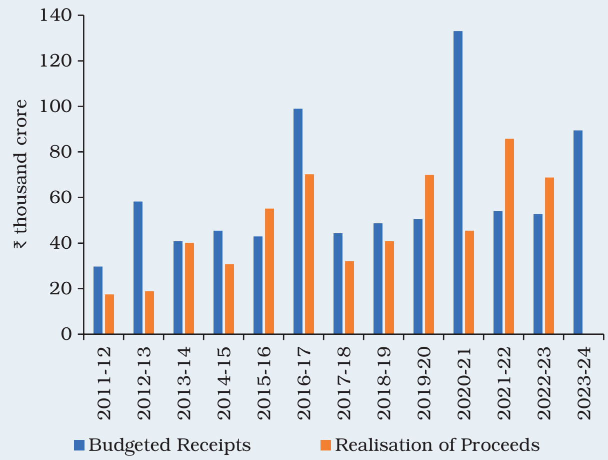
32 Refer to footnote 1 of Chapter I of this Report.

for *Pradhan Mantri Ujjwala Yojana* (PMUY) beneficiaries; and customs duties on plastics and iron and steel products were rejigged[33]. Further, the *Pradhan Mantri Garib Kalyan Anna Yojana* was extended - Phase VI (April - September 2022) and Phase VII (October - December 2022) while free foodgrains to about 81.4 crore beneficiaries under the National Food Security Act (NFSA) for one year from January 1, 2023 was announced. As a result, subsidy expenditure overshot budget estimates (BE) by ₹2.1 lakh crore (food subsidy increased by ₹0.8 lakh crore and fertiliser subsidy increased by ₹1.2 lakh crore), leading to an increase in revenue expenditure by 1.0 per cent of GDP (₹2.6 lakh crore) in 2022-23 (RE)[34] over BE.

II.6.5 Meanwhile, the government remained committed to capital spending, and as a result capital outlay (capital expenditure *less* loans and advances) exceeded budget estimates by around ₹10,000 crore. Loans and advances, however, witnessed a shortfall of around ₹32,000 crore, resulting in a marginal shortfall in overall capex by 0.1 per cent of GDP (around ₹22,000 crore) in 2022-23 (RE) *vis-à-vis* the BE.

II.6.6 On the receipts side, tax revenues remained robust, surpassing BE by 0.6 per cent of GDP (₹1.5 lakh crore) as an increase in corporation tax, income tax and goods and services tax (GST) revenues outweighed lower excise and customs collections. Non-tax receipts fell short of budgeted targets in 2022-23 (RE) due to lower dividend transfers by the Reserve Bank, but the shortfall

Chart II.6.3: Spectrum Revenues: Actual *vis-à-vis* Budgeted



Note: Spectrum revenues refers to receipts under 'other communication services' which mainly relate to the license fees from telecom operators and receipts on account of spectrum usage charges.
Source: Union Budget documents.

was capped at 0.03 per cent of GDP (₹7,900 crore) on the back of higher interest receipts, spectrum revenues and dividend transfers from public sector enterprises (Chart II.6.3). Disinvestment receipts are estimated at ₹50,000 crore in 2022-23 (RE) *vis-à-vis* the budgeted target of ₹65,000 crore.

3. Central Government Finances in 2023-24

II.6.7 For 2023-24, the Union Budget has prioritised capital expenditure to accelerate growth while maintaining fiscal prudence to strengthen macroeconomic stability. Reiterating its commitment to reduce gross fiscal deficit (GFD) below 4.5 per cent of GDP by 2025-26, the government has budgeted GFD at 5.9 per cent of GDP[35] in 2023-24, a consolidation of 53

[33] Import duty on key raw materials and inputs for the steel and plastic industry was reduced while levying export duty on some steel products as well as hike on the export duty on iron ore and concentrates.

[34] The second batch of Supplementary Demand for Grants for the financial year 2022-23 was proposed on March 13, 2023, which involves a net cash outgo of ₹1.48 lakh crore (of which, revenue expenditure is ₹1.44 lakh crore and capital expenditure is ₹3,755 crore).

[35] Nominal GDP for 2023-24 (BE) has been projected at ₹3,01,75,065 crore assuming 10.5 per cent growth over the preceding year (*viz.*, ₹2,73,07,751 crore as per the first advance estimates for 2022-23 released by the Ministry of Statistics and Programme Implementation, Government of India on January 6, 2023).

Table II.6.1: Central Government's Fiscal Performance

(Per cent of GDP)

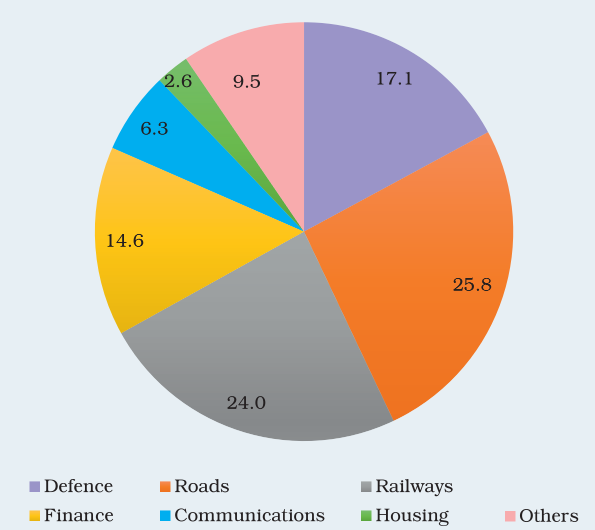
Item	2004-08	2008-10	2010-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23 (BE)	2022-23 (RE)	2023-24 (BE)
1	2	3	4	5	6	7	8	9	10	11	12	13	14
I. Non-debt Receipts	11.0	9.7	9.5	9.1	9.4	9.1	8.8	8.7	8.5	9.4	8.9	8.9	9.0
II. Gross Tax Revenue (a+b)	10.7	10.4	10.2	10.6	11.1	11.2	11.0	10.0	10.2	11.5	10.7	11.2	11.1
a) Direct Tax	5.1	6.0	5.7	5.4	5.5	5.9	6.0	5.2	4.8	6.0	5.5	6.1	6.0
b) Indirect Tax	5.6	4.4	4.5	5.2	5.6	5.4	5.0	4.8	5.5	5.5	5.2	5.1	5.1
III. Net Tax Revenue	7.9	7.6	7.3	6.9	7.2	7.3	7.0	6.7	7.2	7.7	7.5	7.7	7.7
IV. Non-tax Revenue	2.2	1.8	1.8	1.8	1.8	1.1	1.2	1.6	1.0	1.6	1.0	1.0	1.0
V. Non-debt Capital Receipts	0.9	0.3	0.4	0.5	0.4	0.7	0.6	0.3	0.3	0.2	0.3	0.3	0.3
VI. Total Expenditure	14.5	16.1	14.4	13.0	12.8	12.5	12.2	13.4	17.7	16.2	15.3	15.4	14.9
VII. Revenue Expenditure	12.1	14.4	12.6	11.2	11.0	11.0	10.6	11.7	15.5	13.6	12.4	12.7	11.6
VIII. Capital Expenditure	2.4	1.7	1.8	1.8	1.8	1.5	1.6	1.7	2.1	2.5	2.9	2.7	3.3
IX. Revenue Deficit	2.0	5.0	3.5	2.5	2.1	2.6	2.4	3.3	7.3	4.4	3.8	4.1	2.9
X. Gross Fiscal Deficit	3.5	6.3	4.9	3.9	3.5	3.5	3.4	4.6	9.2	6.8	6.4	6.5	5.9

BE: Budget Estimates. RE: Revised Estimates.
Note: Going by the principle of using latest available GDP data for any year, the nominal GDP for 2022-23 (RE) is as per the SAE released on February 28, 2023. In view of this, the fiscal indicators as per cent of GDP given in this section, may vary from those reported in the Union Budget documents. Also refer to footnote 1 of Chapter I of this Report.
Source: Union Budget documents.

basis points over 2022-23 (RE). This consolidation is sought to be achieved through containment of revenue expenditure at 11.6 per cent of GDP, even as capital expenditure is budgeted to rise to 3.3 per cent of GDP, from an average of 1.7 per cent of GDP during 2010-20 (Table II.6.1).

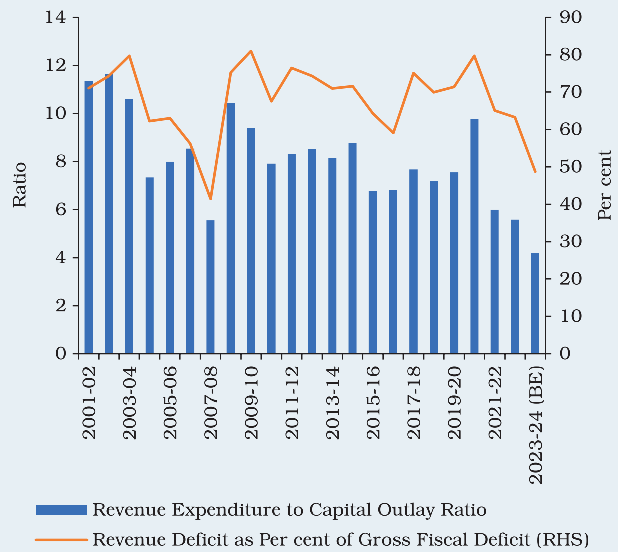
II.6.8 On the expenditure front, a rollback of spending on subsidies is envisaged in 2023-24, on expectations of softening urea prices and scaling down of pandemic related food subsidies. Food and fertiliser subsidies are budgeted to contract by 31.3 per cent and 22.3 per cent, respectively, in 2023-24 (BE), thereby capping revenue spending growth at 1.2 per cent. On the other hand, capital expenditure is budgeted to increase by 37.4 per cent with the Ministries of Road and Railways accounting for almost half of the budgeted capex (Chart II.6.4). Under capital expenditure, the scheme for providing financial assistance to states for capital investment has been extended to 2023-24 (BE) with an enhanced allocation of ₹1.3 lakh crore. Capital expenditure excluding loans and advances, *i.e.*, capital outlay is budgeted to rise to 2.8 per cent of GDP in 2023-24 (BE),

Chart II.6.4: Ministry-wise Breakdown of Capital Expenditure in 2023-24 (Per cent of Total)



Source: Union Budget documents.

Chart II.6.5: Quality of Expenditure



Source: Union Budget documents.

the highest ever in the post-liberalisation period, reflecting a sustained improvement in the quality of spending (Chart II.6.5).

II.6.9 On the receipts side, gross tax revenue is budgeted to increase by 10.4 per cent, with a budgeted buoyancy of 0.96 that is close to the trend level (proxied by the average from 2010-11 to 2018-19) [Table II.6.2]. GST collections have been steadily improving on the back of efforts to improve compliance and have been budgeted at 3.2 per cent of GDP in 2023-24, the highest since the inception of GST (Chart II.6.6). Non-tax receipts are budgeted to increase by 15.2 per cent, while the disinvestment target has been set at ₹51,000 crore.

II.6.10 The Union Budget 2023-24 envisages restrained market borrowings, which will open up space for private investment. Gross market borrowings for 2023-24 are pegged at ₹15.43 lakh crore (5.1 per cent of GDP) as against ₹14.21 lakh crore in 2022-23 RE (5.2 per cent of GDP). Market borrowings (net) are the main

Table II.6.2: Tax Buoyancy

	Average Tax Buoyancy (2010-11 to 2018-19)	2022-23 (BE)	2022-23 (RE)	2023-24 (BE)
1	2	3	4	5
1. Gross Tax Revenue	1.11	0.86	0.77	0.96
2. Direct Taxes	1.03	1.22	1.08	0.96
(i) Corporation Tax	0.92	1.20	1.09	0.96
(ii) Income Tax	1.27	1.28	1.09	0.96
3. Indirect Taxes	1.25	0.51	0.44	0.95
(i) GST	-	1.40	1.40	1.10
(ii) Customs Duty	0.31	1.14	0.32	1.01
(iii) Excise Duty	0.91	-1.34	-1.19	0.54

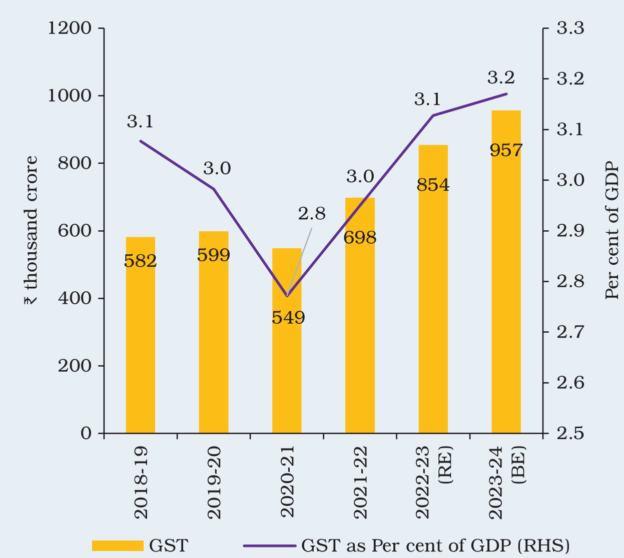
- : Not available. GST: Goods and Services Tax.

Note: Tax buoyancy is defined as the responsiveness of tax revenue to changes in nominal GDP and to discretionary changes in tax policies.Calculations for 2022-23 (BE) are made over 2021-22 (RE).

Source: RBI staff calculations based on Union Budget documents for various years.

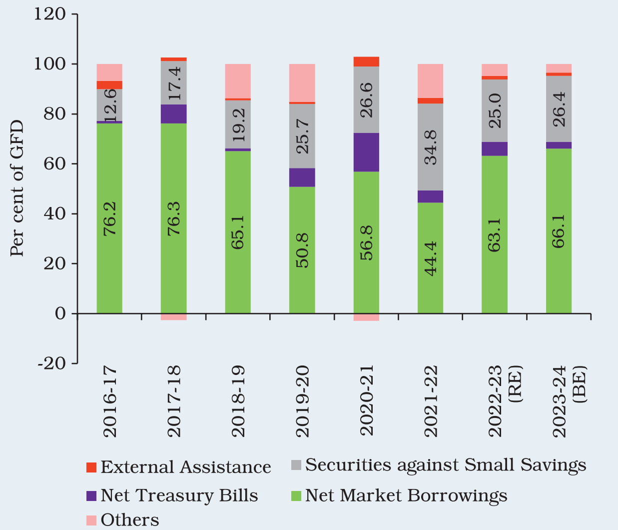
source of financing GFD (66.1 per cent) in 2023-24 (BE) followed by small savings (26.4 per cent) [Chart II.6.7]. Further, a build-up of cash balances has been budgeted, which provides a financing buffer to the Government of India.

Chart II.6.6: GST Collections



Source: Union Budget documents.

Chart II.6.7: Sources of Financing Gross Fiscal Deficit



Source: Union Budget documents.

Table II.6.3: Fiscal Position of States/UTs

(Amount in ₹ lakh crore)

Item	2018-19	2019-20	2020-21	2021-22 (RE)	2022-23 (BE)
1	2	3	4	5	6
I. Revenue Receipts	26.2 (13.9)	26.7 (13.3)	25.9 (13.1)	33.5 (14.2)	38.6 (14.9)
II. Capital Receipts	0.42 (0.2)	0.57 (0.3)	0.23 (0.1)	0.27 (0.1)	0.2 (0.1)
III. Revenue Expenditure	26.4 (14.0)	27.9 (13.9)	29.6 (14.9)	35.7 (15.1)	39.4 (15.3)
IV. Capital Expenditure	4.9 (2.6)	4.6 (2.3)	4.6 (2.3)	6.9 (2.9)	8.2 (3.2)
a. Capital Outlay	4.4 (2.3)	4.2 (2.1)	4.1 (2.1)	6.3 (2.7)	7.5 (2.9)
b. Loans and Advances by States	0.5 (0.2)	0.4 (0.2)	0.4 (0.2)	0.6 (0.3)	0.6 (0.3)
V. Fiscal Deficit	4.6 (2.4)	5.2 (2.6)	8.0 (4.1)	8.8 (3.7)	8.8 (3.4)
VI. Revenue Deficit	0.2 (0.1)	1.2 (0.6)	3.7 (1.9)	2.2 (0.9)	0.8 (0.3)

Note: Figures in parentheses are per cent of GDP.
Source: Budget documents of state governments and CAG.

4. State Finances in 2022-23

II.6.11 States and Union Territories (UTs) have budgeted for a consolidated GFD of 3.4 per cent of GDP for 2022-23 (Table II.6.3). The ratio is lower than that in 2021-22 (RE) and is within the indicative target of 4 per cent set by the Centre. States have budgeted for higher revenue collections, primarily in states' goods and services tax (SGST), excise duties and sales tax/VAT. States' revenue spending and capital outlay are also budgeted to increase.

II.6.12 As per the data available till February 2023, states' GFD during April-February 2022-23 was marginally higher than the corresponding period of the previous year. States' revenue receipts posted a strong y-o-y growth of 14.1 per cent, primarily driven by robust tax collections. In November 2022, the central government released two instalments of tax devolution amounting to ₹1.16 lakh crore as against the usual monthly devolution of ₹0.58 lakh crore. The Centre also released ₹0.17 lakh crore to the states/UTs as GST compensation for April-June 2022. Overall, while the rise in revenue expenditure during April-February, 2022-23 was higher than a year ago, the growth in capex is lower despite the Centre augmenting states' resources by ₹1 lakh crore through 50-year interest-free loan.

5. State Finances in 2023-24

II.6.13 The Centre has put limit to state's fiscal deficit at 3.5 per cent of gross state domestic product (GSDP) for 2023-24, of which 0.5 per cent is tied to power sector reforms. As per information available for 26 states/UTs, the gross fiscal deficit for 2023-24 is estimated to be 3.2 per cent of GSDP, well within the Centre's target (Table II.6.4). The gross transfer to the states is budgeted to increase in 2023-24 (BE), largely due to enhanced tax devolution and an increase in allocation for special assistance (as loans) to states for capex. Finance Commission grants are expected to decline in 2023-24, primarily due to lower transfers under post devolution revenue deficit grants, while the budgeted transfers to

Table II.6.4: State Government Finances 2023-24*: Key Indicators

(Per cent of GSDP)

Item	2021-22	2022-23 (RE)	2023-24 (BE)
1	2	3	4
Revenue Deficit	0.4	0.6	0.2
Gross Fiscal Deficit	2.7	3.5	3.2
Primary Deficit	0.5	1.4	1.1

*: Data pertain to twenty-six states/UTs that have presented their final budgets for 2023-24.
Source: Budget documents of state governments.

the local bodies and health sector have seen a sharp rise.

II.6.14 To spur states' investment in infrastructure and incentivise them for complementary policy action, the Centre has decided to continue with the 50-year interest-free loan to states for one more year with an enhanced allocation of ₹1.3 lakh crore. The entire loan amount will have to be spent in 2023-24. A part of these loans will be contingent on states increasing their actual capital expenditure. A portion of the outlay will also be allocated for scrapping old government vehicles, urban planning reforms and actions, financing reforms in urban local bodies, housing for police personnel, constructing Unity Malls[36], libraries and digital infrastructure for children and adolescents, and states' share of capital expenditure of central schemes. Furthermore, through property tax governance reforms and ring-fencing user charges on urban infrastructure, cities will be incentivised to improve their credit worthiness for municipal bonds. Additionally, an Urban Infrastructure Development Fund (UIDF) will be established through priority sector lending shortfall. The fund will be managed by the National Housing Bank (NHB) and will be used by public agencies to create urban infrastructure in tier 2 and tier 3 cities.

6. General Government Finances

II.6.15 The general government deficit and debt moderated to 9.4 per cent and 86.5 per cent of GDP, respectively, in 2022-23 (BE) from the peak levels of 13.1 per cent and 89.4 per cent in 2020-21, respectively (Appendix Table 7).

7. Conclusion

II.6.16 While committing to credible fiscal consolidation, the government has led the revival in investment cycle through augmented capital expenditure, recognising its multiplier effects by crowding-in private investment and lifting the economy's growth potential. Going forward, fiscal consolidation will need to be sustained to rebuild policy buffers and ensure debt sustainability. Continued thrust on digitisation could aid in greater formalisation of the economy and thereby higher tax base, generating the necessary resources to undertake developmental expenditure.

II.7 EXTERNAL SECTOR

II.7.1 India's external sector was buffeted by deteriorating global macro-financial conditions following the war in Ukraine that impacted trade and capital flows. Even as domestic economic recovery kept import demand high, a slowdown in global demand weighed on India's exports. These, together with the adverse net terms of trade shock associated with record high global commodity prices, expanded India's merchandise trade deficit during the year. Notwithstanding a robust growth in services exports and higher remittance receipts, the widening of merchandise trade deficit and a

[36] It would focus on promoting and selling the state's 'one district, one product', geographical indication products and other handicraft products. It will also provide space to promote similar products from other states.

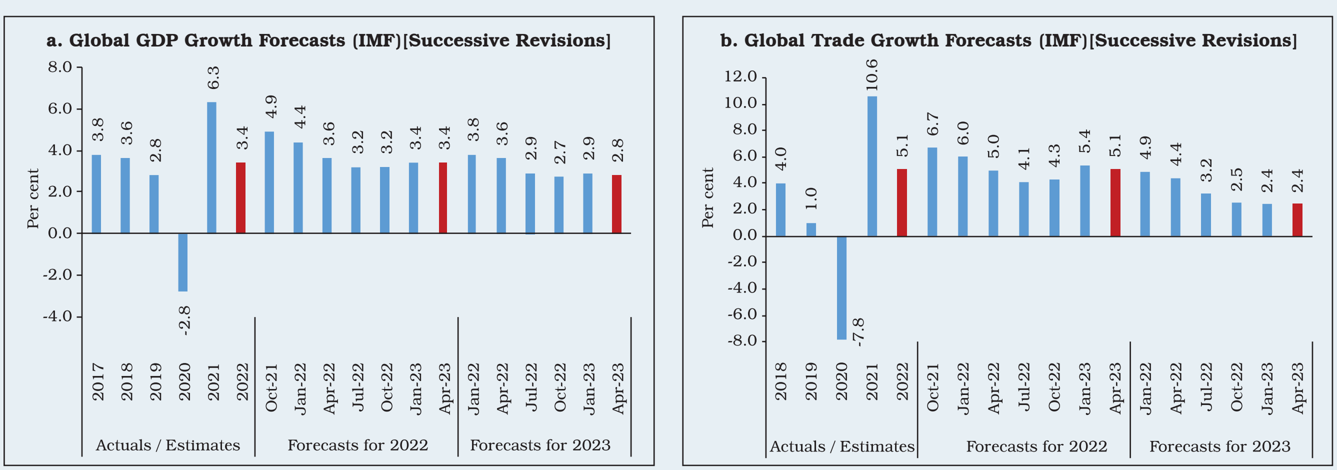
higher outgo on the primary income account led the current account deficit (CAD) to widen during the year, which peaked in Q2. While net capital inflows dominated by foreign direct investment (FDI) and banking capital supported financing of CAD, significant foreign portfolio outflows during the year necessitated the drawdown of foreign exchange reserves. Valuation losses, primarily due to a large appreciation of the US dollar against non-dollar reserve currencies, constituted a major part of the depletion of foreign exchange reserves during the year. Nonetheless, the external sector stood resilient against global spillovers, with India's vulnerability indicators faring better than its peer emerging market economies (EMEs).

II.7.2 Set against this backdrop, sub-section 2 presents a brief overview of the global economic and financial conditions against which these shifts in external balances occurred. This is followed by a discussion on merchandise trade and invisibles in sub-sections 3 and 4, respectively. Sub-section 5 presents an analysis of capital flows. An assessment of external vulnerability indicators is provided in sub-section 6, followed by concluding observations.

2. Global Economic Conditions

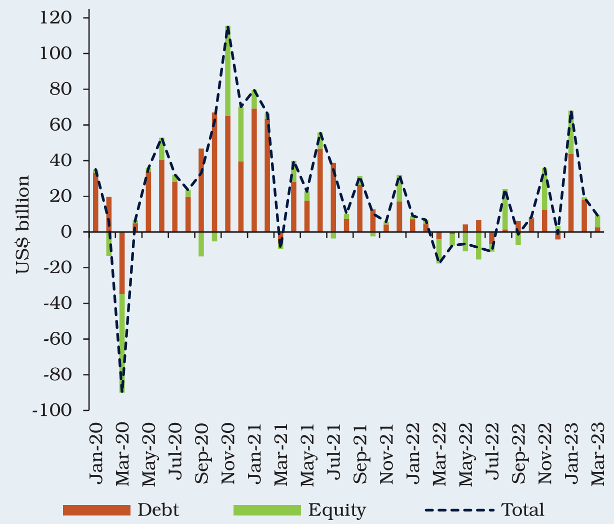
II.7.3 With the war in Ukraine continuing longer than initially thought and entering its second year, the global macroeconomic conditions deteriorated during 2022-23. As a result, the IMF revised down its global GDP and trade growth estimates for 2022 in successive rounds between October 2021 and October 2022 (Chart II.7.1a). Global financial conditions tightened, reflecting synchronised monetary policy tightening to contain rising inflation amidst repricing of risks in an atmosphere of global spillovers and country-specific factors, sparking-off scrambles for safe havens and relentless appreciation of the US dollar. Notwithstanding initial fears of an imminent global recession, and possibility of a hard landing, the global economy exhibited resilience, prompting the IMF to revise its global growth estimate upward to 3.4 per cent in January 2023, which remained unchanged thereafter. On similar lines, projection for global trade (goods and services) growth was also revised upward by the IMF to 5.1 per cent in April 2023 from 4.3 per cent in October 2022 (Chart II.7.1b).

Chart II.7.1: Real GDP and World Trade* Volume Growth



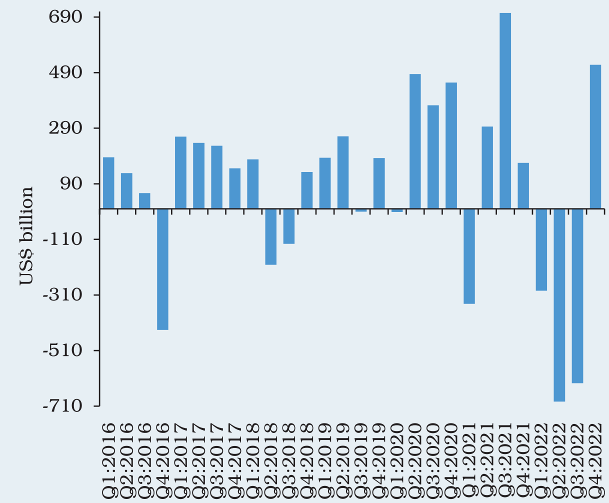
*: Goods and services.
Source: IMF.

Chart II.7.2: Portfolio Investment Flows to EMEs



Source: Institute of International Finance.

Chart II.7.3: Change in Global Foreign Exchange Reserves*



*: Indicates quarter-on-quarter change in official reserve assets.
Source: IMF.

II.7.4 With risk-off sentiment dominating markets, emerging market economies (EMEs) experienced portfolio outflows during the year (Chart II.7.2). World foreign exchange reserves also declined, reflecting the impact of both central bank interventions on the foreign exchange market as also valuation losses on account of the appreciation of the US dollar, the principal reserve currency (Chart II.7.3).

3. Merchandise Trade

II.7.5 The global slowdown has dampened India's merchandise exports. Nevertheless, merchandise exports at US$ 450.4 billion in 2022-23 grew by 6.7 per cent as compared with 44.6 per cent in the previous year. Merchandise imports at US$ 714.0 billion grew at a higher pace of 16.5 per cent during the same period (Table II.7.1).

II.7.6 Petroleum products were the major driver of export growth as non-oil exports declined marginally in 2022-23. Among non-oil products, electronic goods, rice, organic and inorganic chemicals, and drugs and pharmaceuticals drove exports whereas engineering goods, cotton yarn/fabrics, plastic and linoleum, iron ore, and gems and jewellery dragged down the overall export performance (Chart II.7.4).

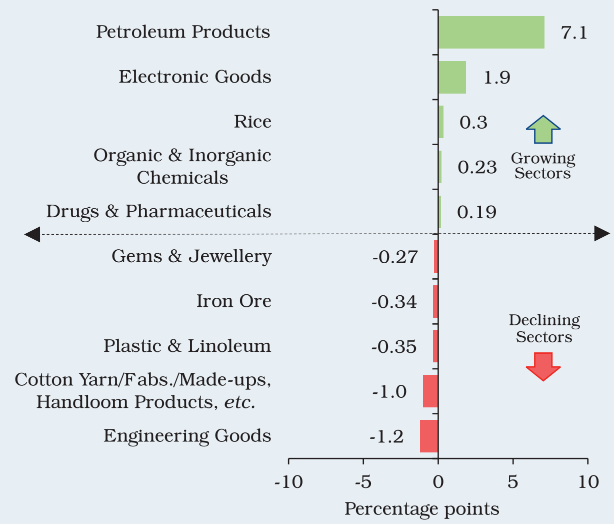
Table II.7.1: India's Merchandise Trade

	Value in US$ Billion				Growth Rate (Y-o-Y)			
	2019-20	2020-21	2021-22	2022-23	2019-20	2020-21	2021-22	2022-23
1	2	3	4	5	6	7	8	9
Exports								
Q1	80.9	51.5	95.5	121.0	-1.4	-36.4	85.7	26.6
Q2	78.3	74.2	102.7	110.7	-3.9	-5.2	38.5	7.8
Q3	79.1	75.8	106.8	104.6	-1.9	-4.2	41.0	-2.1
Q4	75.1	90.4	117.0	114.1	-12.7	20.4	29.3	-2.4
Annual	313.4	291.8	422.0	450.4	-5.1	-6.9	44.6	6.7
Imports								
Q1	130.1	61.3	127.0	183.5	1.1	-52.9	107.2	44.5
Q2	118.0	90.7	147.5	189.0	-11.3	-23.1	62.7	28.1
Q3	116.1	110.8	167.0	176.1	-11.2	-4.6	50.7	5.4
Q4	110.5	131.7	171.6	165.4	-9.2	19.1	30.3	-3.6
Annual	474.7	394.4	613.1	714.0	-7.7	-16.9	55.4	16.5
Trade Balance								
Q1	-49.2	-9.8	-31.4	-62.6				
Q2	-39.7	-16.5	-44.8	-78.3				
Q3	-37.0	-35.1	-60.2	-71.5				
Q4	-35.4	-41.2	-54.6	-51.3				
Annual	-161.3	-102.6	-191.0	-263.6				

Source: DGCI&S and PIB.

II.7.7 Petroleum exports in value terms showed a robust growth of 44.4 per cent during 2022-23 though export volumes contracted marginally by 0.4 per cent, reflecting the gains made by the exporters on the back of elevated international prices (Chart II.7.5a). Refined oil export earnings increased particularly from the European market (Chart II.7.5b). As exports became increasingly remunerative owing to the sharp rise in international crude prices, the government imposed a cess on exports of diesel, petrol, and aviation turbine fuel to ensure sufficient availability domestically, considering the recovery in domestic aggregate demand condition. This has been reviewed fortnightly and as per the latest revision, effective April 19, 2023, there is no export cess on any of the refined products.

Chart II.7.4: Relative Contribution of Major Sectors to Export Growth (2022-23 over 2021-22)

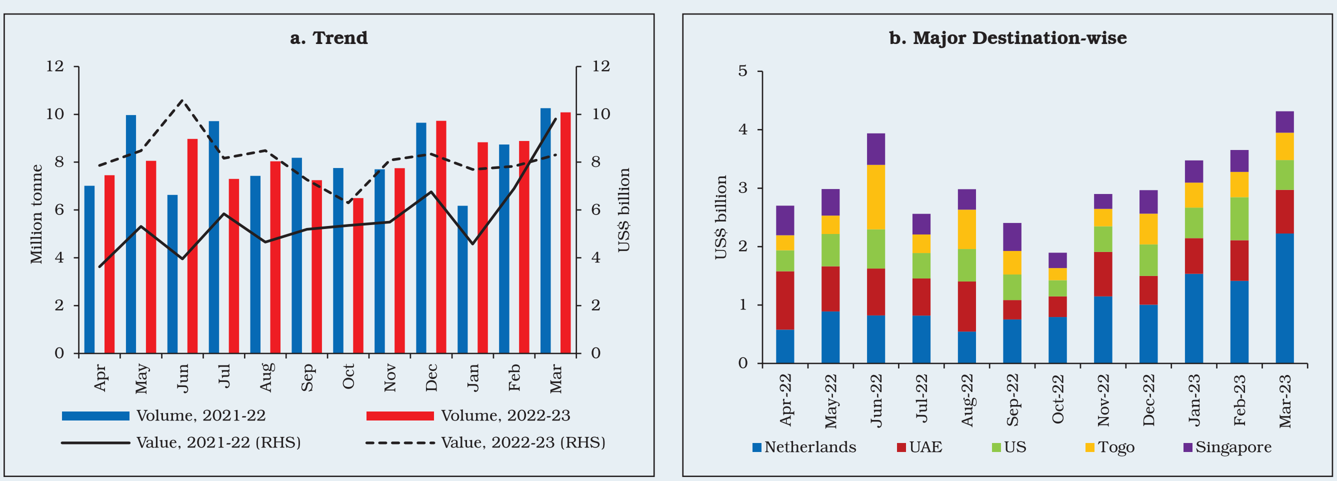


Source: DGCI&S.

II.7.8 India's engineering exports at US$ 107.0 billion contracted by 4.6 per cent during 2022-23, while engineering exports excluding iron and steel recorded a growth of 4.9 per cent (Chart II.7.6a). Commodity-wise, iron and steel (which account for about one-fifth of total engineering exports) plummeted by 41.5 per cent during 2022-23 as a consequence of subdued international demand and imposition of export duty on steel in May 2022, which was removed in November 2022.

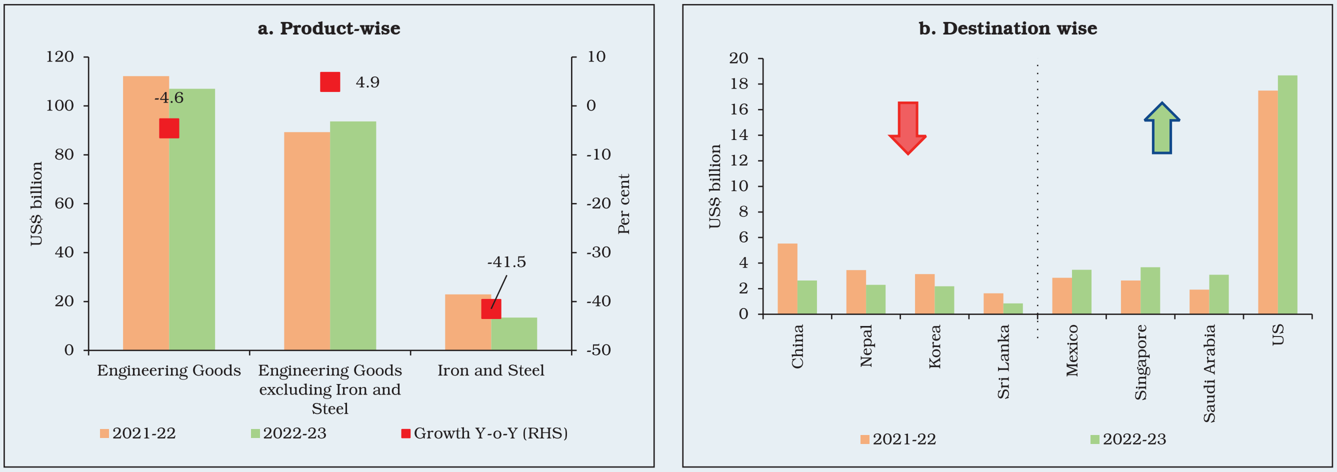
II.7.9 Major markets for engineering exports from India include the US, China, the UAE, Italy, and Germany. Subdued global demand impacted engineering goods exports from India to some of these countries (Chart II.7.6b). Strong US dollar and the high import content of engineering goods also contributed to the decline.

Chart II.7.5 : India's Exports of Petroleum Products



Source: DGCI&S.

Chart II.7.6: India's Exports of Engineering Goods



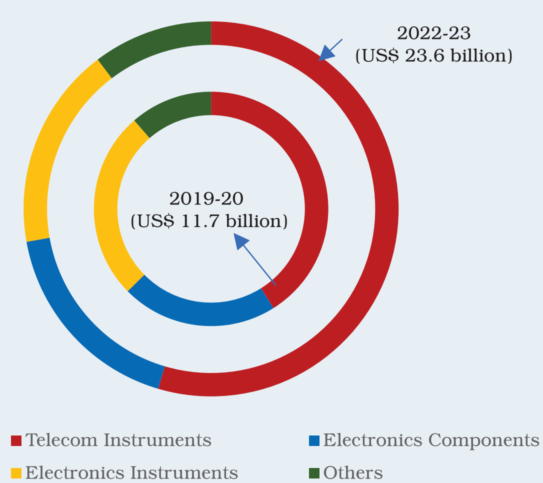
Source: DGCI&S.

II.7.10 According to the World Steel Association, global steel demand is expected to increase by 2.3 per cent in 2023 as against a decline of 3.2 per cent in 2022. Demand for steel is expected to grow by 7.3 per cent in India and 2.0 per cent in China, and is expected to fall by 0.4 per cent in the Euro Area and the UK[37]. The extension of remission of duties and taxes on exported products (RoDTEP) scheme to articles of iron and steel, and also to pharmaceuticals and organic and inorganic chemicals will make these products competitive in the global market.

II.7.11 In the face of rising input and logistics costs, organic and inorganic chemical exports grew by 3.3 per cent to US$ 30.3 billion during 2022-23. The Indian chemicals industry has potential to benefit from the China *plus* one strategy being pursued by industry players.

II.7.12 Electronic goods exports at US$ 23.6 billion registered a robust growth of 50.4 per cent during 2022-23. The bulk of this growth was due to the 74.2 per cent increase in exports of telecom instruments during the same period (Chart II.7.7). The production-linked incentive (PLI) scheme for mobile manufacturing has helped relocation of smartphone supply chains to India, enhanced local value addition and attracted global manufacturers to set up facilities. Additionally, an import duty of 22.0 per cent on smartphones and tariffs on other components

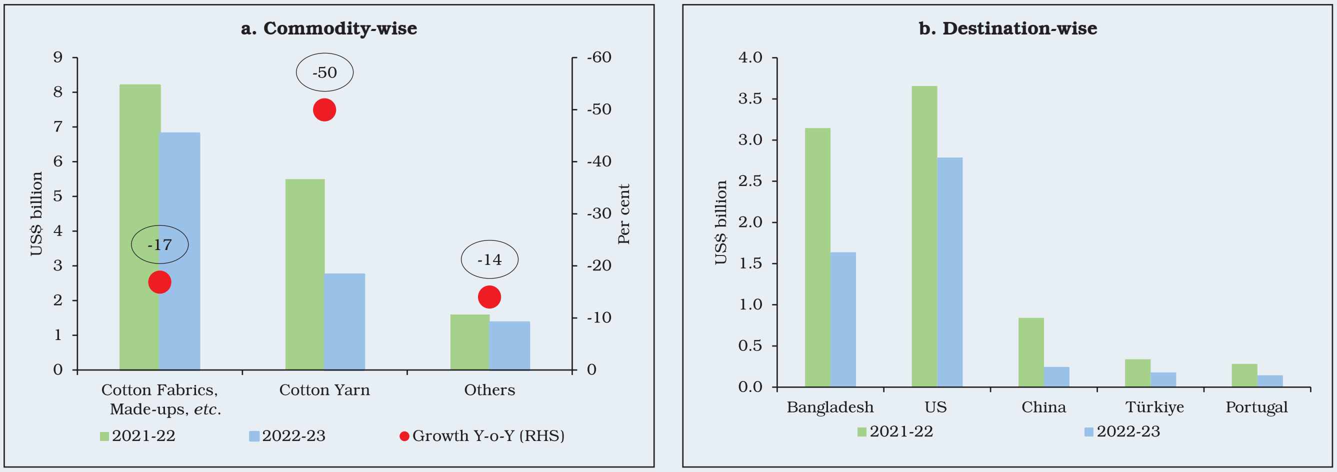
Chart II.7.7: Composition of India's Electronic Goods Exports



Source: DGCI&S.

[37] Short Range Outlook, World Steel Association, April 2023.

Chart II.7.8: Exports of Cotton Yarn/ Fabrics/ Made-ups, *etc.*



Source: DGCI&S.

have been imposed by the government since 2020-21 to promote local manufacturing.

II.7.13 Exports of cotton yarn/fabrics, *etc.* contracted by 28.4 per cent during 2022-23. Commodity-wise, cotton yarn exports reduced to about half their level a year ago (Chart II.7.8a). Exports of cotton yarn/fabrics, *etc.* to Bangladesh, which alone constituted 42.0 per cent of cotton yarn exports of India in 2021-22, reduced to almost half in 2022-23. Stronger dollar and lower capacity utilisation amid power crisis and stockpiling of old yarn by textile manufacturers impacted cotton imports into Bangladesh, a net cotton importer. Exports to China also plunged significantly due to COVID-19 lockdowns and weak apparel demand (Chart II.7.8b). Additionally, a duty of 11.0 per cent on imported cotton amid lack of cheaper domestic raw material adversely impacted margins of spinners and manufacturers, leading to a fall in exports of cotton fabrics.

II.7.14 With the objective of enhancing India's trade at the bilateral/regional level, India's trade agreements with the UAE and Australia came into effect during 2022-23. Negotiations are ongoing for agreements with the UK, the European Union, Canada, and the Gulf Cooperation Council (GCC). During 2022-23, detailed guidelines were also issued to facilitate international trade in the Indian Rupee. To help exporters in dealing with the volatile global economic and geopolitical situation, the foreign trade policy 2015-20 was extended till March 2023 (Box II.7.1).

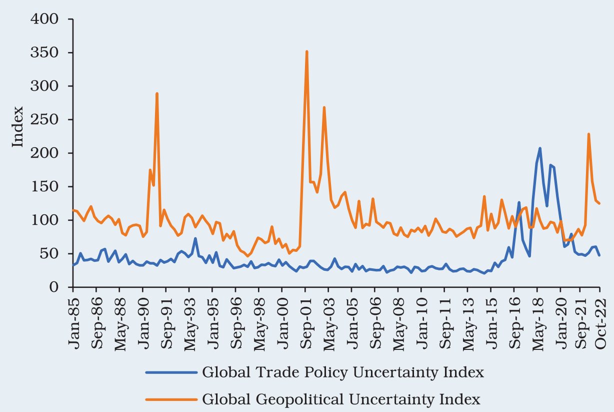
Box II.7.1
India's Exports in an Adverse Global Environment

Two major threats to future of global trade are the increasing geopolitical risks and protectionist policies (IMF, 2023). The increasing global trend towards fragmentation and protectionism have contributed to the rising geopolitical risk and trade policy uncertainty (Caldara and Lacoviello, 2022) [Chart 1].

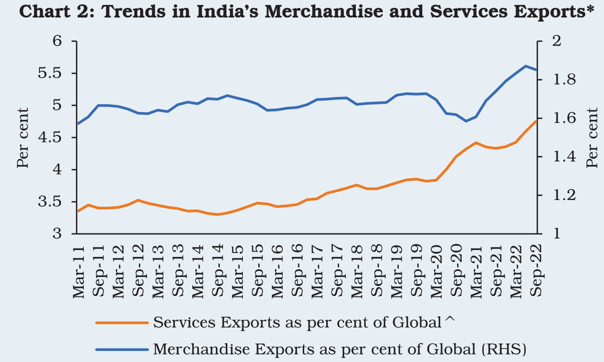
An analysis of the effect of geopolitical risks and trade policy uncertainties on global trade is performed using a panel of 43 countries for which the indices are available. The following regression for the sample period Q2: 2010 to Q2:2022 is estimated:

$$\log(Export)_{it} = \alpha_i + \beta * GPRI_{it} + \gamma * log(TPU)_t + \theta * log(Global\ GDP)_t + \delta_{1-4} + \epsilon_{it}$$

(Contd.)



Source: RBI staff estimates.



* : Four quarter moving average.
^ : Global service exports is aggregated services exports of 96 countries for which the data are available for the entire period.
Source: WTO and RBI staff estimates.

Where, $Export_{it}$ is service/merchandise/computer and business services (CBS) exports[38] of country *i* in quarter *t*; $GPRI_{it}$ is country-specific quarterly geopolitical risk index of country *i* in quarter *t;* and TPU_t is quarterly global trade policy uncertainty index. Global GDP and quarter fixed effects are also added as control variables.

The results indicate trade policy uncertainty has a significant negative effect on merchandise trade, but strikingly a positive significant effect on overall service trade and also on CBS exports (Table 1). The effect of geopolitical risk index on either of the variables is not statistically significant.

The empirical findings from the exercise support the contradictory patterns being observed in India's export of goods and services. While India's merchandise exports as per cent of global trade have remained more or less stable over the past decade, its services exports have been rising steadily, driven mostly by CBS exports (Chart 2).

Table 1: Effect of Geopolitical and Trade Uncertainty on Exports
(Dependent Variable: Country-level Exports)

Explanatory Variables	Services Exports Overall	Computer and Business Service Exports	Merchandise Exports
1	2	3	4
Geopolitical Risk Index ($GPRI_{it}$)	0.025 (0.042)	0.036 (0.029)	-0.041 (0.034)
Trade Policy Uncertainty Index ($log\ TPU_t$)	0.039** (0.019)	0.034** (0.015)	-0.085*** (0.018)
Global GDP ($log\ Global\ GDP_t$)	0.448** (0.166)	1.632*** (0.168)	0.922*** (0.110)
Number of observations	2074	1950	2107

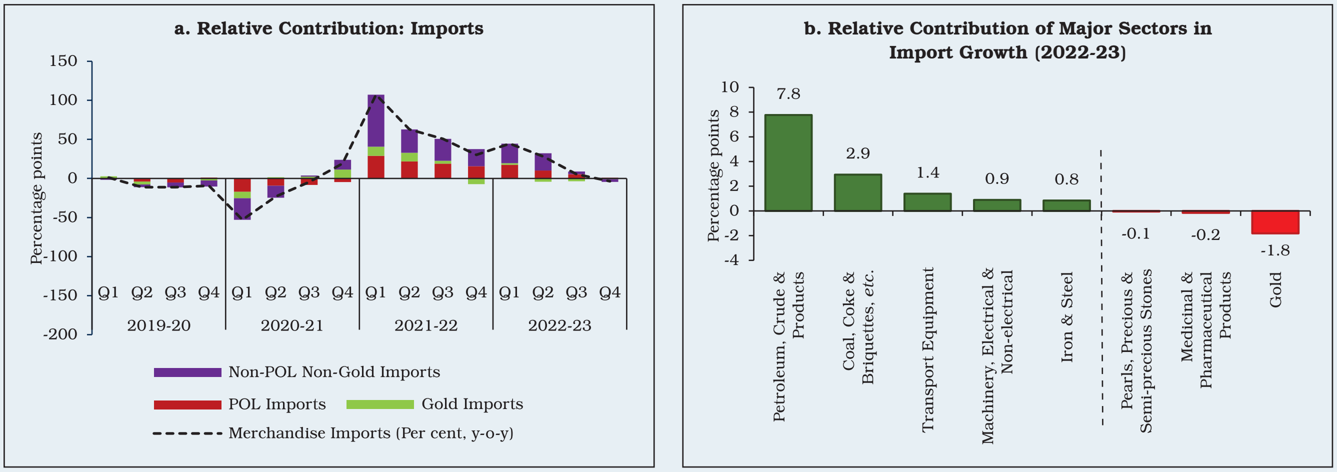
***, **, and * indicate significance at 1 per cent, 5 per cent and 10 per cent level, respectively.
Note: Cluster robust standard errors are given in the parentheses. The model controls for quarter fixed effects and country fixed effects.
Source: RBI staff estimates.

References:

1. Caldara, D., and Lacoviello, M. (2022), 'Measuring Geopolitical Risk', *American Economic Review*, April, 1194-1225.
2. Caldara, D., Lacoviello, M., Molligo, P., Prestipino, A., and Raffo, A. (2020), 'The Economic Effects of Trade Policy Uncertainty', *Journal of Monetary Economics,* Vol.109
3. IMF (2023), 'Geo-Economic Fragmentation and the Future of Multilateralism', *Staff Discussion Note SDN/2023/001,* January, IMF, Washington DC.

[38] The export figures for computer and business service category is obtained by adding the following two sub-categories under the WTO service trade database: a) telecommunications, computer and information services; and b) other business services.

Chart II.7.9: India's Merchandise Imports



Source: DGCI&S.

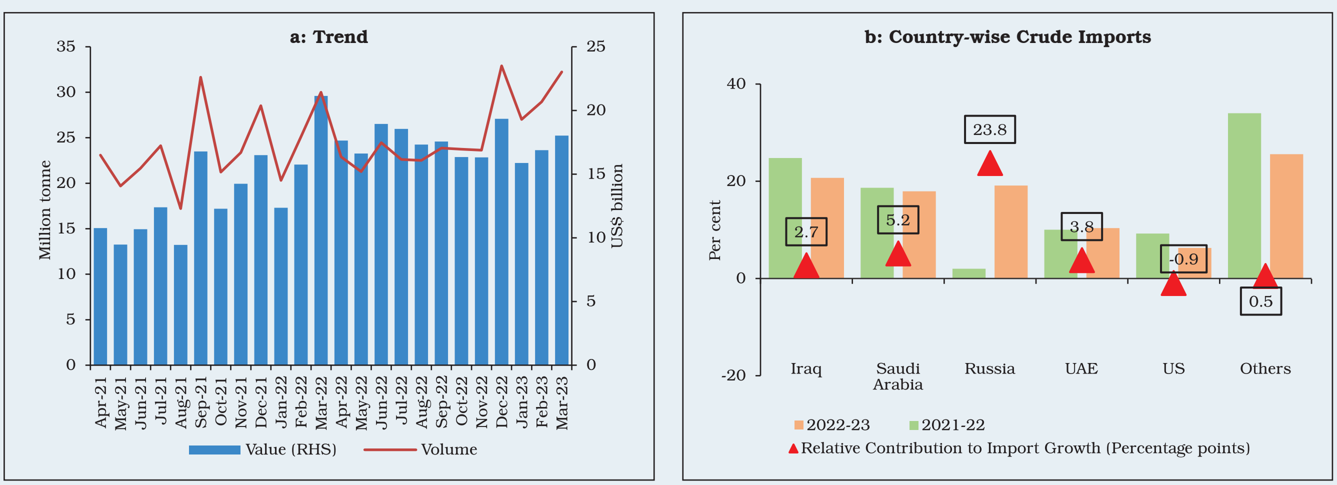
II.7.15 On the import side, India's merchandise imports at US$ 714.0 billion recorded a growth of 16.5 per cent in 2022-23, witnessing a deceleration in the second half of the year on the back of moderation in commodity prices. At the disaggregated level, petroleum, oil and lubricants (POL) were the major drivers of imports, followed by coal, transport equipment, machinery, and iron and steel. Gold, on the other hand, contributed negatively to import growth (Chart II.7.9).

II.7.16 India's POL imports constituted the largest item in India's import basket, accounting for 29.3 per cent of the overall imports in 2022-23. POL imports grew by 29.4 per cent in value terms and by 7.0 per cent in volume terms, reflecting the impact of higher prices (Chart II.7.10a).

II.7.17 In 2022-23, there was a change in the sources of India's crude imports. Russia's share in India's crude imports soared to 19.1 per cent from 2.0 per cent a year ago (Chart II.7.10b).

II.7.18 Gold imports at US$ 35.0 billion declined by 24.2 per cent in 2022-23. To dampen demand and ease pressure on trade deficit, India raised

Chart II.7.10: India's Petroleum Imports



Source: DGCI&S.

the basic import duty on gold to 12.5 per cent from 7.5 per cent in July 2022, which was subsequently brought down to 10 per cent in February 2023. Further, as per the World Gold Council, retail demand is expected to face headwinds due to higher gold price.

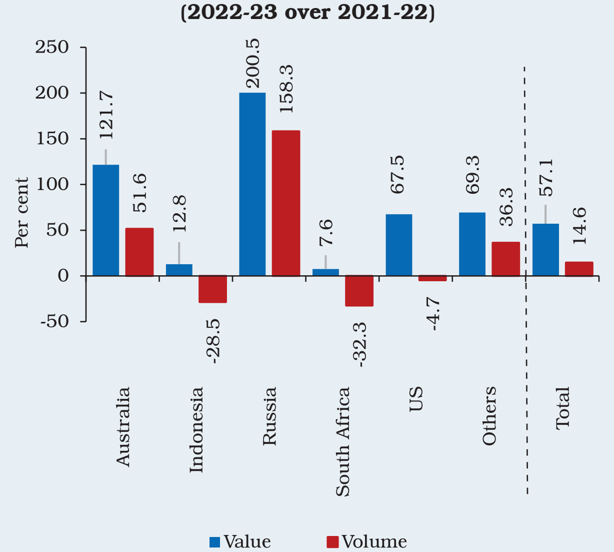
II.7.19 Coal imports in value terms surged 57.1 per cent in 2022-23, driven by elevated international prices and high demand for non-coking coal from the power sector. In the wake of a severe shortage due to rising power demand, the government mandated power plants to import 10.0 per cent of their coal requirement and blend it with domestic supply in May 2022. This emergency order was rolled back in August as domestic coal supply position improved. India imported coal primarily from Australia, Indonesia, Russia, the US and South Africa in 2022-23 (Chart II.7.11).

II.7.20 India's fertiliser imports, which account for around one-third of the annual domestic fertiliser consumption, grew in value terms by 21.4 per cent to reach US$ 17.2 billion in 2022-23. Complex fertilisers [*e.g.,* Diammonium phosphate (DAP)], with a share of 46.6 per cent, contributed the most to the increase in fertiliser imports (Chart II.7.12). To ensure stable supplies and reduce exposure to market volatility, India has signed long-term agreements for fertiliser imports and is seeking investment from global companies as a long-term strategy. Further, to reduce India's dependence on urea imports, the government is promoting the use of *nano* urea among farmers as an alternative to commercial urea.

II.7.21 India is the largest importer of vegetable oil globally. With rising international edible oil prices, India's import bill on vegetable oil rose to US$ 20.8 billion in 2022-23 from US$ 19.0 billion in the previous year. Composition-wise, palm oil has the largest share, accounting for about 63 per cent of total edible oil imports to India. According to the Solvent Extractors' Association of India (SEA), India's imports of edible oil in volume terms during the Oil Year so far (November 2022 to March 2023) was 70.6 lakh tonne, an increase of 22.0 per cent over the corresponding period of previous year.

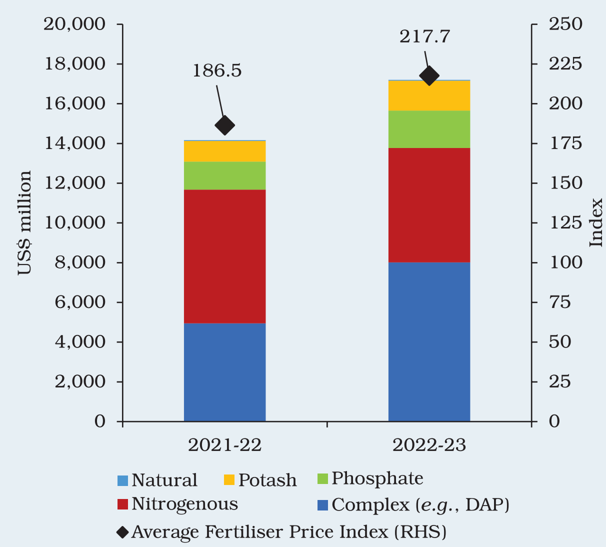
II.7.22 Electronic goods are the second largest import item in India's import basket with a share of

Chart II.7.11: India's Coal Imports (2022-23 over 2021-22)



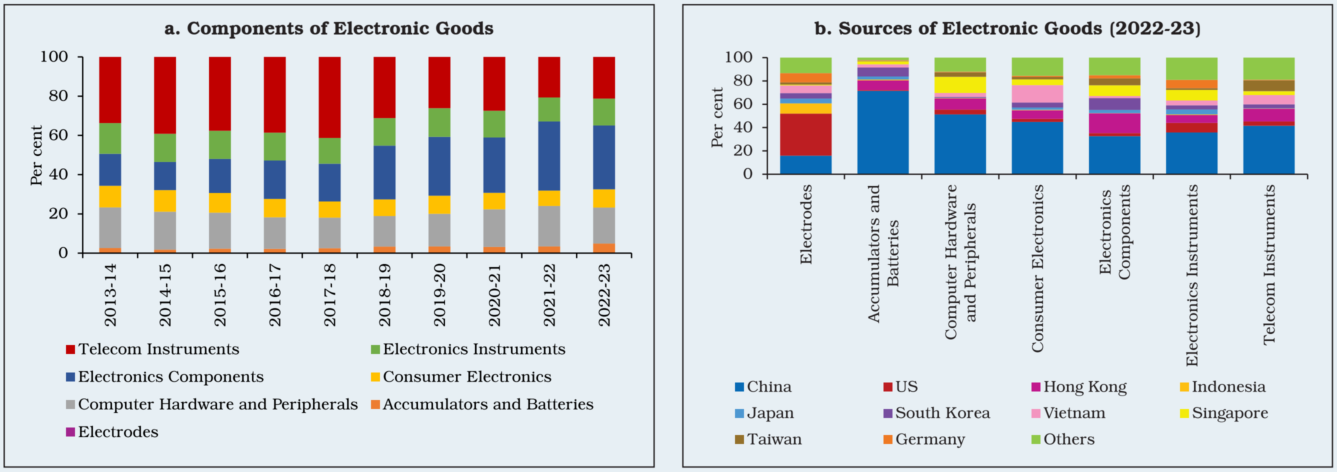
Source: DGCI&S.

Chart II.7.12: India's Fertiliser Imports



Source: DGCI&S and World Bank.

Chart II.7.13: Electronic Goods Imports

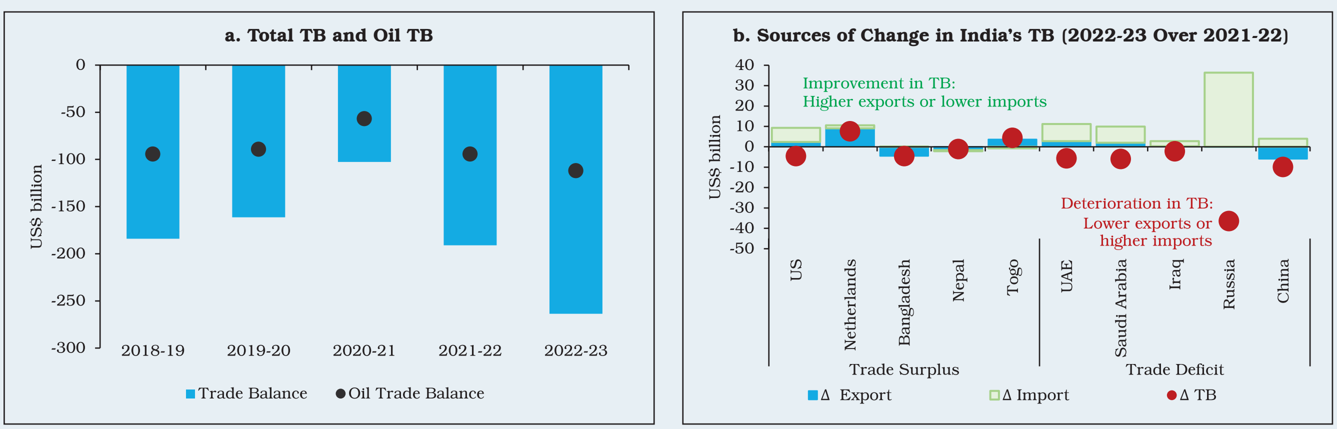


Source: DGCI&S.

10.8 per cent in 2022-23. Imports stood at US$ 77.3 billion growing by 4.9 per cent over the previous year. Over the past decade, the composition of electronic goods imports has shifted towards electronic components, which accounted for 32.5 per cent of total electronic goods imports in 2022-23 (Chart II.7.13a). After peaking at 41.3 per cent in 2017-18, the share of telecom instruments fell to 21.2 per cent in 2022-23, as domestic manufacturing increased aided by government's initiatives to boost electronics manufacturing in India, reduce import dependence and boost exports[39]. China remains the largest source of import of electronic goods across all components (Chart II.7.13b).

II.7.23 As imports grew faster than exports, trade deficit stood at US$ 263.6 billion in 2022-23, about

Chart II.7.14: India's Merchandise Trade Deficit



TB: Trade Balance.
Note: A positive Δ import implies lower imports and *vice versa*.
Source: DGCI&S and RBI staff calculations.

[39] Some of these schemes include Make in India programme, National Policy on Electronics (2019), PLI scheme for the electronics sector, and Modified Electronics Manufacturing Clusters (EMC 2.0) scheme.

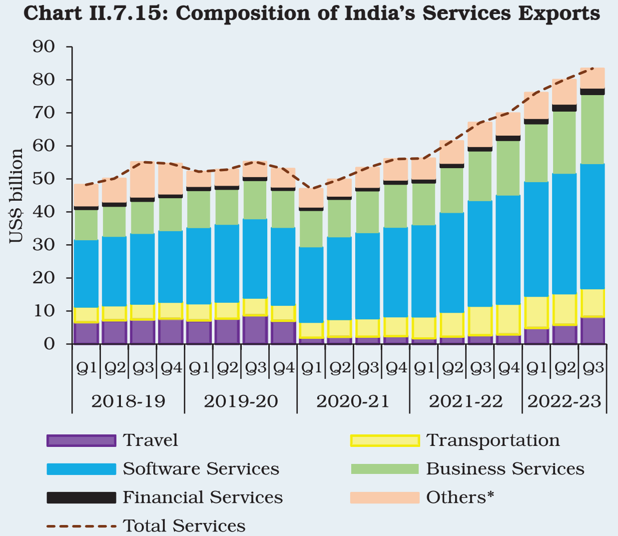
38.0 per cent higher than its level in the previous year. Oil deficit accounted for 42.5 per cent of the total deficit (Chart II.7.14a). On a bilateral basis, the deficit with major partner countries widened (Chart II.7.14b).

4. Invisibles

II.7.24 Net receipts from invisibles, reflecting cross-border transactions in services, income and transfers, displayed resilience during April-December 2022. While demand for software and business services exports, which account for around 70.0 per cent of India's services exports, surged sequentially during the year as well as over the previous year (Chart II.7.15), remittance receipts also remained strong. Meanwhile, net outgo on the primary income account increased during the year following a rise in net investment income outflows.

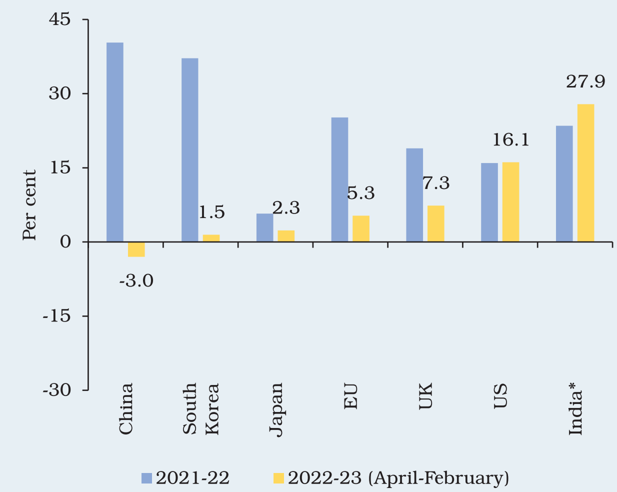
II.7.25 After a significant recovery in 2021-22, global services trade in major services exporting economies displayed some weakening during 2022-23, barring the US and India (Chart II.7.16). In 2022, value of global commercial services

Chart II.7.15: Composition of India's Services Exports



*: Includes insurance services, communication services and government not included elsewhere.
Source: RBI.

Chart II.7.16: Growth in Country-wise Exports of Services



*: Data pertain to April-March (Provisional).
Source: WTO and RBI.

trade grew by 15.0 per cent y-o-y (17.0 per cent in 2021), which was broad-based across sectors and regions, including North America, Europe and Asia. As per the forecasts on global information technology (IT) spending provided by Gartner, IT spending is expected to witness an increase to US$ 4.6 trillion in 2023 from US$ 4.4 trillion in 2022, which augurs well for India's services exports going forward. Nonetheless, downside risks remain owing to recessionary fears primarily in the US and the EU, which are the key destinations for India's services exports.

II.7.26 A rise in travel and transportation receipts alongside growth in computer, business and information services exports provided resilience to services exports globally in 2022 (Charts II.7.17a and II.7.17b). With the easing of pandemic-related restrictions on mobility, world transport and travel services rose by 25.0 per cent and 79.0 per cent, y-o-y, respectively, in 2022.

II.7.27 After recovering fully to pre-pandemic levels by H1:2021-22, inward remittances to India recorded a sequential rise and stood at US$ 83.8

Chart II.7.17a: Travel Receipts in Major Travel Destinations

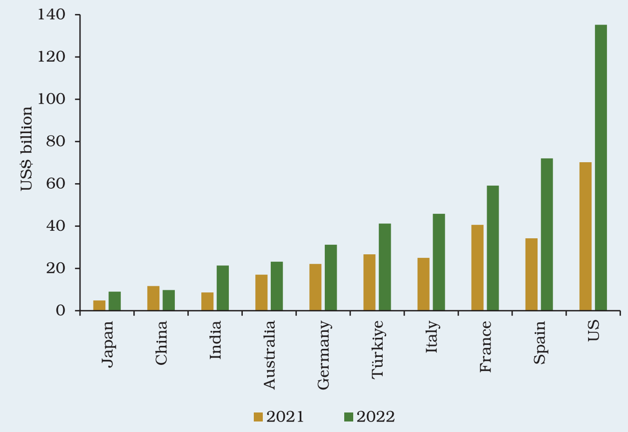
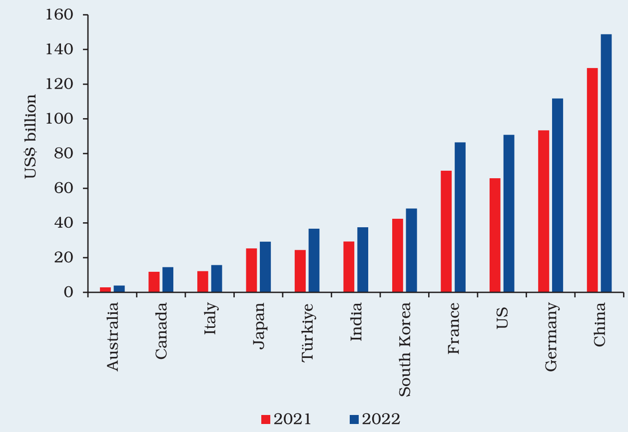


Chart II.7.17b: Transportation Receipts in Major Economies



Source: RBI and WTO.

billion during April-December 2022, with US$ 30.8 billion during Q3:2022-23 (Chart II.7.18a). In 2022, India's inward remittance receipts increased to US$ 107.5 billion from US$ 86.3 billion in 2021 (Chart II.7.18b). The rise in India's remittances was driven by a host of factors, including elevated crude oil prices, fiscal stimulus packages benefitting Indian migrants in the advanced economies (AEs) and post-pandemic wage hikes. Moreover, the rollover of vaccinations and easing of travel restrictions helped Indian migrants in the middle-east to return to their workplaces and resume work in 2022, which also positively impacted remittance flows to India. The World Bank estimates that the average cost of sending remittances of US$ 200 to India declined from 5.5 per cent in Q4:2020 (highest since Q1:2019) to 4.7 per cent in Q3:2022.

II.7.28 Under the income account, which relates to the income on cross-border investments and compensation of employees that domestic resident entities earn from (or pay to) the rest of

Chart II.7.18a: Inward Remittances to India *vis-à-vis* Cost of Sending Remittances to India (US$ 200)

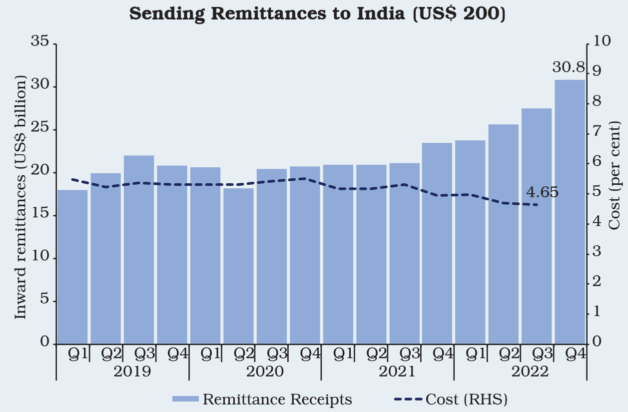
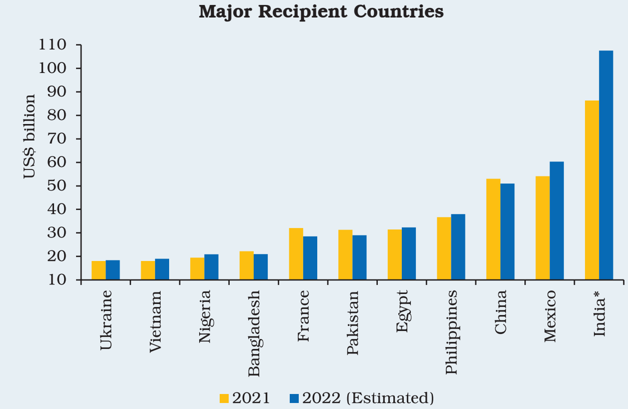


Chart II.7.18b: Inward Remittances Across Major Recipient Countries



*: Balance of Payments (BoP) basis.
Source: RBI and World Bank.

Chart II.7.19a: Composition of India's Current Account Balance

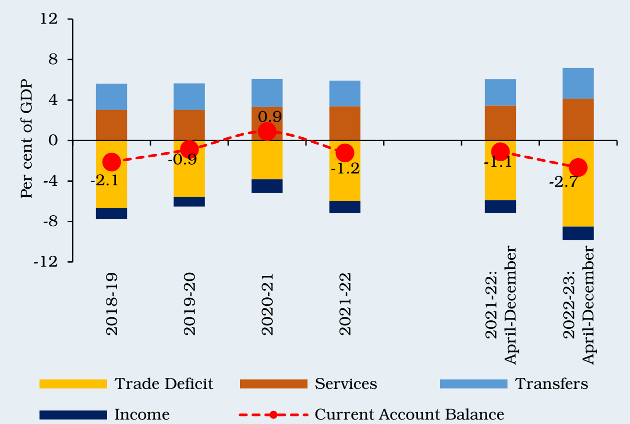
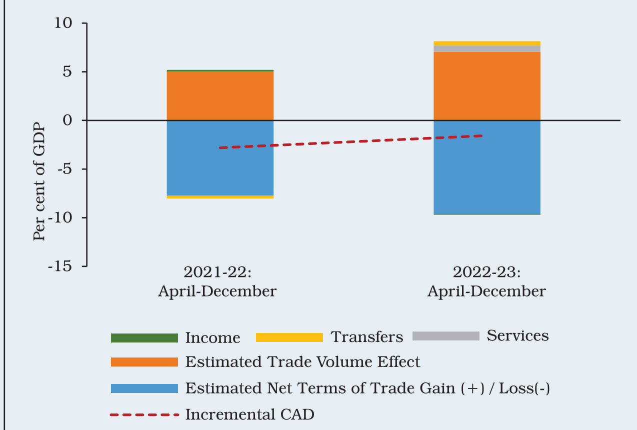


Chart II.7.19b: Sources of Incremental Current Account Balance



Source: RBI.

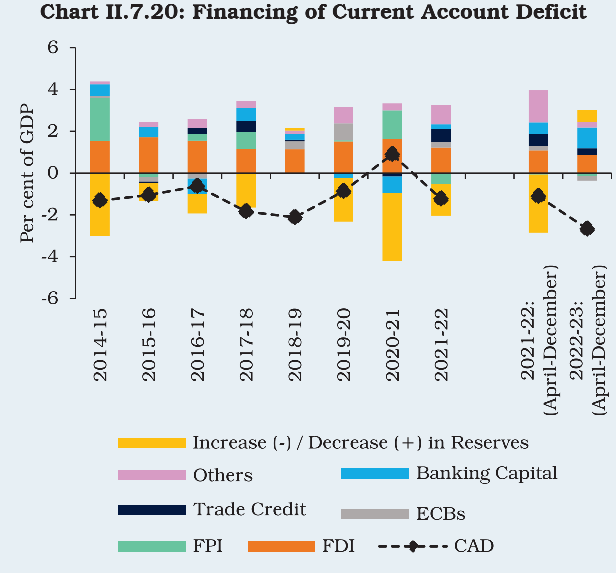
the world, receipts rose during April-December 2022. However, payments were significantly higher than a year ago.

II.7.29 The widening of merchandise trade deficit and the rise in net outgo in the primary income account drove the sequential rise in India's CAD from Q1:2022-23 to Q2:2022-23, before moderating in Q3. During April-December 2022, CAD stood at 2.7 per cent, higher than 1.1 per cent a year ago (Chart II.7.19a). Negative net terms of trade owing to elevated crude oil prices and the widening of the trade deficit on account of a deceleration in exports led by a slowdown in growth in India's trading partners and higher imports owing to strong domestic demand recovery mainly contributed to the higher CAD during the year so far (Chart II.7.19b).

5. External Financing

II.7.30 In April-December 2022, given the rise in India's CAD, external financing needs went up significantly. Among the major components of financial flows, net FDI remained strong, while foreign portfolio investment (FPI) witnessed significant volatility during the year. Moreover, while loans in the form of trade credit and banking capital recorded net inflows during April-December 2022, external commercial borrowings (ECBs) recorded net outflows. Owing to the significant stress in the financial account, there was a depletion of US$ 14.7 billion from the foreign exchange reserves on a balance of payments (BoP) basis (excluding valuation changes) during April-December 2022 (Chart II.7.20 and Appendix Table 8).

Chart II.7.20: Financing of Current Account Deficit



Source: RBI.

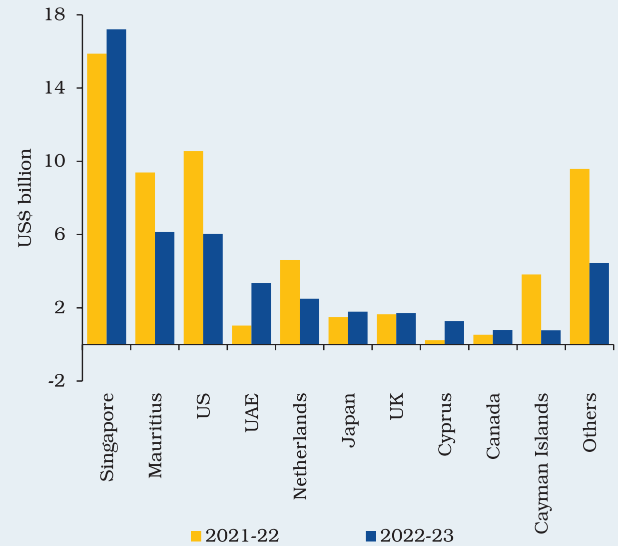
Table II.7.2: Foreign Direct Investment Flows

(US$ billion)

	2019-20	2020-21	2021-22	2022-23
1	2	3	4	5
1. Net FDI (1.1 - 1.2)	43.0	44.0	38.6	28.0
1.1 Net Inward FDI (1.1.1 - 1.1.2)	56.0	54.9	56.2	41.6
1.1.1 Gross Inflows	74.4	82.0	84.8	71.0
1.1.2 Repatriation/ Disinvestment	18.4	27.0	28.6	29.3
1.2 Net Outward FDI	13.0	11.0	17.6	13.6

Source: RBI.

Chart II.7.21: Source Country-wise Inflow of FDI (Equity)



Source: RBI.

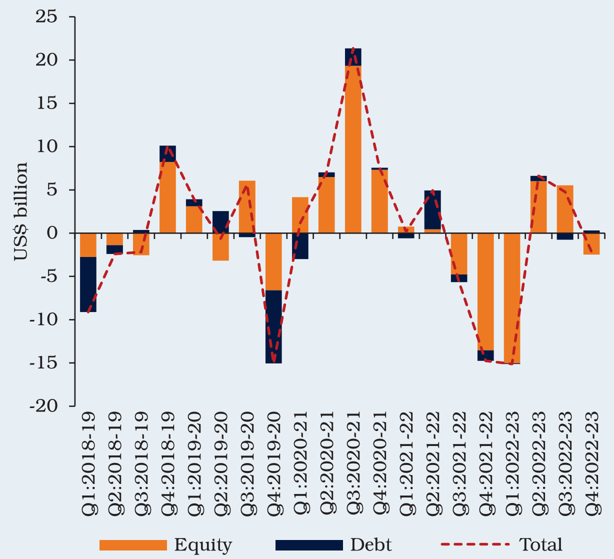
II.7.31 Within capital flows, net FDI (*i.e.*, net inward *minus* net outward) remained strong during 2022-23 at US$ 28.0 billion (US$ 38.6 billion a year ago). During this period, while repatriation/disinvestment of FDI in India rose, outward FDI by India registered a decline (Table II.7.2). According to the UNCTAD's World Investment Report (June 2022), India was the 7th largest recipient of FDI in 2021 (8th in 2020). Various government initiatives, *viz.*, PM *Gati Shakti*, further enhancement of PLI scheme and a strong push for a transition to green energy, are expected to attract more FDI from foreign companies. During 2022-23, the top FDI source countries were Singapore, Mauritius, the US, the UAE and the Netherlands, contributing 76.5 per cent of total FDI equity (Chart II.7.21). Sector-wise composition indicates that the services sector, including financial services, computer services, communication services and business services, accounted for a major share of FDI equity in India during this period, followed by manufacturing, retail and wholesale trade, electricity and other energy, and education, research and development (Appendix Table 9).

II.7.32 Outward FDI from India recorded a decline of 22.9 per cent during 2022-23 on a y-o-y basis. The UK, Singapore, the US, the UAE, and Mauritius were the major destinations of outward FDI from India. Financial, insurance and business services, manufacturing, wholesale and retail trade, and restaurants and hotels were the major sectors attracting India's overseas direct investment during this period.

II.7.33 As a result of monetary tightening by advanced economies to control high inflation, net foreign portfolio investments (FPI) in major EMEs, including India, recorded outflows in 2022-23. However, after being net sellers in Q1:2022-23, FPIs turned net purchasers in domestic markets, particularly in equities, since July 2022 (Chart II.7.22).

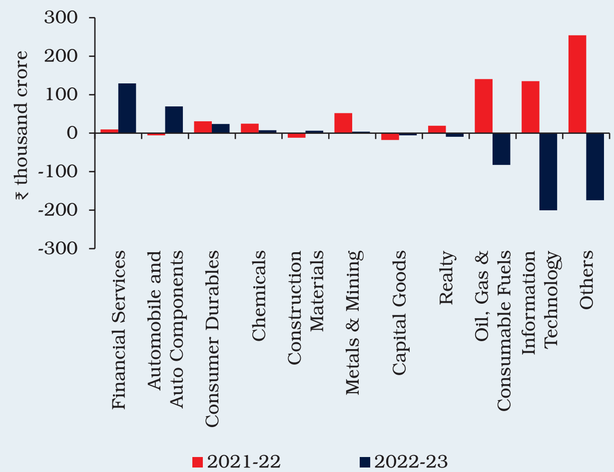
II.7.34 FPI inflows in the equity market were primarily recorded in the financial services, automobile, consumer durables, chemicals and construction material sectors (Chart II.7.23). The investment limits for FPIs in debt market remained underutilised during 2022-23. As at end-March 2023, only 18.9 per cent of the limits (general

Chart II.7.22: Net Foreign Portfolio Flows to India



Source: NSDL.

Chart II.7.23: Change in FPIs' Exposure in Equity Market



Note: Others include sectors such as fast moving consumer goods, healthcare, power, telecommunication and consumer services.
Source: NSDL.

route) in central government securities were utilised (26.3 per cent as at end-March 2022), while the utilisation rate for state government securities (SGSs) remained abysmally low at below one per cent. Of the total value of specified categories of central government securities opened fully for non-resident investors without any restrictions under the fully accessible route (FAR), 2.7 per cent was held by FPIs as at end-March 2023 (2.6 per cent as at end-March 2022). In the corporate bond segment, FPIs' interest remained subdued, *inter alia,* due to rise in yields in the US (Box II.7.2). Only 15.5 per cent of the limit for FPIs in corporate bonds (in absolute terms) was utilised as at end-March 2023, down from 19.9 per cent as at end-March 2022.

Box II.7.2
Interest Rate Sensitivity of Capital Flows: The Indian Experience

Monetary policy changes in the US have been one of the key determinants of capital flows to EMEs (Koepke, 2019). The impact, however, varies across EMEs depending on their domestic macroeconomic policies, level of external debt, fiscal deficit and reserves. Though theoretically interest rate differential remains a key determinant of capital flows, in practice, the empirical findings tend to vary. Against this backdrop, an empirical analysis of the interest rate sensitivity of various components of India's gross capital inflows is conducted, covering quarterly data from Q2:1999 to Q2:2022. Gross capital inflows, instead of net flows, have been used for the analysis as a country's net position may often not be a reliable indicator of its financial vulnerabilities.

In order to detect the sensitivity of gross capital inflows to interest rate differential (IRD), vector autoregression (VAR) models are estimated following Verma and Prakash (2011), and employing exogenous variables such as changes in INR-USD nominal exchange rate, domestic real GDP growth, and global GDP growth proxied by OECD GDP growth. Further, in examining the impact of IRD on various components of capital flows – foreign portfolio investment (FPI), short-term trade credit (STC), external commercial

(Contd.)

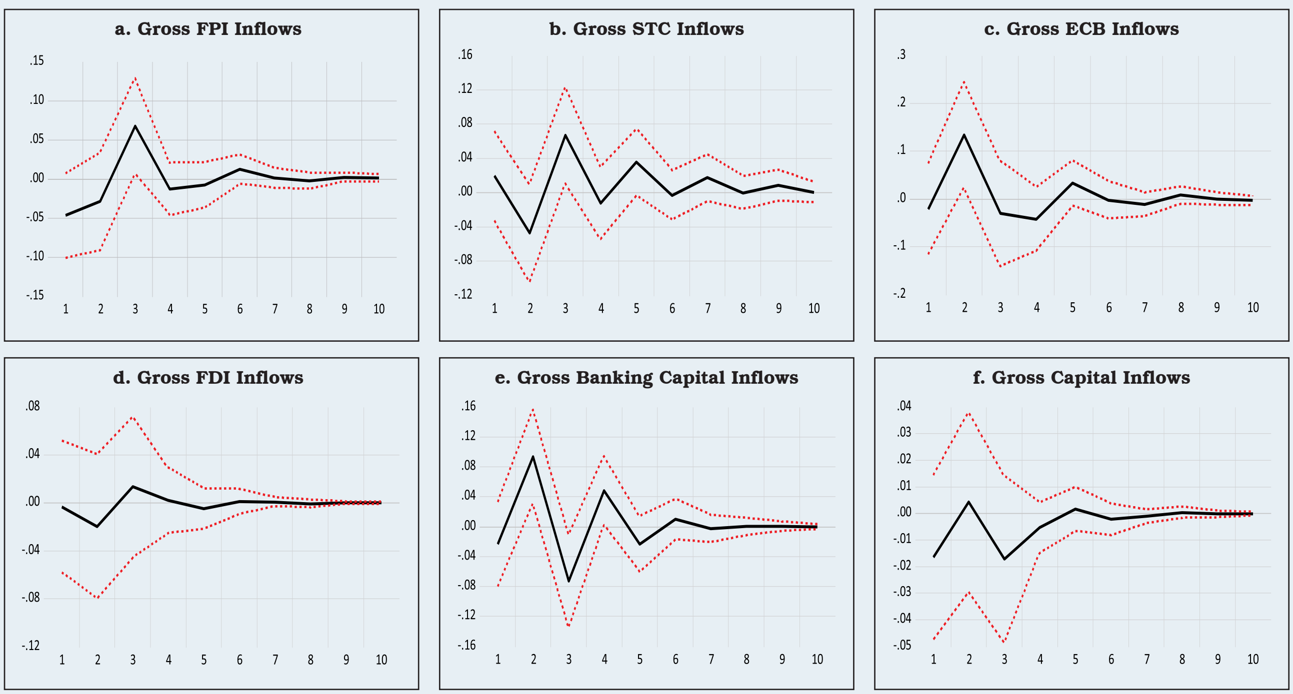
Table 1: Causal Relationship between Change in Interest Rate Differential and Change in Gross Capital Inflows

Null Hypothesis	*Sample Period*	*Chi-sq*	*Probability*
IRD does not Granger Cause FPI	2010Q4-2022Q2	4.89	0.09
FPI does not Granger Cause IRD	2010Q4-2022Q2	1.47	0.48
IRD does not Granger Cause STC	2010Q4-2022Q2	6.72	0.03
STC does not Granger Cause IRD	2010Q4-2022Q2	0.34	0.84
IRD does not Granger Cause ECB	1999Q2-2022Q2	7.09	0.03
ECB does not Granger Cause IRD	1999Q2-2022Q2	2.71	0.26
IRD does not Granger Cause BC	1999Q2-2022Q2	10.62	0.00
BC does not Granger Cause IRD	1999Q2-2022Q2	1.42	0.49
IRD does not Granger Cause FDI	1999Q2-2022Q2	0.65	0.72
FDI does not Granger Cause IRD	1999Q2-2022Q2	5.51	0.06

Source: RBI staff estimates.

borrowings (ECB), banking capital (BC) flows and foreign direct investment (FDI) – appropriate proxies for IRD have been employed.[40] Causality from IRD to various components of capital flows was found to be statistically significant as per Granger causality tests based on the VAR framework (Table 1).[41]

Chart 1: Sensitivity of Various Components of Gross Capital Inflows to Change in IRD



Note: The charts indicate generalised IRFs (one s.d. innovation ± 2 analytic asymptotic standard errors) based on the VAR models; Black lines indicate IRFs; Red dotted lines indicate 95 per cent confidence intervals.
Source: RBI staff estimates.

(Contd.)

[40] Specifically, the difference between quarterly average domestic policy repo rate and the US federal funds rate was used as a proxy for IRD in the case of FPI and STC. Similarly, the difference between 10-year Government of India bond yield and 10-year US government bond yield was used as IRD proxy in the case of ECB and the difference between 91-day Government of India Treasury Bill (TB) yield and US 3-month TB yield was employed as proxy for BC flows. Finally, FDI, being long-term in nature, the difference between 10-year Government of India bond yield and 10-year US government bond yield was considered to be IRD for this case.

[41] The bivariate VAR model considered is as follows: $\{\Delta(interest\ rate\ differential_t), \Delta(gross\ capital\ inflows_t)\}$ where Δ indicates quarter-on-quarter change. The controls mentioned were all considered to be exogenous in nature. Additionally, period dummies were also considered for the global financial crisis of 2008-09 and taper tantrum of 2013-14.

The generalised impulse response functions (IRFs) from the VAR models indicate: (i) a positive relationship between change in IRD and growth in gross FPI, STC, ECB and banking capital inflows with a lag of 1-2 quarters (Chart 1); (ii) a one standard deviation (s.d.) shock to change in IRD raises the growth in gross FPI inflows by 0.07 per cent, gross STC inflows by 0.07 per cent, gross ECB inflows by 0.13 per cent, and gross banking capital inflows by 0.09 per cent; (iii) gross FDI inflows do not seem to be sensitive to IRD; and (iv) a change in IRD does not seem to have a statistically significant impact on gross capital inflows at an aggregate level.

To sum up, the analysis indicates that interest rate differential is an important factor in influencing portfolio, trade financing, banking capital and ECB flows, but not the overall gross capital inflows to India.

References:

1. Koepke, R. (2019), 'What Drives Capital Flows to Emerging Markets? A Survey of the Empirical Literature', *Journal of Economic Surveys*, 33(2), 516-540.
2. Verma, R., and Prakash, A. (2011), 'Sensitivity of Capital Flows to Interest Rate Differentials: An Empirical Assessment for India', *Reserve Bank of India Working Paper Series*, May 2011.

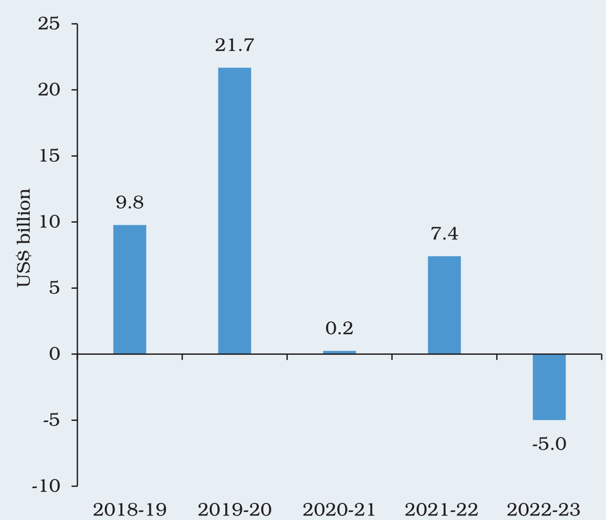
II.7.35 ECBs recorded a fall in terms of the number of ECB agreements as well as amount during 2022-23 as compared with a year ago. Moreover, net external commercial borrowings to India recorded an outflow of US$ 5.0 billion in 2022-23 as against an inflow of US$ 7.4 billion a year ago (Chart II.7.24). On July 6, 2022, under the measures to liberalise forex flows to India introduced by the Reserve Bank, the borrowing limit under the ECB automatic route was raised from US$ 750 million or its equivalent per financial year to US$ 1.5 billion. Further, the all-in-cost ceiling under the ECB framework was also raised by 100 basis points, subject to the borrower being of investment grade rating. These measures were effective till December 31, 2022.

II.7.36 ECB disbursements were largely used for on-lending/sub-lending, new projects, refinancing of earlier ECBs, import of capital goods, and rupee expenditure for local capital goods (Chart II.7.25). Within ECBs, rupee-denominated loans and rupee-denominated bonds (RDBs) accounted for 8.0 per cent of the total agreement amount during 2022-23 as compared with 8.4 per cent a year ago. Furthermore, the share of hedged foreign exchange loans stood at 49.3 per cent during the year, higher than 51.6 per cent during 2021-22.

II.7.37 The net inflow of short-term trade credit stood at US$ 8.1 billion during April-December 2022 as compared with a net inflow of US$ 13.3 billion a year ago. Around 36.0 per cent of the trade credit was raised for imports of crude oil, gold, coal and copper.

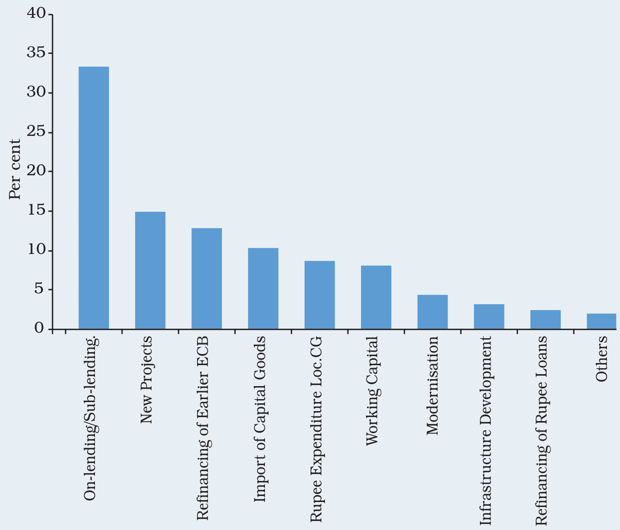
II.7.38 Non-Resident (External) Rupee (NRE) deposits, which constituted 69.2 per cent of the total outstanding non-resident deposits, witnessed net inflows of US$ 2.1 billion during

Chart II.7.24: External Commercial Borrowings to India (Net)



Source: RBI.

Chart II.7.25: End Use of ECBs during 2022-23



Loc. CG: Local Capital Goods.
Source: RBI.

2022-23, lower than US$ 3.3 billion a year ago (Table II.7.3). Net inflows in the Foreign Currency Non-Resident (Bank) [FCNR(B)] accounts stood at US$ 2.4 billion against net redemptions to the tune of US$ 3.6 billion a year ago. Furthermore, Non-Resident Ordinary (NRO) accounts also registered robust net inflows during the year. On the whole, non-resident accounts registered higher accretions to the tune of US$ 8.0 billion during 2022-23 as compared with US$ 3.2 billion a year ago. Furthermore, the capital flow measures adopted by the Reserve Bank on July 6, 2022 with regard to the non-resident accounts relating to the deregulation of interest rates and exemption from cash reserve ratio (CRR) and statutory liquidity ratio (SLR) maintenance on the FCNR(B) and NRE accounts also aided in the higher net inflows to these accounts.

6. Vulnerability Indicators

II.7.39 India's external debt recorded a decline of US$ 6.0 billion (*i.e.,* 1.0 per cent) at end-December 2022 over end-March 2022; as a ratio to GDP, it moderated to 19.1 per cent from 20.0 per cent during the same period (Table II.7.4). India's external debt (as a ratio to GDP) also remained lower than most emerging market peers. Commercial borrowings remained the largest component of external debt, with a share of 35.4 per cent, followed by non-resident deposits (21.9 per cent) and short-term trade credit (20.5 per cent). Sector-wise composition of external debt indicates that non-financial corporations were the largest category of borrowers with a share of 41.1 per cent, followed by deposit-taking corporations, except the central bank (25.1 per cent) and general government (21.0 per cent). Foreign exchange reserves in India also provided a buffer for mitigating external risks and spillovers. At the end of December 2022, foreign exchange reserves were more than two times that of short-term external debt on residual maturity basis and provided cover of 9.4 months of imports projected for 2022-23.

Table II.7.3: Flows under Non-Resident Deposit Accounts

(US$ billion)

	2019-20	2020-21	2021-22	2022-23
1	2	3	4	5
1. Non-Resident External (Rupee) Account	5.6	8.8	3.3	2.1
2. Non-Resident Ordinary Account	2.0	2.3	3.5	3.4
3. Foreign Currency Non-Resident(B) Account	1.1	-3.8	-3.6	2.4
Non-Resident Deposits (1+2+3)	**8.6**	**7.4**	**3.2**	**8.0**

Source: RBI.

Table II.7.4: External Vulnerability Indicators (End-March)

(Per cent, unless indicated otherwise)

Indicator	2013	2021	2022	End-December 2022
1	2	3	4	5
1. External Debt to GDP Ratio	22.4	21.2	20.0	19.1
2. Ratio of Short-term Debt (Original Maturity) to Total Debt	23.6	17.6	19.7	21.1
3. Ratio of Short-term Debt (Residual Maturity) to Total Debt	42.1	44.1	43.2	44.5
4. Ratio of Concessional Debt to Total Debt	11.1	9.0	8.3	8.1
5. Ratio of Reserves to Total Debt	71.3	100.6	98.1	91.8
6. Ratio of Short-term Debt (Original Maturity) to Reserves	33.1	17.5	20.0	23.0
7. Ratio of Short-term Debt (Residual Maturity) to Reserves	59.0	43.8	44.0	48.5
8. Reserve Cover of Imports (in Months)*	7.0	17.4	11.8	9.3
9. Debt Service Ratio (Debt Service to Current Receipts)	5.9	8.2	5.2	5.3
10. External Debt (US$ billion)	409.4	573.7	619.1	613.1
11. Net International Investment Position (NIIP) [US$ billion]	-326.7	-355.1	-358.3	-374.5
12. NIIP/GDP Ratio	-17.8	-13.2	-11.7	-11.8
13. CAB/GDP Ratio#	-4.8	0.9	-1.2	-2.7

*: Based on merchandise imports of latest four quarters, published in BoP statistics.
#: CAB/GDP ratio in column 5 pertains to April-December 2022.
Source: RBI and Government of India.

II.7.40 India's foreign exchange reserves at US$ 578.4 billion as at end-March 2023, registered a decline of US$ 28.9 billion since end-March 2022, of which US$ 19.7 billion decline was due to valuation changes.

7. *Conclusion*

II.7.41 Notwithstanding the market concerns in the first half of the year about a widening CAD in an environment of risk-off sentiment depressing capital inflows, India's CAD remained within sustainable level after peaking in Q2, and the exchange rate movement was orderly. External vulnerability indicators exhibited resilience and strengthening domestic macroeconomic fundamentals helped the economy withstand spillovers from adverse global macro-financial shocks. Significant downside risks to India's external sector, however, persist from the likely slowing of growth in major advanced economies and EMEs, particularly in India's key trading partners, still elevated energy prices, future stance of monetary policy by the US Fed and supply-side disruptions in a conflict-ridden geopolitical environment.

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

III MONETARY POLICY OPERATIONS

Spillovers from high global food, energy and other commodity prices and volatile international financial market movements exerted upward pressures on domestic inflation during 2022-23. Monetary policy remained focused on containing inflation and anchoring inflation expectations. The policy repo rate was raised by a cumulative 250 basis points with the stance shifting to withdrawal of accommodation. Surplus liquidity moderated in consonance with the policy stance and banks' deposit and lending rates as well as market interest rates moved higher during the year.

III.1 The war in Ukraine that started in February 2022 triggered a surge in global food, fuel and other commodity prices and supply chain disruptions. The volatility in international financial markets resulting from the aggressive tightening of monetary policy amplified upward pressures on domestic consumer price inflation (CPI), pulling it above the upper tolerance band. Against this backdrop, the conduct of monetary policy during 2022-23 assigned primacy to price stability. The policy repo rate was increased cumulatively by 250 basis points (bps) during 2022-23 to anchor inflation expectations, break the persistence in core inflation and contain the second-round effects of adverse supply shocks. The monetary policy stance shifted to withdrawal of accommodation to ensure that inflation remains within the target going forward, while supporting growth.

III.2 In its liquidity management operations in support of the monetary policy stance, the Reserve Bank activated the standing deposit facility (SDF) in April 2022 at 25 bps below the repo rate as the new floor of the liquidity adjustment facility (LAF) corridor. The width of the corridor was thus restored to its pre-pandemic configuration of 50 bps. Surplus liquidity moderated during the year and the Reserve Bank conducted variable rate repo (VRR) auctions on occasions to mitigate frictional liquidity pressures. Banks' deposit and lending rates as well as other market rates increased in tandem with the policy repo rate. The mandated external benchmark regime introduced in October 2019 for loan pricing in select sectors strengthened the pace of monetary transmission.

III.3 Against the above backdrop, section 2 presents the implementation status of the agenda set for 2022-23 along with major developments during the year, while section 3 sets out the agenda for 2023-24. Concluding observations are given in the last section.

2. Agenda for 2022-23

III.4 In last year's Annual Report, the Department had set out the following goals for 2022-23:

- An economy-wide credit conditions index and an analysis of its relationship with key macroeconomic variables (Paragraph III.5);
- Evaluation of drivers of inflation expectations (Paragraph III.5); and

- A study of the investment behaviour of corporates/firms to understand constraints on investment (Paragraph III.5).

Implementation Status

III.5 In pursuance of the goals set for 2022-23, an economy-wide credit conditions index was constructed using the loan sanctioning data. Analysis was done on inflation expectations anchoring as well as inflation's ascent in India during the pandemic. In addition, studies were undertaken to assess monetary policy trade-offs in the face of supply shocks and the impact of financial conditions on corporate investment. The sensitivity of output prices to input costs as well as the interlinkage between rural prices and wages were examined. The information content of market expectations from the yield curve and monetary transmission were the other focus areas.

Major Developments

Monetary Policy

III.6 The monetary policy committee's (MPC's) first meeting for 2022-23 was held in April 2022 in an environment of heightened geopolitical tensions due to the war in Ukraine, a generalised hardening of global commodity prices, supply chain disruptions, and volatility in global financial markets. Considering elevated input cost pressures, assuming a normal monsoon in 2022 and an average crude oil price (Indian basket) of US$ 100 per barrel, the inflation projection for 2022-23 was revised up from 4.5 per cent in the February 2022 policy to 5.7 per cent. Real gross domestic product (GDP) growth for 2022-23 was revised down from 7.8 per cent to 7.2 per cent. Given the evolving risks and uncertainties, the MPC unanimously changed the monetary policy stance from accommodative to withdrawal of accommodation to ensure that inflation remains within the target going forward, while supporting growth. The MPC unanimously decided to keep the policy repo rate unchanged at 4 per cent. The Reserve Bank instituted the SDF at 40 bps above the prevailing fixed rate reverse repo to strengthen the operating framework of monetary policy.

III.7 As the war progressed, inflationary pressures turned acute due to elevated commodity prices, supply dislocations and volatility in financial markets. There was a spike in the headline CPI inflation print for March 2022 (released on April 12). With economic activity exhibiting resilience and significant upside risks to the inflation trajectory, the MPC in an off-cycle meeting on May 2 and 4, 2022 unanimously voted to increase the policy repo rate by 40 bps to 4.40 per cent to anchor inflation expectations and contain the second-round effects of supply shocks. The MPC also unanimously decided to continue with the stance set out in the April resolution. Concomitantly, the Reserve Bank raised the cash reserve ratio (CRR) by 50 bps to 4.5 per cent of net demand and time liabilities (NDTL) to absorb surplus liquidity (Box III.1).

III.8 By June 2022, the global economy was grappling with multi-decadal high inflation amidst elevated crude oil prices and lingering supply chain bottlenecks. Domestic CPI inflation rose to 7.8 per cent in April 2022, breaching the upper tolerance level for the fourth consecutive month. Taking into account the elevated commodity and crude oil prices and the pass-through to output prices, the inflation projection was revised up to 6.7 per cent for 2022-23. In order to keep inflation expectations anchored and to restrain the broadening of price pressures, the MPC unanimously raised the policy rate by 50 bps.

III.9 When the MPC met in August 2022, CPI headline inflation had persisted above the upper

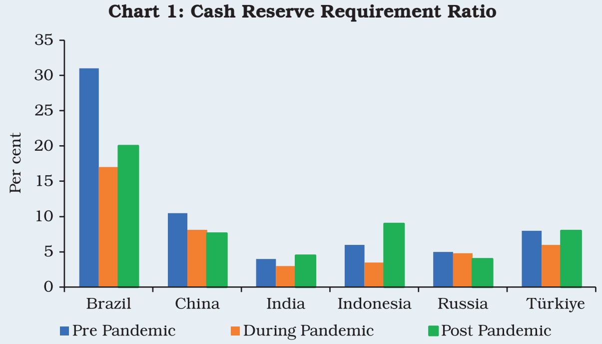
Box III.1
Reserve Requirements and Monetary Policy

Since the 1990s, policy interest rates have emerged as the key instrument for the conduct of monetary policy across central banks. The use of cash reserve requirements has accordingly diminished. Nonetheless, reserve ratios remain an important countercyclical instrument for fostering monetary and financial stability in major emerging market economies (EMEs) [Cordella *et. al.*, 2014].

Following the outbreak of the COVID-19 pandemic in India, the cash reserve ratio (CRR) was cut by 100 bps to 3.0 per cent of net demand and time liabilities (NDTL), releasing primary liquidity of around ₹ 1.37 lakh crore, to stabilise domestic financial markets and support the availability of credit in the economy. Major EMEs such as Brazil, China, Indonesia, Russia and Türkiye also reduced reserve requirements during the pandemic (Chart 1).

In addition, exemptions from maintenance of reserve requirement have been used to incentivise sector specific/ targeted credit growth (Cantú *et. al.,* 2021). For example, in 2020, the Reserve Bank provided exemptions from CRR maintenance for incremental retail loans for automobiles, residential housing and loans to micro, small and medium enterprises (MSMEs). Amongst other countries, Argentina reduced minimum reserve requirements for financial institutions extending loans to MSMEs and to health service providers for the purchase of supplies or medical equipment during the pandemic. In Brazil, reserve requirement exemptions were given for loans to small companies affected by the pandemic. In Türkiye, reserve requirement incentives have been provided to channel loan supply towards productive sectors rather than consumption.

Chart 1: Cash Reserve Requirement Ratio



Note: For Brazil, reserve requirement pertains to time deposits.
Source: CEIC and Central Banks' websites.

The CRR tool can also be deployed to modulate forex flows by tweaking the requirements on non-resident deposits - for example, the Reserve Bank exempted incremental Foreign Currency Non-Resident (Bank) [FCNR(B)] and Non-Resident (External) [NRE] deposits from the maintenance of CRR for the period July 1, 2022 to November 4, 2022 to attract forex inflows[1].

Following the conflict in Ukraine and the associated surge in inflation, a number of EME central banks supplemented their policy rate hikes with increases in CRR. In India, the start of the monetary tightening cycle was marked by a simultaneous increase in the policy rate and the CRR in May 2022. Overall, as the recent experience shows, reserve requirements remain a useful instrument in the monetary policy toolkit, used during both easing and tightening cycles.

References:

1. Cantú, C., P. Cavallino, F. D. Fiore, and J. Yetman (2021), 'A Global Database on Central Banks' Monetary Responses to COVID-19', *BIS Working Paper* no. 934.

2. Cordella T., P. Federico, C. Vegh, and G. Vuletin (2014), 'Reserve Requirements in the Brave New Macroprudential World', *World Bank*, April.

tolerance band, notwithstanding some easing to 7.0 per cent during May-June 2022. With an assumption of the average crude oil price (Indian basket) at US$ 105 per barrel, the inflation projection was retained at 6.7 per cent in 2022-23, with Q2 at 7.1 per cent; Q3 at 6.4 per cent and Q4 at 5.8 per cent. For Q1:2023-24, inflation was projected at 5.0 per cent. Real GDP growth projection for 2022-23 was retained at 7.2 per cent. Given the elevated level of inflation and the resilience of domestic economic activity, the MPC noted that further calibrated monetary policy action was needed. Accordingly, the MPC unanimously decided to increase the policy repo rate by 50 bps to 5.4 per cent. It continued with the withdrawal of accommodation stance with a 5-1 vote.

[1] In Türkiye, the reserve requirement obligation was exempted in December 2021 for the sums converted from forex deposit accounts into Turkish Lira time deposits to enhance the share of Turkish Lira in the total deposits of the banking system.

III.10 At the time of the September MPC meeting, CPI headline inflation was at 7.0 per cent in August - above the upper tolerance level. Domestic economic activity had gained traction, with real GDP rising by 13.5 per cent in Q1:2022-23 (y-o-y). In the MPC's resolution, real GDP growth projection for 2022-23 was revised to 7.0 per cent. With core inflation remaining high and headline inflation likely to hover above the upper tolerance level, the MPC decided that further calibrated action was necessary to keep inflation expectations anchored, restrain the broadening of price pressures and pre-empt second-round effects. Accordingly, the MPC raised the policy repo rate by 50 bps to 5.9 per cent with a 5-1 vote. One member voted for a smaller increase of 35 bps. The MPC also decided by a majority of 5-1 to remain focused on withdrawal of accommodation.

III.11 With the release of CPI inflation for September 2022 at 7.4 per cent on October 12, 2022, average inflation exceeded 6.0 per cent (the upper threshold around the target) for three consecutive quarters – Q4:2021-22 (6.3 per cent), Q1:2022-23 (7.3 per cent) and Q2 (7.0 per cent). In terms of the accountability norms mandated by legislation – Section 45ZN of the RBI Act, 1934 and Regulation 7 of RBI MPC and Monetary Policy Process Regulations, 2016 – a meeting of the MPC was held on November 3, 2022 and a report was sent to the central government by the Reserve Bank.

III.12 Inflation moderated to 6.8 per cent in October 2022 when the MPC met for its scheduled December 2022 meeting, driven by favourable base effects. Real GDP registered a growth of 6.3 per cent (y-o-y) in Q2:2022-23. With headwinds from protracted geopolitical tensions, tightening global financial conditions and slowing external demand, the real GDP growth projection for 2022-23 was revised to 6.8 per cent; and it was projected at 7.1 per cent for Q1:2023-24 and 5.9 per cent for Q2. Headline inflation was projected at 6.6 per cent for Q3:2022-23, 5.9 per cent for Q4, 5.0 per cent for Q1:2023-24 and 5.4 per cent for Q2. The MPC observed that while headline inflation was likely to moderate in H1:2023-24, it would still be well above the target. Meanwhile, economic activity had held up well and was expected to remain resilient. The MPC judged that the impact of monetary policy measures undertaken needed to be monitored carefully. On balance, the MPC observed the need for further calibrated monetary policy action and decided to increase the policy repo rate by 35 bps to 6.25 per cent with a 5-1 vote. The MPC also decided by a 4-2 vote to continue with the stance focused on withdrawal of accommodation.

III.13 At the time of its February 2023 meeting, CPI headline inflation had eased to 5.7 per cent (y-o-y) in December, driven by sharper and earlier-than-expected decline in vegetable prices, even as core inflation remained sticky and above 6 per cent. The MPC noted that the outlook for inflation was surrounded by uncertainties linked to sustained geopolitical tensions, upward pressures on commodity prices due to easing up of mobility restrictions, coupled with ongoing pass-through from input costs to output prices, especially in services. Taking into account these factors and with an assumption of average crude oil price (Indian basket) of US$ 95 per barrel, inflation was projected at 6.5 per cent in 2022-23, with Q4 at 5.7 per cent. On the assumption of a normal monsoon, CPI inflation was projected at 5.3 per cent for 2023-24, with Q1 at 5.0 per cent, Q2 and Q3 at 5.4 per cent and Q4 at 5.6 per cent, with risks evenly balanced. Economic activity continued to exhibit resilience – real GDP growth for 2023-24 was projected at 6.4 per cent with Q1 at 7.8 per cent, Q2 at 6.2 per cent, Q3 at 6.0 per cent and Q4 at 5.8 per cent, and risks broadly balanced. The MPC judged that elevated inflation remained a major risk to the outlook and was of the view that further calibrated monetary policy action was warranted to keep inflation expectations anchored, break core inflation persistence and thereby strengthen medium-term growth prospects. Accordingly, the MPC increased the policy repo rate by 25 bps to 6.50 per cent and persisted with the withdrawal of accommodation, with a 4-2 vote for both the rate action and the stance decisions. The policy repo rate actions during 2022-23 were largely anticipated by the market, thereby strengthening the impact of monetary actions on the economy (Box III.2).

Box III.2
Decoding Policy Expectations of Market Participants

Expectations of future interest rates, rather than only the prevailing rates, are an important driver of spending and saving decisions of households and firms. Accordingly, forward guidance has gained prominence in central banks' communication. Market expectations of future short-term interest rates can be gauged, *inter alia*, through financial market instruments like the overnight index swap (OIS)[2] rates (Lloyd, 2018). If the excess return from the OIS rate *vis-à-vis* the floating leg of the contract is zero, then, on an average, the OIS can provide a robust measure of investors' expectations of future overnight interest rates over the horizon of the contract. For an empirical assessment, $i^{OIS}_{t,t+2}$ denotes the annualised 2-month OIS rate – the swap's fixed interest rate – while $i^{FLT}_{t,t+2}$ is the annualised *ex post* realised (net) return from the floating leg of the same contract[3]. The floating leg of a 2-month (N-days) OIS contract purchased on day t_{1-s} is

$$i^{FLT}_{t,t+2} = \left(\left[\prod_{j=1}^{N}(1+\gamma_j flt_j)\right]-1\right) \times \frac{365}{N} \qquad ...(1)$$

where flt_j is the floating overnight reference rate on day t_j and γ_j is the accrual factor of the form $\gamma_j = D_j/365$, and D_j is the day count between business days t_j and t_{j+1} (Lloyd, 2018). Thus, the *ex post* realised (annualised) excess return on the 2-month OIS contract is

$$rx^{FLT}_{t,t+2} = i^{OIS}_{t,t+2} - i^{FLT}_{t,t+2} \qquad ...(2)$$

Under the expectations hypothesis, the fixed leg of the OIS contract equals the floating leg. This implies that the *ex post* realised excess return in (2) and hence the *ex ante* forecasting error have zero means. Under these circumstances, the 2-month OIS rate can provide a good measure of expected policy rate changes. For India, the average excess return over the period 2010 to 2019, controlled for episodes of market turmoil (*e.g.*, taper tantrum) yields a zero mean, suggesting that monetary policy actions were well anticipated by the market. During the COVID-19 pandemic phase, there was a 'surprise' element in policy changes – the unanticipated component based on equation (2) – in the unscheduled meeting of

Table 1: Average Excess Return

(Basis points)

Policy Date	Δ Policy Rate	Excess Return
1	2	3
2020-21		
March 27	-75	24
May 22	-40	0
August 6	0	-7
October 9	0	12
December 4	0	8
February 5	0	4
2021-22		
April 7	0	3
June 4	0	5
August 6	0	6
October 8	0	4
December 8	0	7
February 10	0	17
2022-23		
April 8	0	0
May 4	40	-40
June 8	50	2
August 5	50	-1
September 30	50	-15
December 7	35	12
February 8	25	0

Note: Average excess returns are estimated based on OIS rates.
Source: RBI staff estimates.

(Contd.)

[2] An OIS is an interest rate derivative contract in which two entities agree to swap/exchange a fixed interest rate payment (the OIS rate) *vis-à-vis* a floating interest rate payment computed over a notional principal amount during the tenor of the contract. The floating rate is usually the overnight (unsecured) interbank rate and the reference rate for OIS contracts in India is the Mumbai Interbank Offered Rate (MIBOR).

[3] The floating leg of the contract is calculated based on the realised overnight reference rate adjusted for intermittent non-trading days.

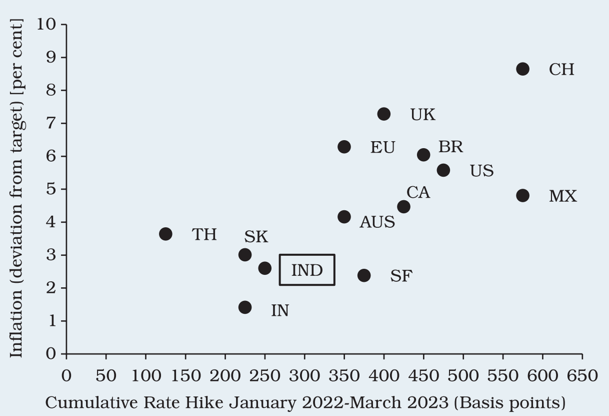
the MPC on March 27, 2020 (Table 1). While the market was expecting a 50 bps rate cut, the surprise component was around 25 bps, given the actual reduction of 75 bps. In most of the subsequent policy announcements, market expectations were broadly in sync with policy decisions. In May 2022, the off-cycle policy rate hike of 40 bps took the market by surprise as evident from the average negative excess return (- 40 bps) prior to the policy. While the next two policies (June and August 2022) were on expected lines, the September 2022 policy decision entailed a surprise element of 15 bps as the market had priced in a hike of 35 bps as against the actual increase of 50 bps. The February 2023 rate hike of 25 bps was in line with the market anticipation. This analysis suggests that the Reserve Bank's communication has been effective in anchoring market expectations.

Reference:

Lloyd, S. (2018), 'Overnight Index Swap Market-based Measures of Monetary Policy Expectations', *Bank of England Staff Working Pape*r no. 709.

III.14 Two black swan events – the pandemic and the war in Ukraine – in succession led to globalisation of inflation in 2022, which accentuated inflation deviations from targets.[4] This necessitated aggressive monetary policy tightening across economies – the third major shock for the global economy since 2020[5] (Chart III.1).

Chart III.1: Global Monetary Tightening and Inflation: 2022-23



AUS: Australia. BR: Brazil. CA: Canada. CH: Chile. EU: Euro Area. IN: Indonesia. IND: India. MX: Mexico. SF: South Africa. SK: South Korea. TH: Thailand. UK: United Kingdom. US: United States.

Note: Deviation of inflation from target is the average for January 2022-March 2023.

Source: Central Banks' websites and RBI staff estimates.

III.15 The MPC's decisions during 2022-23 were initially marked by unanimity on both rate actions and stance, but diversity characterised decision-making beginning August 2022 (stance) and September (repo rate action) amidst increasing uncertainty on the outlook (Chart III.2).

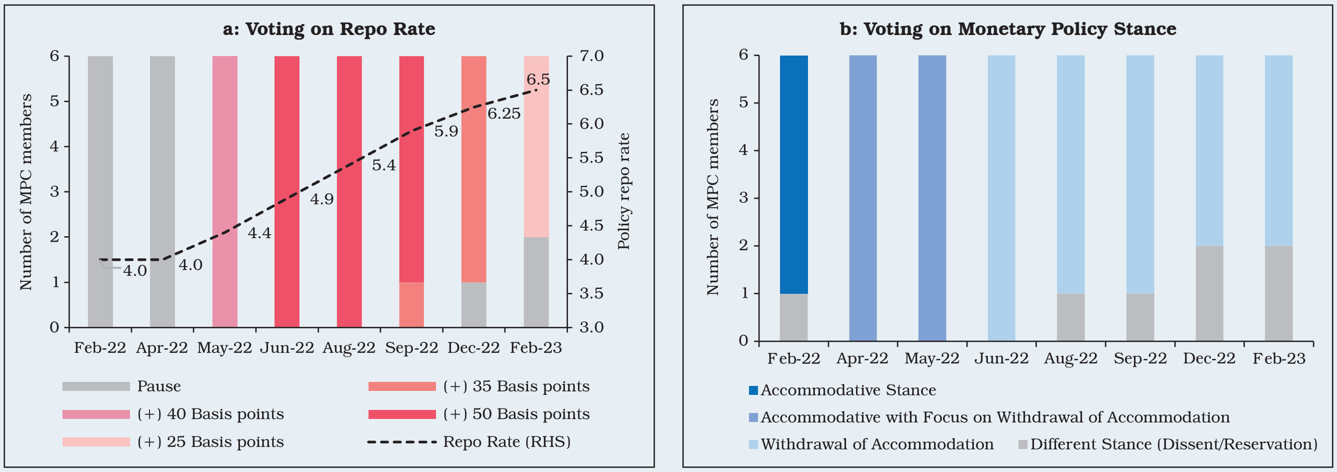
The Operating Framework: Liquidity Management

III.16 Amidst growing inflation risks and a shift in the monetary policy stance towards withdrawal of accommodation, as noted earlier, the SDF was institutionalised at 40 bps above the fixed rate reverse repo (FRRR) in April 2022. The SDF replaced the FRRR as the floor of the LAF corridor and the SDF rate was set at 25 bps below the repo rate. The marginal standing facility (MSF) rate was retained at 25 bps above the policy repo rate, making the LAF corridor symmetric around the policy repo rate and restoring the width of the corridor to its pre-pandemic configuration of 50 bps. Although the SDF window is applicable on overnight deposits, the Reserve Bank retains the flexibility to absorb liquidity of longer tenors, if necessary, with appropriate pricing. With the institution of the SDF, the fixed reverse repo rate,

4 'Globalisation of Inflation and Conduct of Monetary Policy', Speech by Shri Shaktikanta Das, Governor, Reserve Bank of India, Institute of Economic Growth, New Delhi, July 9, 2022.

5 'India: A Story of Resilience', Inaugural Address by Shri Shaktikanta Das, Governor, Reserve Bank of India, Annual FIBAC 2022 Conference, Mumbai, November 2, 2022.

Chart III.2: Monetary Policy Committee (MPC) Voting Pattern



Source: RBI.

retained at 3.35 per cent, was delinked from the policy repo rate. The FRRR remains a part of the Reserve Bank's toolkit and can be used at the Reserve Bank's discretion. Access to the SDF (like the MSF) is at the discretion of banks, unlike repo/ reverse repo, open market operation (OMO) and CRR, which are at the discretion of the Reserve Bank. By removing the collateral constraint, the SDF has strengthened the operating framework of monetary policy; moreover, it is also a financial stability tool in addition to its role in liquidity management. Furthermore, the Reserve Bank increased the CRR by 50 bps to 4.5 per cent (effective fortnight beginning May 21, 2022), withdrawing primary liquidity to the tune of ₹87,000 crore from the banking system, consistent with the shift in monetary policy stance towards withdrawal of accommodation.

Drivers and Management of Liquidity

III.17 Currency demand by the public, volatile capital flows and swings in government cash balances were the major drivers of liquidity during 2022-23. In Q1:2022-23, the build-up of government cash balances and currency demand resulted in liquidity drainage (Table III.1). In terms of management, OMO sales and the increase in CRR also drained surplus liquidity in consonance with the monetary policy stance. During Q2, the Reserve Bank's forex sales amidst turbulent global financial markets mopped up rupee liquidity. This was partially offset by the drawdown of government cash balances and the usual return of currency to the banking system during the monsoon season. In Q3, festival season currency demand and the build-up of government cash balances reduced surplus liquidity while capital inflows and drawdown of excess reserves partially ameliorated liquidity pressures. Thereafter, drawdown in government cash balances and excess reserves in Q4 partially offset liquidity withdrawal due to leakage from currency in circulation and net forex sales. Further, currency demand declined sequentially in H1:2022-23 but stabilised thereafter in H2 (Chart III.3). Overall, the average daily net absorptions under the LAF declined sharply from ₹6.6 lakh crore in March 2022 to ₹0.14 lakh crore in March 2023.

Table III.1: Liquidity – Key Drivers and Management

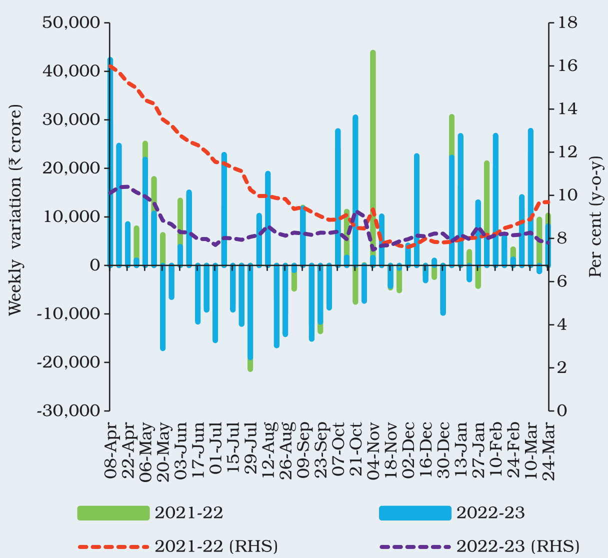
(₹ crore)

Item	2021-22	2022-23*	Q1:2022-23	Q2:2022-23	Q3:2022-23	Q4:2022-23*
1	2	3	4	5	6	7
Drivers						
(i) CiC [withdrawal (-) /return (+)]	-2,79,953	-2,46,702	-83,887	59,283	-74,331	-1,47,766
(ii) Net Forex Purchases (+)/ Sales (-)	1,34,629	-2,23,165	16,159	-2,89,713	53,147	-2,758
(iii) GoI Cash Balances [build-up (-) / drawdown (+)]	1,97,220	-1,71,400	-2,64,512	64,651	-1,589	30,050
(iv) Excess Reserves [build-up (-) / drawdown (+)]	-43,729	1,69,808	1,50,165	-54,446	26,944	47,145
Management						
(i) Net OMO Purchases (+)/ Sales (-)	2,13,976	-31,360	-6,620	-14,460	-10,280	0
(ii) Required Reserves [including both change in NDTL and CRR]	1,28,155	-1,56,083	-1,03,054	-13,946	-23,643	-15,440
Memo Items:						
Average Daily Net Absorption during the Period	6,71,285	1,87,156	4,99,919	1,64,699	55,967	27,978

CiC: Currency in Circulation. GoI: Government of India.
*: Data for Q4 are up to March 24, 2023.
Note: Inflow (+)/Outflow (-) to and from the banking system.
Source: RBI.

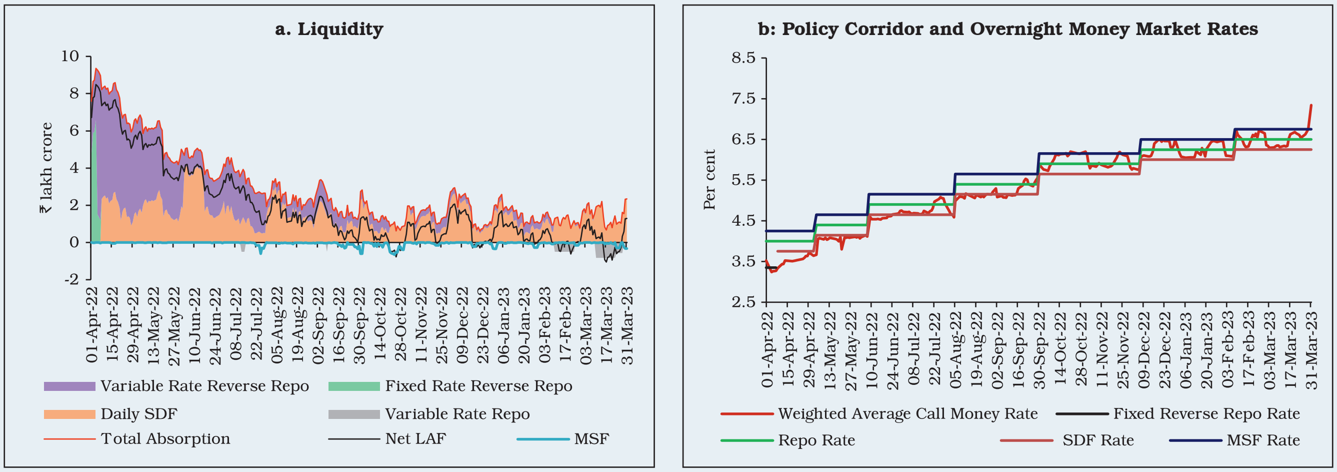
III.18 The daily absorption under the SDF during 2022-23 averaged ₹1.5 lakh crore, while the amount absorbed through variable rate reverse repo auctions (both main and fine-tuning operations) averaged ₹1.4 lakh crore (Chart III.4a). In view of the ebbing liquidity surplus, banks' appetite to park funds with the Reserve Bank for a longer period waned and the amount absorbed through the variable rate reverse repo auctions declined to 8.5 per cent of the total absorption in March 2023 from 69.3 per cent in March 2022. In order to mitigate frictional liquidity pressures from the goods and services tax (GST) payments, advance tax outflows and usual year-end tightness, the Reserve Bank conducted three variable rate repo (VRR) auctions during 2022-23 – ₹50,000 crore each of 3 days and overnight maturity on July 26 and September 22, 2022, respectively, and ₹75,000 crore of 5 days maturity on March 24, 2023. Banks occasionally took recourse to the MSF to meet their liquidity requirements. While the MSF borrowings touched a high of ₹65,646 crore on October 24, 2022, the daily recourse to MSF averaged ₹5,936 crore during 2022-23. The Reserve Bank conducted two 14-day VRR auctions as the main operation in February and March 2023. An amount of ₹5,000 crore was also made available to standalone primary dealers (SPDs)

Chart III.3: Currency in Circulation (CiC)



Source: RBI.

Chart III.4: Liquidity Conditions and Call Money Rate



Source: RBI and CCIL.

under the standing liquidity facility (SLF) on March 31, 2023 at the prevailing repo rate. Overall, the net LAF generally remained in absorption mode (barring some intermittent periods), averaging ₹1.9 lakh crore during 2022-23 as compared with ₹6.7 lakh crore in 2021-22.

III.19 With the shift in the monetary policy stance, the weighted average call rate (WACR) moved from below the fixed reverse repo rate in early April 2022 towards the policy repo rate over the course of 2022-23. Specifically, the WACR traded 3 bps above the policy repo rate (on an average) in H2:2022-23 in contrast to being 27 bps below in H1. Transient liquidity tightness caused the WACR to breach the MSF rate – the upper band of the LAF corridor – occasionally in Q3 and Q4. The WACR hardened to 7.34 per cent on March 31, 2023 on account of year-end balance sheet considerations (Chart III.4b).

III.20 Money market interest rates rose broadly in tandem with the policy repo rate hikes and the decline in surplus liquidity during 2022-23 (Table III.2). Medium to long term bond yields were also sizeably influenced by global cues.

Table III.2: Interest Rates

(Per cent)

Indicator		Average for			
		Mar-2022	Jun-2022	Sep-2022	Mar-2023
1		2	3	4	5
Rates	WACR	3.32	4.49	5.30	6.52
	Tri-party Repo	3.41	4.51	5.41	6.47
	Market Repo	3.42	4.50	5.40	6.55
	3-Month T-Bill	3.79	5.02	5.79	6.88
	3-Month CP	4.34	5.46	6.27	7.75
	3-Month CD	4.01	5.21	6.10	7.48
	AAA Corporate Bond - 5-year	6.48	7.59	7.43	7.85
	G-Sec Yield - 5-year	6.38	7.29	7.15	7.28
	G-Sec Yield - 10-year	6.83	7.49	7.23	7.35
Spreads (bps)	CP - T-Bill	59	55	68	90
	AAA 5-year - G-Sec 5-year	10	30	28	57
Memo Items:					
Liquidity	Net LAF (₹ crore)	6,61,027	3,37,597	1,02,757	14,185
Global Indicators	US 10-year G-sec (Per cent)	2.14	3.13	3.51	3.66
	Crude Oil Price (Indian basket) (US $ per barrel)	114	116	91	79

Source: CCIL, RBI and Bloomberg.

Other Policy Measures

III.21 In order to enable banks to better manage their investment portfolio during 2022-23, the Reserve Bank enhanced the limit under Held to Maturity (HTM) category from 22 per cent to 23 per cent of NDTL till March 31, 2023 in April 2022 and subsequently up to March 31, 2024 in December. It was also decided to allow banks to include eligible SLR securities acquired between September 1, 2020 and March 31, 2024 under this enhanced limit. The HTM limits are set to be restored from 23 per cent to 19.5 per cent in a phased manner starting from the quarter ending June 30, 2024. In view of the moderation in surplus liquidity, the Reserve Bank announced merger of the 28-day VRRR with the fortnightly 14-day main auction in the September policy. As part of the calibrated move towards normal liquidity operations, market hours were restored – from 9.00 am to 5.00 pm – in respect of call/notice/term money, commercial paper, certificates of deposit and repo in corporate bond segments of the money market as well as for rupee interest rate derivatives in December 2022, and for the government securities market from February 2023.

Monetary Policy Transmission

III.22 Banks' deposit and lending rates increased in 2022-23 in tandem with the policy repo rate. In response to the 250 bps increase in the policy repo rate in 2022-23, banks raised their external benchmark-based lending rate (EBLR) upwards by the same magnitude, which strengthened the pace of transmission. The 1-year median marginal cost of funds-based lending rate (MCLR) of banks moved higher by 150 bps in 2022-23. The weighted average lending rates (WALRs) on outstanding and fresh rupee loans increased by 98 bps and 169 bps, respectively, in 2022-23 (Table III.3).

III.23 Amidst the moderation in surplus liquidity and strong credit demand, the weighted average domestic term deposit rate (WADTDR) on fresh deposits (including retail and bulk deposits)

Table III.3: Transmission from the Policy Repo Rate to Deposit and Lending Rates of SCBs

(Variation in basis points)

Period (April-March)	Repo Rate	Term Deposit Rates		Lending Rates			
		WADTDR – Fresh Deposits	WADTDR – Outstanding Deposits	1-year MCLR (Median)	EBLR	WALR – Fresh Rupee Loans	WALR – Outstanding Rupee Loans
1	2	3	4	5	6	7	8
2020-21	-40	-159	-110	-90	-115@	-78	-82
2021-22	0	27	-25	-5	0	-29	-36
2022-23	+250	236	113	150	250	169	98
Memo Items:							
February 2019 to March 2022 *(Easing Cycle)*	-250	-259	-188	-155	-	-232	-150
May 2022 to March 2023 *(Tightening Cycle)*	+250	245	113	140	250	181	100

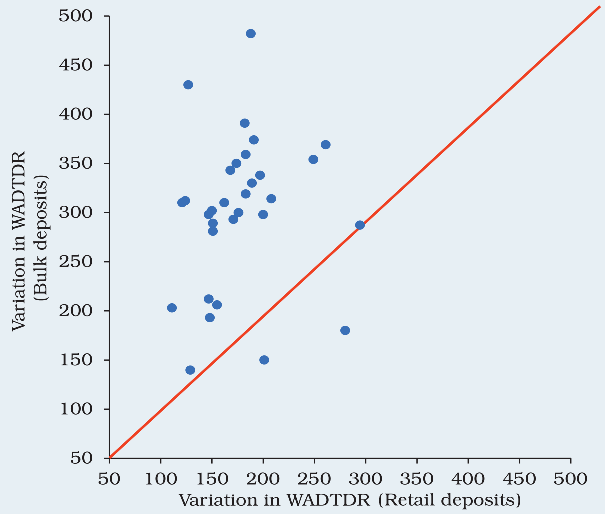
SCBs: Scheduled Commercial Banks. WADTDR: Weighted Average Domestic Term Deposit Rate. WALR: Weighted Average Lending Rate. MCLR: Marginal Cost of Funds-based Lending Rate. EBLR: External Benchmark-based Lending Rate. -:Nil.

@ : Includes the impact of repo rate cut of 75 bps on March 27, 2020.

Note: Data on EBLR pertain to domestic banks.

Source: Special Monthly Return VIAB, RBI, and RBI staff estimates.

Chart III.5: Bank-wise Transmission to Fresh Term Deposit Rates (May 2022 to March 2023)



Note: Data pertain to 31 domestic banks.
Source: RBI.

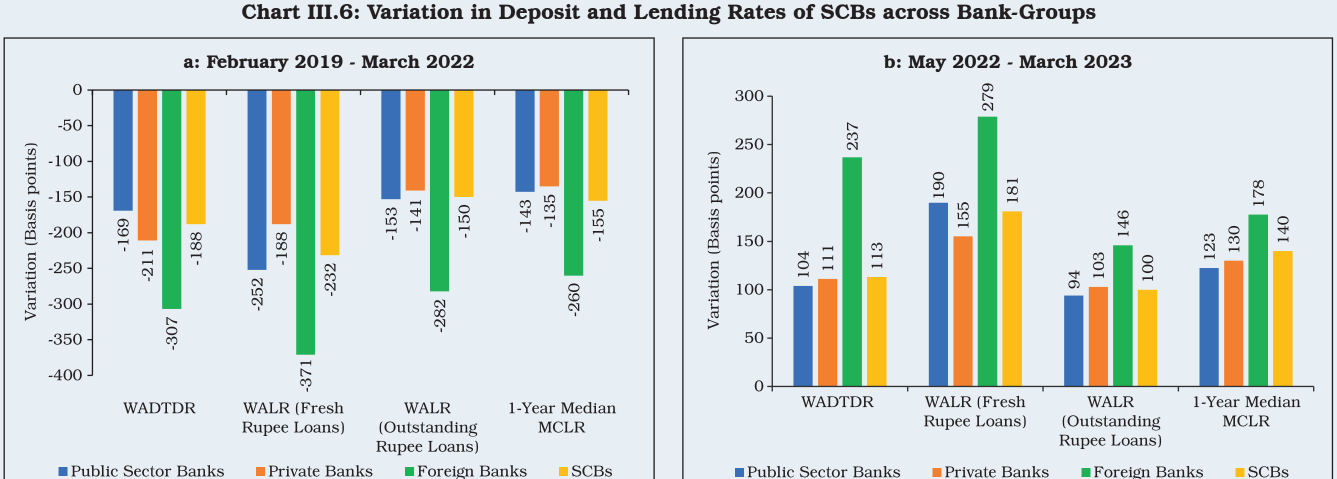
increased by 236 bps in 2022-23. The increase in term deposit rates was initially led by adjustments in bulk deposit rates (Chart III.5). The pass-through to retail term deposit rates jumped in H2:2022-23; the WADTDR on retail term deposits rose by 126 bps during October 2022-March 2023 as compared with an increase of 48 bps in H1. The weighted average savings deposit rate, however, remained broadly unchanged during 2022-23.

III.24 Across bank groups, the increase in WALRs on fresh loans was higher in the case of public sector banks (PSBs) relative to private banks (PVBs). The transmission to WADTDR on outstanding deposits and WALR on outstanding loans was relatively more for PVBs (Chart III.6). The transmission was the highest in the case of foreign banks, facilitated by low cost and lower duration deposits which enabled them to make quick adjustments in response to policy rate changes.

III.25 The mandated external benchmark regime introduced in October 2019 for loan pricing in select sectors has strengthened the pace of monetary transmission. The proportion of outstanding floating rate loans linked to external benchmarks increased from 9.1 per cent in March 2020 to 48.3 per cent in December 2022 and these loans have now the largest share in total floating rate loans. Concurrently, the share of the MCLR-linked loans fell from 78.3 per cent to 46.1 per cent over the same period (Table III.4).

III.26 In case of loans linked to the policy repo rate, the spread in respect of fresh rupee loans

Chart III.6: Variation in Deposit and Lending Rates of SCBs across Bank-Groups



Source: RBI.

Table III.4: Outstanding Floating Rate Rupee Loans of SCBs across Interest Rate Benchmarks

(Per cent to total)

Month	Base Rate	MCLR	EBLR	Others	Total
1	2	3	4	5	6
March 2020	10.3	78.3	9.1	2.3	100.0
March 2021	6.4	62.3	29.5	1.8	100.0
March 2022	4.9	48.6	44.0	2.5	100.0
December 2022	3.4	46.1	48.3	2.2	100.0

Note: Data pertain to 73 scheduled commercial banks.
Source: RBI.

(*i.e.*, WALR over the repo rate) was the highest for education loans, followed by other personal loans (Table III.5). Among the domestic bank groups, the spreads charged by PSBs for vehicle, education, and other personal loans were lower than those of PVBs while for housing and MSME loans, the spreads charged by PVBs were lower than those of PSBs.

Table III.5: Loans linked to External Benchmark – Spread of WALR (Fresh Rupee Loans) over Repo Rate (March 2023)

(Percentage points)

Bank Group	Personal Loan				MSME Loans
	Housing	Vehicle	Education	Other Personal Loans	
1	2	3	4	5	6
Public Sector Banks	2.57	2.71	3.90	3.13	3.64
Private Sector Banks	2.49	3.47	4.82	6.22	3.07
Domestic Banks	2.52	3.08	4.21	3.78	3.26

Source: RBI.

Sectoral Lending Rates

III.27 The WALR on fresh loans rose by around 201 bps for housing and 152 bps for education sectors, 179 bps for industry (large), and 118 bps for MSMEs in 2022-23 (Table III.6).

Table III.6: Sector-wise WALR of SCBs (Excluding RRBs) - Fresh Rupee Loans

(Per cent)

End-Month	Agriculture	Industry (Large)	MSMEs	Infrastructure	Trade	Professional Services	Personal Loans					Rupee Export Credit
							Housing	Vehicle	Education	Credit Card	Others$	
1	2	3	4	5	6	7	8	9	10	11	12	13
Mar-20	9.66	8.51	10.37	8.18	7.38	8.89	8.73	9.91	11.04	36.81	8.24	6.57
Mar-21	9.98	7.12	8.90	7.50	7.31	7.52	7.15	9.27	8.97	36.04	8.37	6.21
Mar-22	9.06	6.55	8.66	7.09	7.36	7.68	7.01	8.85	8.74	36.04	7.64	5.53
Jun-22	8.97	6.87	8.81	7.12	7.28	7.68	7.60	8.36	9.27	34.15	7.51	6.10
Sep-22	9.42	7.37	9.46	7.46	8.06	8.25	7.99	8.93	9.86	36.77	9.39	6.79
Dec-22	9.62	7.78	9.41	7.96	8.63	8.49	8.62	9.83	10.17	34.31	8.84	7.51
Mar-23	10.12	8.34	9.84	8.56	8.87	8.80	9.02	10.47	10.26	37.06	9.22	8.09
Variation (Percentage Points)												
2021-22	-0.92	-0.57	-0.24	-0.41	0.05	0.16	-0.14	-0.42	-0.23	0	-0.73	-0.68
2022-23	1.06	1.79	1.18	1.47	1.51	1.12	2.01	1.62	1.52	1.02	1.58	2.56

$: Other than housing, vehicle, education, and credit card loans.
Source: RBI.

Table III.7: Sector-wise WALR of SCBs (Excluding RRBs) - Outstanding Rupee Loans

(Per cent)

End-Month	Agriculture	Industry (Large)	MSMEs	Infrastructure	Trade	Professional Services	Personal Loans					Rupee Export Credit
							Housing	Vehicle	Education	Credit Card	Others$	
1	2	3	4	5	6	7	8	9	10	11	12	13
Mar-20	10.07	9.22	10.51	9.67	8.92	9.90	8.59	10.01	10.53	28.90	9.40	7.31
Mar-21	9.68	8.27	9.73	8.87	8.51	8.44	7.55	9.59	9.47	31.90	8.79	6.76
Mar-22	9.35	7.76	9.28	8.31	8.14	8.11	7.46	9.06	9.30	30.51	8.16	6.55
Jun-22	9.35	7.89	9.33	8.38	8.38	8.30	7.74	9.11	9.44	30.23	8.52	6.78
Sep-22	9.47	8.21	9.77	8.70	8.75	9.09	8.20	9.21	9.74	29.48	8.64	7.12
Dec-22	9.63	8.54	10.10	8.81	9.24	9.12	8.67	9.39	10.07	30.26	8.86	7.42
Mar-23	9.84	8.78	10.28	8.96	9.49	9.29	8.86	9.36	10.20	30.44	9.19	7.71
Variation (Percentage Points)												
2021-22	-0.33	-0.51	-0.45	-0.56	-0.37	-0.33	-0.09	-0.53	-0.17	-1.39	-0.63	-0.21
2022-23	0.49	1.02	1.00	0.65	1.35	1.18	1.40	0.30	0.90	0.23	-0.07	1.16

$: Other than housing, vehicle, education, and credit card loans.
Source: RBI.

III.28 In the case of outstanding loans, the WALR increased by 140 bps for housing, 102 bps for industry (large), and 100 bps for MSMEs during 2022-23 (Table III.7). Despite the increase in 2022-23, the WALRs in most sectors are below their levels in March 2020.

3. Agenda for 2023-24

III.29 The Department would support the conduct and formulation of monetary policy with high quality analysis of evolving macro-financial developments, constant reassessment of the outlook for inflation and growth, forecasting and analysis of liquidity conditions and assessment of credit conditions with a special focus on sectoral flows. Against this backdrop, the Department would undertake the following new initiatives during 2023-24:

- Use machine learning (ML) techniques for improving nowcasting and forecasting of GDP (*Utkarsh* 2.0);
- With non-banking financial companies (NBFCs) constituting an increasingly important segment of the Indian financial system, the Department plans to strengthen the analysis of transmission to lending rates and sectoral credit flows by expanding the coverage to include NBFCs in addition to banks in a phased manner (*Utkarsh* 2.0); and
- A review of the working of the external benchmark system for loans to strengthen monetary transmission (*Utkarsh* 2.0).

4. Conclusion

III.30 The conduct of monetary policy in 2022-23 was conditioned by an abrupt change in the inflation outlook following the war in Ukraine. This was amplified by aggressive monetary policy tightening by major central banks. In India, inflationary pressures caused monetary policy to shift focus to inflation management. It raised the repo rate cumulatively by 250 bps during 2022-23 and changed the policy stance to withdrawal of accommodation. Surplus liquidity moderated through the year, and the operating procedure of monetary policy was strengthened with the introduction of the SDF. Bank deposit and lending rates as well as market rates rose, reflecting the combined impact of higher policy rate and the reduction in the size of surplus liquidity.

III.31 Looking ahead, the conduct of monetary policy will continue to be guided by the objective of achieving the medium-term target for CPI inflation of 4 per cent within a band of +/- 2 per cent, while supporting growth. The Reserve Bank will undertake liquidity management operations in sync with the monetary policy stance and taking into account the needs of the productive sectors of the economy.

IV CREDIT DELIVERY AND FINANCIAL INCLUSION

The Reserve Bank added further impetus to its financial inclusion initiatives during the year by scaling up the Centre for Financial Literacy project to cover the entire country and taking forward the National Strategy for Financial Inclusion (NSFI) goals by working in close co-ordination with the other financial sector regulators. Efforts toward ensuring access to financial services along with timely availability of adequate credit to vulnerable groups as well as productive sectors of the economy were sustained.

IV.1 The Reserve Bank continued with its focus on ensuring availability of banking services to all sections of society across the country, including strengthening the credit delivery system to cater to the needs of productive sectors of the economy, particularly agriculture, and micro and small enterprises. During 2022-23, a number of initiatives were taken for promoting financial inclusion and improving credit delivery.

IV.2 To achieve the financial inclusion goals and objectives, it is imperative that the extent of financial inclusion achieved is monitored on a regular basis and evaluated periodically. Accordingly, a composite financial inclusion index (FI-Index) was constructed and published for the first time on August 17, 2021. In the second iteration, there has been a year-on-year (y-o-y) growth of 4.6 per cent in the FI-Index. There has also been a considerable progress in providing banking access to every village within 5 kilometre radius/hamlet of 500 households in hilly areas, which is one of the key objectives of the NSFI: 2019-24. Further, in order to expand and deepen the digital payments ecosystem in the country, state level bankers' committees/union territory level bankers' committees (SLBCs/UTLBCs) have been identifying the districts in their respective states/UTs for making them 100 per cent digitally enabled. As at end-March 2023, 182 districts have been identified across the country under this programme.

IV.3 Against this backdrop, the rest of the chapter is structured into three sections. The implementation status of the agenda for 2022-23 is presented in section 2. It also covers the performance of credit flow to priority sectors and developments with respect to financial inclusion and financial literacy. The agenda for 2023-24 is provided in section 3. Concluding observations are set out at the end.

2. Agenda for 2022-23

IV.4 The Department had set the following goals for 2022-23 for enhancing financial inclusion.

- Implementation of milestones under NSFI: 2019-24 by leveraging on the developments in the FinTech space to encourage financial service providers to adopt innovative approaches for strengthening outreach *(Utkarsh)* [Paragraph IV.5-IV.7];
- Scaling up of Centres for Financial Literacy (CFLs) to cover the entire country (*Utkarsh*) [Paragraph IV.7]; and
- Implementation of milestones under the National Strategy for Financial Education (NSFE): 2020-25 by undertaking capacity building of intermediaries involved in dissemination of financial education (Paragraph IV.8).

Implementation Status

IV.5 The NSFI has been put in place to synchronise and co-ordinate the efforts of all the stakeholders concerned to deepen the financial inclusion process at the national level. NSFI lays down action plans and milestones, and suggests broad recommendations, which, *inter alia*, focus on creating the necessary infrastructure to support the digital eco-system, strengthening inter-regulatory co-ordination for customer grievance redressal by leveraging technology, and creating innovative approaches.

IV.6 On the digital financial services front, implementation of several projects, *viz.*, setting up of Payments Infrastructure Development Fund (PIDF), Expanding and Deepening of Digital Payments Ecosystem (EDDPE), and *Bharat* Net Project of the Government of India, has been undertaken. In a bid to propel technology driven financial inclusion and ensure balancing of risk mitigation and promotion of innovation, the financial sector regulators have put in place an enabling framework for regulatory sandbox to harbour innovative approaches in a controlled environment to assess their efficacy for enhancing financial inclusion. Further, in order to facilitate testing of innovative products/services falling within the regulatory ambit of more than one financial sector regulator[1], a standard operating procedure (SOP) for interoperable regulatory sandbox (IoRS) has been put in place.

IV.7 With rapid digitalisation of financial services, concerted efforts have been made in the financial literacy space to ease the usage of financial services over the digital platforms for the targeted segments. Accordingly, to promote process literacy along with concept literacy, the National Centre for Financial Education (NCFE) has developed a financial education handbook for micro, small and medium enterprises (MSMEs), and is also in the process of preparing a similar handbook for self-help groups (SHGs) and new entrants at the workplace. Significant progress has been made in scaling up of CFL[2] in a phased manner (also refer to Box IV.1). As on March 31, 2023, a total of 1,469 CFLs were operationalised across the country.

IV.8 One of the milestones under the NSFE: 2020-25 is capacity building of intermediaries involved in dissemination of financial literacy. The NCFE is the nodal agency looking after capacity building of intermediaries. It had conducted programmes for financial literacy centre (FLC)-in-charges and SEBI registered resource persons, senior bank officials and regional rural banks' literacy officers. These programmes are part of an on-going effort to ensure that the intermediaries are abreast with the latest developments.

Major Developments

Credit Delivery

Priority Sector

IV.9 Scheduled commercial banks' (SCBs') achievement under the priority sector lending as on March 31, 2023 stood at 44.7 per cent. Each of the bank-groups (*viz.,* public sector banks, private

1 Reserve Bank of India (RBI), Securities and Exchange Board of India (SEBI), Insurance Regulatory and Development Authority of India (IRDAI), International Financial Services Centres Authority (IFSCA), and Pension Fund Regulatory and Development Authority (PFRDA).

2 The CFL project is the Reserve Bank's endeavour to bring together non-government organisations (NGOs) and banks to enable innovative and community-led participative approaches to strengthen financial literacy at the grassroot levels. The CFL project was piloted in 2017. Based on the experience gathered through a rigorous impact assessment exercise, the CFL project is being scaled up across the country in a phased manner.

Table IV.1: Achievement of Priority Sector Lending Targets

(₹ crore)

Financial Year	Public Sector Banks	Private Sector Banks	Foreign Banks
1	2	3	4
2021-22	26,49,180 (42.90)	16,85,806 (43.71)	2,08,107 (42.65)
2022-23*	28,55,355 (44.18)	19,93,388 (45.57)	2,10,578 (42.92)

*: Data are provisional.

Note: Figures in parentheses are percentage to adjusted net bank credit (ANBC) or credit equivalent of off-balance sheet exposure (CEOBE), whichever is higher.

Source: Priority sector returns submitted by SCBs.

sector banks and foreign banks) has also achieved the prescribed 40 per cent overall priority sector lending (PSL) target during 2022-23 (Table IV.1).

Trading in Priority Sector Lending Certificates (PSLCs)

IV.10 The total trading volume of PSLCs registered a growth of 7.7 per cent and stood at ₹7.13 lakh crore in 2022-23 as compared to 12.4 per cent growth during the previous year. Among the four PSLC categories, the highest trading was observed in PSLC-small and marginal farmers and PSLC-general with the transaction volumes being ₹3.21 lakh crore and ₹1.79 lakh crore, respectively, in 2022-23.

Lending by Banks to Non-Banking Financial Companies (NBFCs) for the Purpose of On-Lending

IV.11 To ensure continuation of the synergies between banks and NBFCs in delivering credit to the specified priority sectors, it was decided to permit categorisation of the following as PSL on an on-going basis: (a) lending by SCBs to NBFCs for the purpose of on-lending to 'agriculture' and 'micro and small enterprises'; and (b) lending by small finance banks (SFBs) to NBFC-Microfinance Institutions (MFIs) and other MFIs, which have a 'gross loan portfolio' (GLP) of up to ₹500 crore as on March 31 of the previous financial year, for the purpose of on-lending to individuals.

Flow of Credit to Agriculture

IV.12 The Kisan Credit Card (KCC) provides adequate and timely bank credit to farmers under a single window for cultivation, animal husbandry and fisheries, including for consumption, investment and insurance purposes (Table IV.2).

Bank Credit to the MSME Sector

IV.13 Increasing the flow of credit to the micro, small and medium enterprises (MSMEs) has been a policy priority of the Reserve Bank and

Table IV.2: Kisan Credit Card (KCC) Scheme

(Number in lakh, Amount in ₹ crore)

Financial Year	Number of Operative KCCs #	Outstanding Crop Loan	Outstanding Term Loan	Outstanding Loan for Animal Husbandry and Fisheries	Total
1	2	3	4	5	6
2021-22	268.70	4,33,408	29,306	13,559	4,76,273
2022-23*	282.96	4,61,391	37,551	19,694	5,18,636

*: Data are provisional.

#: The number of operative KCC accounts do not include non-performing asset (NPA) accounts.

Source: Public sector banks, private sector banks and small finance banks (excluding RRBs).

Table IV.3: Bank Credit to MSMEs

(Number in lakh, Amount in ₹ crore)

Financial Year	Micro Enterprises		Small Enterprises		Medium Enterprises		MSMEs	
	No. of Accounts	Amount Outstanding	No. of Accounts	Amount Outstanding	No. of Accounts	Amount Outstanding	No. of Accounts	Amount Outstanding
1	2	3	4	5	6	7	8	9
2020-21	387.93	8,21,027.77	27.82	6,62,998.50	4.44	2,99,898.53	420.19	17,83,924.80
2021-22	239.58	8,82,693.58	21.88	7,22,274.25	3.22	4,06,089.15	264.67	20,11,056.98
2021-22 (end-December 2021)	221.07	8,23,270.41	22.87	6,88,435.22	3.34	3,71,997.95	247.28	18,83,703.59
2022-23* (end-December 2022)	193.64	9,78,646.26	16.83	7,34,260.08	3.20	4,37,686.00	213.68	21,50,592.34

*: Data are provisional.
Source: Priority sector returns submitted by SCBs.

the Government of India. On a y-o-y basis, the outstanding credit to the MSMEs by SCBs increased by 14.2 per cent during 2022-23 (as at end-December 2022) as compared with 11.7 per cent in the corresponding period of the previous year (Table IV.3).

Financial Inclusion

Assignment of Lead Bank Responsibility

IV.14 The assignment of lead bank responsibility to a designated bank in every district is undertaken by the Reserve Bank. As at end-March 2023, 12 public sector banks and one private sector bank have been assigned lead bank responsibility, covering 760 districts across the country.

Universal Access to Financial Services in Every Village

IV.15 Providing banking access to every village within 5 kilometre radius/hamlet of 500 households in hilly areas is one of the key objectives of the NSFI: 2019-2024. The milestone has been achieved fully in 26 states and 7 UTs as on March 31, 2023, and 99.96 per cent of the identified villages/hamlets across the country have been covered. Efforts are being made to achieve the target for the remaining villages/hamlets.

Expanding and Deepening of Digital Payments Ecosystem

IV.16 For expanding and deepening the digital payments ecosystem in the country, all SLBCs/ UTLBCs were advised to identify district(s) in their respective states/ UTs and allot the same to a bank having significant footprint, which would endeavour to make the district 100 per cent digitally enabled in order to facilitate every individual in the district to make/ receive payments digitally in a safe, secure, quick, affordable and convenient manner. As on March 31, 2023, 182 districts have been identified (42 districts under pilot programme and 140 districts under scaled up programme) for making them 100 per cent digitally enabled. Out of these 182 districts, 87 (26 under pilot and 61 under scaled up programme) are 100 per cent digitally enabled as on March 31, 2023.

Financial Inclusion Plan

IV.17 Banks have been advised to put in place financial inclusion plans (FIPs) in order to enhance the level of financial inclusion of the country in a holistic and sustainable manner. These FIPs capture banks' achievements on parameters such as the number of outlets [branches and business correspondents (BCs)], basic savings bank deposit accounts (BSBDAs), overdraft facilities availed in these accounts, transactions in KCCs and general credit cards (GCCs) and transactions through the business correspondents - information and communication technology (BC-ICT) channel. The progress made on these parameters as at end-December 2022 is set out in the Table IV.4.

Table IV.4: Financial Inclusion Plan: A Progress Report

Particulars	Mar 2010	Dec 2021	Dec 2022$
1	2	3	4
Banking Outlets in Villages- Branches	33,378	53,249	53,159
Banking Outlets in Villages>2000*-BCs	8,390	15,18,496	13,83,569
Banking Outlets in Villages<2000*-BCs	25,784	3,26,236	2,95,657
Total Banking Outlets in Villages - BCs	34,174	18,44,732	16,79,226
Banking Outlets in Villages - Other Modes	142	2,542	2,273
Banking Outlets in Villages -Total	**67,694**	**19,00,523**	**17,34,658**
Urban Locations Covered Through BCs	447	14,12,529	4,38,333^
BSBDA - Through Branches (Number in lakh)	600	2,712	2,704
BSBDA - Through Branches (Amount in crore)	4,400	1,18,625	1,23,653
BSBDA - Through BCs (Number in lakh)	130	3,919	4,082
BSBDA - Through BCs (Amount in crore)	1,100	95,021	1,16,777
BSBDA - Total (Number in lakh)	**735**	**6,631**	**6,786**
BSBDA - Total (Amount in crore)	**5,500**	**2,13,646**	**2,40,430**
OD Facility Availed in BSBDAs (Number in lakh)	2	64	89
OD Facility Availed in BSBDAs (Amount in crore)	10	556	546
KCC - Total (Number in lakh)	240	473	499
KCC - Total (Amount in crore)	1,24,000	6,93,596	7,66,694
GCC - Total (Number in lakh)	10	87	67
GCC - Total (Amount in crore)	3,500	1,99,145	1,85,915
ICT-A/Cs-BC-Total Transactions (Number in lakh)#	270	21,095	25,434
ICT-A/Cs-BC-Total Transactions (Amount in crore)#	700	6,62,211	8,15,598

$: Data are provisional. *: Village population.
#: Transactions during the financial year.
^: Significant decrease is on account of select private sector banks.
Source: FIP returns submitted by public sector banks, private sector banks and regional rural banks.

Financial Inclusion Index (FI-Index)

IV.18 A composite FI-Index has been constructed in consultation with the stakeholders concerned to capture the extent of financial inclusion across the country comprehensively. The FI-Index comprises of three broad sub-indices (weights indicated in brackets), *viz.,* access (35 per cent), usage (45 per cent), and quality (20 per cent), with each of these consisting of a number of indicators.

IV.19 In the second iteration of the FI Index, there has been a growth (y-o-y) of 4.6 per cent from 53.9 in March 2021 to 56.4 in March 2022, with growth witnessed across all the sub-indices.

Financial Literacy

IV.20 To have an exclusive focus on financial literacy at the block level through brick-and-mortar presence, the pilot CFL project was initiated by the Reserve Bank in 2017 in 80 blocks across nine states and was subsequently extended to 20 tribal/economically backward blocks in 2019 (Box IV.1).

Inclusion of Financial Education in the School Curriculum

IV.21 Developing financial literacy content for school children is one of the strategic goals of NSFE: 2020-2025. NCFE along with other regulators and CBSE developed five educational workbooks for school students of class VI-X. So far, 22 state/UT educational boards have wholly/ partially included modules on financial education in their school curriculum. Further, the Council for the Indian School Certificate Examinations (CISCE) has integrated financial education in their school curriculum. Efforts are being made by NCFE in coordination with the regional offices

Box IV.1
Centre for Financial Literacy (CFL): Progress Achieved and the Way Ahead

The CFL project was initiated with the objective of exploring innovative and participatory approaches to financial literacy at the block level. Based on the experience gained from the pilot project and feedback received from the stakeholders, the CFL project has been scaled up in a phased manner. Funding support for the project is provided by Depositor Education Awareness Fund (DEAF), Financial Inclusion Fund (FIF) of the National Bank for Agriculture and Rural Development (NABARD) and sponsor banks. The financial literacy camps conducted by these CFLs aim to achieve certain end-outcomes such as accounts opened/reactivated, pension and insurance linkages, and monitoring thereof, is done through data pertaining to the end-outcomes uploaded in the Automated Data Extraction Project (ADEPT) portal.

As per NSFI, one of the milestones is to expand the reach of CFL at every block in the country by March 2024. The outreach of the CFLs is now being scaled up across the country in a phased manner, whereby 1,469 CFLs covering 4,389 blocks have been set up as on March 31, 2023, and the entire country is expected to be covered by 2024.

Source: RBI.

of the Reserve Bank to cover the remaining state educational boards. Further, NCFE is also following up with NCERT for integration of financial education in their curriculum.

Activities Conducted by Financial Literacy Centres

IV.22 As at end-December 2022, there were 1,478 financial literacy centres (FLCs)[3] in the country. During 2022-23, a total of 1,10,081 financial literacy activities were conducted by the FLCs up to December 31, 2022.

Observing Financial Literacy Week 2023

IV.23 The Financial Literacy Week (FLW) is an initiative of the Reserve Bank to spread awareness among the masses/various sections of the population on key topics through a focused campaign every year. During 2022-23, FLW was observed between February 13 and 17, 2023 on the theme of 'Good Financial Behaviour - Your Saviour', with a focus on creating awareness about saving, planning and budgeting, and prudent use of digital financial services. During this week, banks were advised to disseminate information and create awareness amongst its customers and the general public. Further, the Reserve Bank also undertook a centralised mass media campaign to disseminate essential financial awareness messages on the said theme to the general public.

3. Agenda for 2023-24

IV.24 The Department has set the following goals for 2023-24:

- Setting up CFLs in the remaining blocks so as to cover the entire country (*Utkarsh* 2.0); and
- Working towards the deliverables of G20 Global Partnership for Financial Inclusion (GPFI).

4. Conclusion

IV.25 The impact of the sustained efforts on financial inclusion is evident from the notable increase in the FI-Index in its second iteration that was released for the year ending March 2022. During the year, the Reserve Bank continued its focus towards financial inclusion through implementation of initiatives to achieve the milestones set under the NSFI and NSFE. Setting up CFLs in the remaining blocks of the country will facilitate in scaling up financial literacy further in the country.

[3] FLCs are established by banks and are manned by the financial literacy counsellors.

V FINANCIAL MARKETS AND FOREIGN EXCHANGE MANAGEMENT

The Reserve Bank ensured orderly financial market conditions, despite formidable global headwinds during the year. It sustained efforts to develop and deepen various segments of the financial markets by strengthening the regulatory framework aimed at broadening participation, easing access and fostering product innovation. Measures to enhance the ease of doing business and lower the compliance burden were the outcome of a process of constant review and rationalisation of various regulations relating to foreign exchange. Liquidity operations were proactively aligned to the shift in the stance of monetary policy.

V.1 During 2022-23, the Reserve Bank continued to unveil new regulatory initiatives, both proactively and in response to evolving challenges, to further develop financial markets in terms of easing access, broadening participation, reducing compliance burden and enhancing market transparency. Targeted measures against unauthorised forex trading platforms were introduced taking cognisance of the risks to financial stability. The liquidity management operations were conditioned by the shift in the stance of monetary policy, *i.e.,* gradual withdrawal of accommodation in a tightening cycle of the policy repo rate. The Reserve Bank also facilitated external trade and payments and promoted orderly development of the foreign exchange markets, with a view to improve the ease of doing business and reduce the compliance burden through periodic review and rationalisation of procedures and ongoing efforts directed at automation of the regulatory compliance processes.

V.2 Against this backdrop, the rest of the chapter is structured into four sections. The development and regulation of financial markets are covered in section 2. The Reserve Bank's market operations are discussed in section 3. In section 4, the focus is on external trade and payments and measures relating to liberalisation and development of external financial flows. Concluding observations are set out in the last section.

2. FINANCIAL MARKETS REGULATION DEPARTMENT (FMRD)

V.3 The Financial Markets Regulation Department (FMRD) is entrusted with the development, regulation and surveillance of money, government securities (G-secs), interest rate derivatives, foreign exchange and credit derivative markets. The Department undertook several measures in pursuance of this mandate to fulfil the objectives set for 2022-23.

Agenda for 2022-23

V.4 The Department had set out the following goals for 2022-23:

- Issue directions for introducing variation margin requirements for Non-Centrally Cleared Derivatives (NCCDs) in India in the first half of 2022-23 (*Utkarsh*) [Paragraph V.5]; and
- Issue revised directions on Rupee Interest Rate Derivatives (IRD) in 2022-23, after reviewing the feedback obtained from the public with a view to allowing greater product innovation, easing non-resident access to the domestic market and rationalising procedures (Paragraph V.6).

Implementation Status

V.5 The Directions on exchange of variation margin[1] (VM) for NCCDs were issued on June 1, 2022. The Department also issued the draft Directions, mandating exchange of initial margin for NCCDs.

V.6 The Department is following a phased approach to implement the revised IRD Directions. As a first step, authorised dealer category-I (AD Cat-I) banks and standalone primary dealers (SPDs), authorised under Section 10(1) of the Foreign Exchange Management Act (FEMA), 1999 have been permitted to offer foreign currency settled – overnight indexed swap (FCS-OIS) contracts to non-residents and other eligible market-makers.

Major Initiatives

Action on Unauthorised Foreign Exchange (Forex) Trading Platforms

V.7 In view of the increasing proliferation of unauthorised trading platforms offering forex trading facilities to Indian residents, an advisory was issued cautioning the residents against undertaking forex transactions with unauthorised persons or on unauthorised electronic trading platforms (ETPs). A set of frequently asked questions (FAQs) on forex transactions in this regard was also published along with a list of authorised ETPs and an 'Alert List' of unauthorised entities understood to be offering forex trading facilities. An awareness campaign under the aegis of the 'RBI *Kehta Hai*' programme has also been initiated to create awareness about the risks involved in transacting on unauthorised trading platforms (Box V.1).

Margin Requirements for Non-Centrally Cleared Derivatives (NCCDs)

V.8 With a view to strengthening the resilience of over the counter (OTC) derivative markets and in the backdrop of the G-20 recommendations on OTC derivatives, the Master Directions – Reserve Bank of India (Variation Margin) Directions, 2022 were issued on June 1, 2022.

Box V.1
Unauthorised Forex Trading Platforms

Foreign exchange (forex) transactions in India are governed by the FEMA, 1999 and the rules, regulations, directions, and permissions issued thereunder. As per the extant statutory and regulatory framework, persons resident in India can purchase/sell forex only for permissible current and capital account transactions; and only from/to authorised persons (including recognised stock exchanges). While permitted forex transactions can be executed electronically, they should be undertaken only on electronic trading platforms authorised for the purpose by the Reserve Bank or on recognised stock exchanges as per the terms and conditions specified by the Reserve Bank from time to time.

There has been a proliferation of unauthorised ETPs in the country offering forex trading facilities to residents in recent years. These platforms are extensively advertised on news platforms, social media and digital media including search engines, over-the-top platforms and gaming apps and their misleading advertisements are often targeted at gullible customers through promises of disproportionate/exorbitant returns, bonus on initial investment and assured rewards. There have also been reports of such platforms engaging agents who personally contact prospective customers to undertake forex trading/investment schemes.

These platforms are not authorised by the Reserve Bank and the forex transactions undertaken on them are in contravention of FEMA, 1999. Such unauthorised platforms

(Contd.)

[1] In terms of the G20 over the counter (OTC) derivatives market reforms, OTC derivatives which are not centrally cleared should be subject to requirements for variation margin (collateral collected or paid to reflect the current mark-to-market exposure, between counterparties) and initial margin (collateral collected to cover the potential future exposure).

have the potential to attract less sophisticated customers and expose them to the risk of financial loss.

Regulatory Initiatives

Taking cognisance of this market development and growing complaints about individuals losing money and reports of frauds by these platforms, cautionary advices were issued on February 3, 2022, September 7, 2022 and February 10, 2023. Members of the public were cautioned not to undertake forex transactions on unauthorised ETPs or remit/deposit money for such unauthorised transactions. It was clarified that resident persons undertaking forex transactions for purposes other than those permitted under the FEMA or on ETPs not authorised by the Reserve Bank shall render themselves liable for legal action under the FEMA.

With a view to create greater awareness, an 'Alert List' of entities, which are neither authorised to deal in forex under the FEMA Act, 1999 nor authorised to operate ETPs for forex transactions, was published. The 'Alert List' also includes names of entities/platforms/websites which appear to be promoting unauthorised entities/ETPs, including through advertisements of such unauthorised entities or claiming to be providing training/advisory services. The 'Alert List' is not exhaustive and is based on information available with the Reserve Bank at the time of its publication. It has been clarified that an entity not appearing in the list should not be assumed to be authorised by the Reserve Bank. To ascertain the authorisation status of any person/ETP, the members of the public may refer to the list of authorised persons and the list of authorised ETPs, which have also been made available on the Reserve Bank's website. To supplement these measures, a set of FAQs on forex transactions has also been published for providing general guidance to the public.

Source: RBI.

The Directions mandate the exchange of variation margin between counterparties of non-centrally cleared OTC derivative transactions. The scope of the Directions extends to interest rate, foreign exchange and credit derivative transactions and will be applicable for financial and non-financial entities based on their outstanding transactions in OTC derivative markets.

'Fully Accessible Route' for Investment by Non-residents in Government Securities – Additional Specified Securities

V.9 The Fully Accessible Route (FAR) for non-resident investment in Central Government Securities (G-secs) introduced on March 30, 2020, permits non-residents to invest, without any macro-prudential limits, in certain specified securities (issuance of G-secs of 5-year, 10-year and 30-year). With an objective to increase the choice of G-secs available for investment by the non-resident investors under the FAR and also to augment liquidity across the sovereign yield curve, all new issuances of G-secs of 7-year and 14-year tenors (including the current issuances) were included as specified securities under the FAR on July 7, 2022. This augmentation of the FAR with the 7 and 14-year securities has been well received by the FPIs, as indicated by the build-up of the FPI holdings since July 8, 2022. In the 7-year security, the FPI holding increased from ₹118 crore before its inclusion under the FAR to ₹7,084 crore as on March 31, 2023. The 14-year security witnessed a build-up from ₹36 crore to ₹1,313 crore during the same period.

Investment by Foreign Portfolio Investors (FPI) in Debt – Relaxations

V.10 Under the Medium-Term Framework (MTF), FPI investment in government and corporate debt are subject to certain macro-prudential limits, *viz.*, (i) a short-term limit requirement wherein not more than 30 per cent of investments each in government securities and corporate bonds can have a residual maturity of less than one year, and (ii) a minimum residual maturity requirement wherein FPIs can invest only in corporate debt instruments with a residual maturity of at least one year. With an objective to enhance forex inflows while ensuring overall macroeconomic and financial stability, investments by FPIs in government securities and corporate debt were exempted on July 7, 2022 from the requirements of short-term limit and minimum residual maturity till October 31, 2022. During the above period, FPIs invested ₹3,955 crore in commercial papers (CPs).

Foreign Currency Lending by Authorised Dealer Category I (AD Cat-I) Banks

V.11 With a view to facilitate foreign currency borrowing by a larger set of borrowers who may find it difficult to directly access overseas markets, AD Cat-I banks were permitted on July 7, 2022, to utilise overseas foreign currency borrowing (OFCB) for lending in foreign currency to entities for a wider set of end-use purposes, subject to the negative list set out for external commercial borrowings (ECBs). The dispensation for raising such borrowings was available till October 31, 2022.

Permitting Standalone Primary Dealers (SPDs) to Deal in Offshore Foreign Currency Settled Rupee Derivatives Market

V.12 Banks in India were permitted in February 2022 to undertake transactions in foreign currency settled overnight indexed swap (FCS-OIS) market with non-residents and other market makers. As SPDs are also market-makers like banks in the onshore OIS market, SPDs authorised under Section 10(1) of FEMA, 1999 were permitted to undertake FCS-OIS transactions with non-residents and other eligible market-makers from August 8, 2022.

Notification of Significant Benchmark

V.13 In terms of requirements provided under the Financial Benchmark Administrators (Reserve Bank) Directions, 2019, the Reserve Bank had notified Mumbai interbank forward outright rate (MIFOR) as a 'significant benchmark'. The MIFOR is a financial benchmark comprising: (i) USD London interbank offered rate (LIBOR) and (ii) USD/INR forward premia as components. In the backdrop of beginning of cessation of LIBOR from January 1, 2022, USD LIBOR linked transactions are now permitted only for specific purposes. The MIFOR has been replaced with modified MIFOR (MMIFOR) for new financial transactions from January 1, 2022. MMIFOR comprises the adjusted secured overnight financing rate (SOFR) and the Financial Benchmarks India Private Limited (FBIL) forward premia rate. MMIFOR has been notified as a 'significant benchmark' from December 2022.

Hedging of Gold Price Risk in Overseas Markets

V.14 Resident entities in India were not permitted to hedge their exposure to gold price risk in overseas markets. With a view to providing greater flexibility to these entities to hedge the price risk of their gold exposures efficiently, resident entities have been permitted (since December 12, 2022) to hedge their gold price risk on recognised exchanges in the International Financial Services Centre (IFSC), recognised by the International Financial Services Centres Authority (IFSCA).

Inclusion of Sovereign Green Bonds under the FAR

V.15 Non-residents were permitted to invest in specified categories of G-secs without any restrictions under the FAR from April 2020. The list of specified securities under the FAR was expanded on January 23, 2023 to include all sovereign green bonds issued by the government in 2022-23.

Agenda for 2023-24

V.16 For the year 2023-24, the Department has set the following goals:

- The draft Directions mandating exchange of initial margin for NCCDs were issued for public feedback on June 16, 2022. The final Directions shall be issued in 2023-24 (*Utkarsh* 2.0);
- With a view to enhancing operational efficiencies, easing access further to the foreign exchange derivative market for users with small forex (FX) exposures and ensuring that a broader set of customers with the necessary risk management expertise are equipped with the flexibility to manage their hedging programme efficiently, the regulatory framework for hedging of FX risks will be reviewed in 2023-24; and
- With an objective to enhance market transparency, a review of the reporting and disclosure framework of trade repositories (TRs) shall be carried out in 2023-24 (*Utkarsh* 2.0).

3. FINANCIAL MARKETS OPERATIONS DEPARTMENT (FMOD)

V.17 The Financial Markets Operations Department (FMOD) is primarily responsible for the conduct of liquidity management operations in alignment with the stance of monetary policy to secure the first leg of monetary policy transmission in the financial markets and ensuring orderly conditions in the forex market through both onshore and offshore market operations.

Agenda 2022-23

V.18 During the year, the Department had set out the following goals:

- To carry out liquidity management operations effectively using all available liquidity management tools as may be necessary, in line with the stance of monetary policy (*Utkarsh*) [Paragraph V.19];
- To continue to conduct foreign exchange operations in an effective manner to curb undue volatility in the USD/INR exchange rate (Paragraph V.20-V.21); and
- To undertake policy-oriented research on financial markets (Paragraph V.22).

Implementation Status

Money Market and Liquidity Management [2]

V.19 During 2022-23, the Reserve Bank actively managed evolving liquidity in the wake of shift in the stance of monetary policy towards withdrawal of accommodation. In view of the scheduled redemption of long term repo operations (LTROs) and targeted long term repo operations (TLTROs) during February to April 2023, it remained flexible in its approach towards liquidity management. The Reserve Bank committed to conduct operations on either side of the LAF, *i.e.,* both - variable rate reverse repo (VRRR) and variable rate repo (VRR) operations, depending on the evolving liquidity conditions. The policy rate hikes, as well as the absorption of primary liquidity from the banking system through increase in the cash reserve ratio (CRR) during the year led to the weighted average call money rate (WACR) - the operating target of

[2] Details relating to liquidity management operations are covered in Chapter III of this Report.

monetary policy - increasing from 3.47 per cent in April 2022 to 6.50 per cent in March 2023.

Foreign Exchange Market

V.20 During the year, the Rupee traded with a depreciating bias tracking unrelenting appreciation of the USD in response to aggressive US Fed tightening of monetary policy and surge in US treasury yields. Elevated crude prices and FPI outflows from the domestic capital markets also exerted pressure on the Rupee. Brent crude prices averaged around US$ 95 per barrel during the financial year as against an average of around US$ 63 per barrel in the previous five years. FPI outflows, however, moderated as the US Fed slowed its pace of tightening amid signs of inflation peaking in the US.

V.21 The Reserve Bank intervened in the forex market through operations in the onshore/offshore OTC and exchange traded currency derivatives (ETCD) segments in order to maintain orderly market conditions and contain excessive volatility in the exchange rate (Box V.2).

Box V.2
Effectiveness of the Reserve Bank Measures in Containing INR Volatility

Emerging as well as advanced economy (AE) currencies witnessed heightened volatility in 2022 due to synchronised monetary policy tightening by major systemically important central banks in an effort to tame multi-decade high inflation. In particular, the US Fed's aggressive policy rate hikes led to tightening in US financial conditions. Foreign portfolio investment (FPIs) flows to EMEs turned negative reflecting risk-off sentiment, leading to sharp depreciation pressures on their exchange rates.

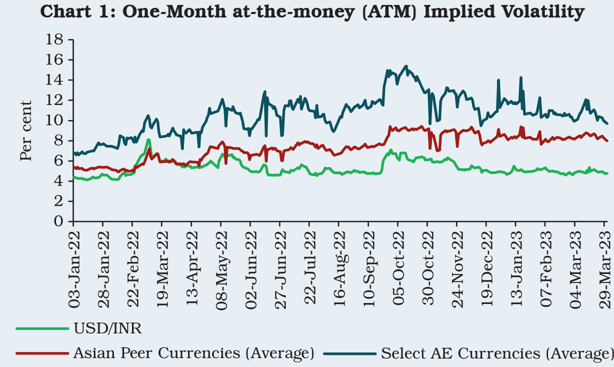
The Indian Rupee (INR) came under pressure as crude oil prices surged and equities witnessed record FPI outflows. The 1-month implied volatility of INR *vis-à-vis* USD jumped above 8.0 per cent in March 2022 for the first time since 2020, tracking Brent's surge above US$ 139 per barrel post escalation of geopolitical tensions. Domestic equities witnessed FPI outflows over nine consecutive months starting in October 2021, totalling US$ 33 billion, with June 2022 recording the second-highest monthly outflows ever of US$ 6.4 billion. Amidst these global headwinds and extreme uncertainty, the Reserve Bank intervened in the forex market to contain INR volatility without reference to any specific level or band of the exchange rate, besides undertaking various other policy measures.

The implied volatility of USD/INR was largely contained during January 2022 to March 2023 following the Reserve Bank's intervention measures and it remained well below the average implied volatilities of major Asian peers[3] and select AE currencies[4] during this period (Chart 1).

To assess the effectiveness of the Reserve Bank's intervention in reducing Indian Rupee's volatility, a generalised autoregressive conditional heteroscedasticity (GARCH) model has been applied on select variables for the sample period April 2022 to March 2023. Here, the dependent variable, lnr_t, is log difference of closing USD/INR spot exchange rate (S) over two consecutive days, indicating return on the exchange rate.

$$lnr_t = 100 \times (\ln S_t - \ln S_{t-1}) \quad \text{...(1)}$$

Chart 1: One-Month at-the-money (ATM) Implied Volatility



Source: Bloomberg.

(Contd.)

[3] Chinese Yuan, Indonesian Rupiah, Korean Won, Malaysian Ringgit, Philippine Peso and Thai Baht.

[4] Australian Dollar, Canadian Dollar, Euro, Japanese Yen, New Zealand Dollar and Pound Sterling.

Here, the positive (negative) lnr_t indicates rupee depreciation (appreciation) against the US dollar. USD/INR return is influenced by its past values and an error term (ε_t) reflecting shocks impacting the exchange rate.

$$lnr_t = \beta_0 + \beta_1 lnr_{t-1} + \varepsilon_t \qquad ...(2)$$

The error term ε_t is a function of lagged information (Ω_{-1}). Further, ε_t is assumed to be normally distributed with zero mean and its variance (h_t) is defined as:

$$\varepsilon_t|\Omega_{-1} \sim \mathrm{N}(0, h_t) \qquad ...(3)$$

The, variance equation (h_t) is as follows:

$$h_t = \alpha_0 + \alpha_1 \varepsilon_{t-1}^2 + \alpha_2 h_{t-1} + \gamma|\alpha_3 Intv_t + \alpha_4 FII_{Equity_{(t-2)}} + \alpha_5 Brent_t| \qquad ...(4)$$

Here, α_1 and α_2 are the coefficients of autoregressive conditional heteroscedasticity (ARCH) and GARCH terms, respectively. $Intv_t$ is Reserve Bank's intervention, FII_{Equity} is foreign equity flows[5], and $Brent_t$ is Brent crude oil prices.

The residual diagnostics of the estimated model shows no ARCH effect suggesting no autocorrelation in residuals.

The results indicate that the Reserve Bank's intervention was effective in reducing USD/INR volatility, while higher variation in foreign equity outflows and higher Brent crude oil prices led to increased volatility in the USD/INR exchange rate (Table 1).

Table 1: GARCH (1,1) Estimation Results
(Sample Period: April 2022 to March 2023)

Variable	Coefficient	z-Statistic	Probability
Dependent Variable: lnr_t			
C	0.053***	3.73	0.01
$lnr_{(t-1)}$	-0.10	-1.38	0.16
Variance Equation: $h_t = \alpha_0 + \alpha_1 \varepsilon_{t-1}^2 + \alpha_2 h_{t-1} + \gamma\lvert\alpha_3 Intv_t + \alpha_4 FII_{Equity_{(t-2)}} + \alpha_5 Brent_t\rvert$			
C	0.045***	6.29	0.00
$ARCH_{-1}$	0.53***	4.69	0.00
$GARCH_{-1}$	0.20**	2.41	0.01
$Intv_t$	-0.0227***	-3.60	0.00
$FII\ Equity_{(t-2)}$	0.000036**	2.33	0.01
$Brent_t$	0.0014**	2.41	0.01
Log-likelihood	-26.96	Total observations	266
Durbin-Watson stat	1.93	Akaike info criterion	0.26
		ARCH(LM)	0.56 (0.45)

*** and ** indicate significance at 1 per cent and 5 per cent level, respectively.
Source: RBI staff calculations.

Research/Analytical Studies

V.22 The Department carried out analytical research on several topical issues including exchange rate volatility in emerging market economies.

Agenda for 2023-24

V.23 During the year 2023-24, the Department plans to achieve the following goals:

- To carry out liquidity management operations effectively through all available tools, in line with the monetary policy stance;
- To continue to conduct foreign exchange operations in an effective manner to curb undue volatility in the USD/INR exchange rate; and
- To continue to conduct policy-oriented research and analysis on financial markets so as to guide market operations strategies on an ongoing basis (*Utkarsh* 2.0).

4. FOREIGN EXCHANGE DEPARTMENT (FED)

V.24 The mandate of the Foreign Exchange Department (FED) is to facilitate external trade and payments and promote an orderly development of the foreign exchange markets, by framing simple yet comprehensive, time-consistent, and principles-based policies. In furtherance of the stated mandate and continuing with the Department's mission to streamline FEMA, which

5 The period contains mostly net outflows from Indian market.

includes aligning the regulatory framework to meet the needs of the present business and economic scenario, the Department has sustained its efforts to improve the ease of doing business and reduce the compliance burden. In this regard, the Department overhauled the overseas investment (OI) regime by issuing new Regulations and Directions to complement the new OI Rules issued by the Central Government; extended the late submission fee (LSF) framework for all reporting delays under FEMA; and liberalised the external commercial borrowing (ECB) guidelines to diversify and expand the source of foreign funding. Further, to boost export growth and to support the increasing interest of the global trading community in the Indian Rupee (INR), an additional arrangement for invoicing, payment, and settlement of exports and imports in INR, has also been put in place by the department.

Agenda for 2022-23

V.25 The Department had set out the following goals for 2022-23:

- Continue rationalisation of the FEMA regulations by consolidating existing regulations of similar subjects, to obviate frequent issuance of amendment notifications, and aligning definitions across notifications/regulations (Paragraph V.26);
- Implementation of the revised computation matrix for compounding of contraventions under FEMA 1999 (*Utkarsh*) [Paragraph V.27];
- A comprehensive review of the Liberalised Remittance Scheme (LRS) to address various issues and inconsistencies in the scheme (Paragraph V.28);
- To continue automation of process of submission of various returns for regulatory compliance by leveraging technology (Paragraph V.29);
- Conducting awareness programmes and creation of digital content on an ongoing basis (*Utkarsh*) [Paragraph V.30]; and
- To continue to delegate more powers to AD banks and regional offices (ROs) for faster implementation of policy changes (Paragraph V.31).

Implementation Status

Rationalisation of Compounding Proceedings Rules

V.26 A rationalised draft Foreign Exchange Management (Compounding Proceedings) Rules, 2022 to supersede the extant Foreign Exchange (Compounding Proceedings) Rules, 2000, has been forwarded to the Government of India. Apart from aligning provisions contained in the Rules with those contained in the Act, the draft Rules propose the following major amendments:

- Enhancing the compounding powers of the RBI officers designated as Compounding Authorities;
- Enabling electronic/online modes of payment for compounding application fees and compounding amount; and
- Enabling the powers to Reserve Bank to lay down the procedure for compounding.

Implementation of the Revised Computation Matrix for Compounding of Contraventions under FEMA, 1999

V.27 Post review of the existing guidance note on computation matrix for calculation of compounding amount, a revised matrix, which provides simplified and standardised guidance for calculating the compounding amount, is at an advanced stage of finalisation.

Comprehensive Review of the Liberalised Remittance Scheme (LRS)

V.28 Under LRS, authorised dealers (ADs) may freely allow remittances by resident individuals up to US$ 2,50,000 per financial year (April-March) for any permitted current or capital account transaction. A comprehensive review to address various issues in the scheme, covering, *inter alia*, the legal framework, annual limit, permitted purposes, and repatriation requirements, under the Scheme has been undertaken and a revised LRS will be issued in due course.

Automation of Process of Submission of Various Returns - Discontinuation / Merger / Online Submission of Returns

V.29 In view of the recommendations by the Regulations Review Authority (RRA 2.0) related to discontinuation/merger or conversion of extant 65 regulatory paper-based returns into online returns on February 18, 2022, authorised persons (APs) have been notified, about the conversion of 21 returns into online submission. In addition, one return, namely 'quarterly return on guarantee availed and invoked from non-resident entities', has been discontinued/merged. Subsequently, AD banks were advised about the discontinuation of the said return with effect from the quarter ending June 2022. This migration to online returns will help in reducing the cost of regulatory compliance for the reporting entities while improving the accuracy, speed, and quality of data submission and enhancing the ease of doing business.

Conducting Awareness Programmes and Creation of Digital Content

V.30 Regional offices (ROs) have been conducting various workshops to supplement the simplification of regulations at the Central Office. The workshops for APs and FEMA exhibition-cum-townhall events during the year, where trade and industry bodies and users of foreign exchange were the participants, have been conducted by ROs to explain the recent policy changes and obtain feedback on ground-level implementation issues. Further, pursuant to the issuance of rationalised Overseas Investment (OI) Rules/Regulations, workshops for AD banks and ROs designated to process late submission fee (LSF) applications under the new OI regime were conducted. In addition to the above, the various guidelines/instructions are disseminated through Master Directions, Training Modules and Frequently Asked Questions (FAQs).

Delegation of Powers to AD Banks and ROs: Late Submission Fee for Reporting Delays Related to Overseas Investment Transactions - Standard Operating Procedure (SOP)

V.31 Keeping with the spirit of liberalisation, and with a view to encouraging ease of doing business, the late submission fee (LSF) concept has been introduced in the Foreign Exchange Management (Overseas Investment) Regulations, 2022, which is implemented at RO level, for which seven ROs, *viz.*, Ahmedabad, Bangalore, Chennai, Hyderabad, Kolkata, Mumbai, and New Delhi were identified. Subsequently, a detailed SOP and guidance note on calculation of LSF in overseas investment transactions was issued on August 26, 2022.

Major Initiatives

Comprehensive Review of Foreign Exchange Management (International Financial Services Centre) Regulations, 2015

V.32 The Foreign Exchange Management (International Financial Services Centres) Regulations, 2015 were issued on March 2, 2015. However, the IFSC Authority (IFSCA) has been set up under the provisions of IFSC Authority Act, 2019. Consequently, several provisions of the regulations *ibid,* have become redundant. Accordingly, a comprehensive review of the regulations was carried out and the draft revised notification under FEMA, as well as the notification to be issued by the Government under the Special Economic Zone (SEZ) Act, have been forwarded to the Government of India for finalisation.

Government of India-Guaranteed Term Loan Extended by State Bank of India (SBI) to the Government of Sri Lanka - Settlement of Current Account Transactions with Sri Lanka in INR

V.33 In order to facilitate the settlement of Indian exports to Sri Lanka, undertaken as part of the term-loan agreement of US$ 1.0 billion between SBI and the Government of Sri Lanka, such transactions have been permitted to be settled in INR outside the Asian Clearing Union (ACU) mechanism since May 19, 2022.

V.34 In addition, AD Cat-I Banks have been advised on July 8, 2022, that all eligible current account transactions including trade transactions with Sri Lanka shall be settled in any permitted currency outside the ACU mechanism until further notice.

Import of Gold by Qualified Jewellers as Notified by IFSCA through India International Bullion Exchange IFSC Limited (IIBX)

V.35 As per the Directorate General of Foreign Trade (DGFT) notification, qualified jewellers (as notified by International Financial Services Centres Authority - IFSCA) are permitted to import gold under specific Indian Trade Classification (ITC) based on Harmonised System (HS) codes through India International Bullion Exchange IFSC Limited (IIBX), in addition to the nominated agencies (as notified by DGFT) and nominated banks (as notified by the Reserve Bank for import of gold). AD banks have been permitted since May 25, 2022, to allow qualified jewellers (as notified by IFSCA) to remit advance payment to enable them to import gold through IIBX in IFSC, subject to specified conditions.

Strategic Policy for Cross-Border Payments in INR

V.36 As a part of the long-term economic reform agenda for creation of an efficient cross-border payment and settlement system to improve the operational efficiency for meeting the needs of the country, the Reserve Bank had operationalised a framework for international trade payments in domestic currency through issuance of a circular to banks on July 11, 2022. This will enable Indian banks and INR to become a wider integral part of international trade and international supply chain.

V.37 Given India's growing foreign trade and the recent geopolitical developments, a complementary system to the existing mechanism to encourage trade payment and settlement in INR is being explored. The system can be tailored to encourage use of INR for cross-border trade and further enhance Indian exports, thereby generating additional employment and income.

V.38 The mechanism introduced in July 2022 is an additional arrangement for denominating, invoicing, and effecting payment and settlement of exports/imports in INR and would coexist with the current practice of trade payment and settlement in freely convertible foreign exchange. It has been envisaged that settlement of international trade in INR may take place following a voluntary and gradual principle and trading partners should also have a choice to use the existing arrangement. The benefits are twofold: (i) it would be a mutually beneficial mechanism for both countries in terms of conservation of foreign exchange reserves through settlement of full or part of the trade transactions through national currencies (INR and partner country currency). Payment and settlement in INR and partner country currency would reduce costs such as hedging and conversion; and (ii) the surplus Rupee balances in the special Rupee *vostro* accounts can be used for other remunerative purposes on reciprocal arrangements between the partner countries.

External Commercial Borrowings (ECB) Policy – Liberalisation Measures

V.39 In order to further diversify and expand the sources of forex inflows, the Reserve Bank *vide* its press release dated July 6, 2022, on 'Liberalisation of Forex Flows' had announced the temporary increase of the ECB limit under the automatic route from US$ 750 million or its equivalent per financial year to US$ 1.5 billion and the all-in-cost ceiling by 100 basis points (bps) for borrowers of investment-grade rating. These temporary measures were available for the ECBs raised up to December 31, 2022. Accordingly, after making necessary amendments in FEMA 3(R) [Foreign Exchange Management (Borrowing and Lending) Regulations, 2018], all AD Cat-I Banks were notified about the same. Post the review of the guidelines, new ECB agreements amounting to US$ 15.09 billion were concluded during August to December 2022, out of which, US$ 6.4 billion were concluded under the temporarily enhanced limit of US$ 1.5 billion under the automatic route. Besides, during the same period, ECB agreements worth US$ 44 million and EUR 0.1 million were also concluded at the revised all-in-cost ceiling provided for investment-grade borrowers.

Late Submission Fee for Reporting Delays under Foreign Exchange Management Act, 1999 (FEMA)

V.40 The concept of late submission fee (LSF) was introduced for reporting delays under the Foreign Exchange Management Act, 1999 (FEMA). LSF had been introduced for foreign investment (FI), ECBs, and overseas investment (OI) related transactions with effect from November 7, 2017, January 16, 2019 and August 22, 2022, respectively. To bring uniformity in the imposition of LSF across functions, a uniform matrix in line with the one for OI-related transactions for calculation of LSF, wherever applicable under FEMA, was introduced (Box V.3).

Box V.3

Operationalisation of a New Overseas Investment (OI) Regime

In keeping with the spirit of liberalisation and to promote ease of doing business, the Central Government and the Reserve Bank have been progressively simplifying the procedures and rationalising the rules and regulations under the Foreign Exchange Management Act, 1999. In this direction, a significant step has been taken with the operationalisation of a new Overseas Investment regime. Foreign Exchange Management (Overseas Investment) Regulations, 2022 have been notified in supersession of Foreign Exchange Management (Transfer or Issue of any Foreign Security) (Amendment) Regulations, 2004, and Foreign Exchange Management (Acquisition and Transfer of Immovable Property Outside India) Regulations, 2015. The Foreign Exchange Management (Overseas Investment) Directions, 2022 issued on August 22, 2022, superseded Master Direction dated January 1, 2016, as amended from time to time. The new regime simplifies the existing framework for overseas investment by persons resident in India to cover wider economic activity and significantly reduces the need for seeking specific approvals. This will result in reduced compliance burden and associated compliance costs.

(Contd.)

Some of the significant changes brought about by the new rules and regulations are summarised below:

- Enhanced clarity with respect to various definitions such as ‘overseas portfolio investment’, ‘net worth’, ‘step down subsidiary’, *etc.;*
- Introduction of the concept of ‘strategic sector’ to facilitate overseas investment in sectors of national interest;
- In case of investigation by any investigative agency/ regulatory body against person resident in India, the requirement of the Reserve Bank approval for overseas investment/disinvestment has been replaced with a no objection certificate (NOC) from the respective agency;
- A mechanism of ‘late submission fee (LSF)’ has been introduced for taking on record delayed reporting;
- Issuance of guarantees to or on behalf of second or subsequent level step-down subsidiary (SDS) has been brought under the automatic route;
- Write-off on account of disinvestment, for loss-making foreign entities, has been allowed without any limit, subject to compliance with pricing and other guidelines;
- Allowing non-financial sector entities to make investment in financial service sector (except insurance and banking), subject to profitability criteria; and
- Flexibility in pricing guidelines for investment/ disinvestment has been introduced for valuation as per any internationally accepted pricing methodology.

Source: RBI.

Enabling Bharat Bill Payment System (BBPS) to Process Cross-Border Inbound Bill Payments under the Rupee Drawing Arrangement (RDA)

V.41 As announced in the Statement on Developmental and Regulatory Policies of August 5, 2022, with a view to enabling BBPS, an interoperable platform for standardised bill payment to process cross-border inbound bill payments, it has been decided to allow foreign inward remittances received under the Rupee Drawing Arrangement (RDA), to be transferred to the know your customer (KYC) compliant bank account of the biller (beneficiary) through BBPS, subject to certain conditions. This shall facilitate NRIs to undertake utility, education, and other bill payments on behalf of their families in India.

Foreign Investment in India - Rationalisation of Reporting in Single Master Form (SMF) on FIRMS Portal

V.42 An online Foreign Investment Reporting and Management System (FIRMS) was introduced on September 1, 2018, for reporting foreign investments in India. Accordingly, based on the feedback received from various stakeholders including investee companies and AD banks, the FIRMS portal was revamped to introduce the system of auto-acknowledgment of reporting of forms and online calculation of Late Submission Fee (LSF), *w.e.f.,* January 5, 2023. The system was changed with a view to expedite and ease the process of reporting foreign investment in the country.

Ongoing Software Projects, viz., SPECTRA and AP Connect

V.43 Authorised person (AP) connect has been operationalised on Pilot Go-Live basis with effect from December 22, 2022. As regards Software Platform for External Commercial Borrowings and Trade Credits Reporting and Approval (SPECTRA), the same is at an advanced stage of implementation.

Agenda for 2023-24

V.44 The Department’s strategy for 2023-24 is to focus on consolidating and carrying forward all the above initiatives. Going forward, the focus will remain on ensuring that the FEMA operating framework is in sync with the needs of the evolving macroeconomic environment. In addition, efforts would be made towards role enrichment of APs by way of delegation of powers, and rationalisation of reporting requirements with the intent of better data management and reduction in the cost of compliance. Accordingly, the Department has formulated the following strategic action plan for the year 2023-24:

- Review of Compounding Proceedings Rules, under the Foreign Exchange Management Act (FEMA), 1999 (*Utkarsh* 2.0);
- Review of the authorisation framework of APs under FEMA (*Utkarsh* 2.0);
- Rationalisation of the LRS (*Utkarsh* 2.0);
- Rationalisation of regulations on Foreign Exchange Management (Manner of Receipt and Payment) Regulations, 2016 (*Utkarsh* 2.0);
- Review of guidelines related to Rupee accounts of non-residents (*Utkarsh* 2.0);
- Rationalisation of Foreign Exchange Management (Mode of Payment and Reporting of Non-Debt Instruments) Regulations, 2019;
- Review of supervisory framework for full-fledged money changers and non-bank AD Category II;
- Rationalisation of guarantee regulations; and
- Rationalisation/simplification of trade guidelines (*Utkarsh* 2.0).

5. CONCLUSION

V.45 The Reserve Bank undertook proactive measures during the year to contain market volatility, ensure orderly conditions in the market, and anchor market expectations, notwithstanding formidable global spillovers, while sustaining its focus on further development of key market segments. Liquidity conditions were modulated to align them with the shift in the monetary policy stance towards withdrawal of accommodation. The Reserve Bank also undertook regulatory initiatives to curb unauthorised forex trading platforms. It continued with its efforts to align the regulatory framework with the changing needs of the economy with an emphasis on lowering the compliance burden. Looking ahead, the Reserve Bank would continue to remain watchful of new risks, assess emerging opportunities, and seek market feedback to further strengthen regulations covering the entire gamut of money, government securities and foreign exchange market, with a view to reducing systemic risk and enhancing market transparency. The liquidity operations will continue to be in sync with the stance of the monetary policy while the foreign exchange operations will be guided by the objective of ensuring orderly movements in the exchange rate of the rupee.

VI REGULATION, SUPERVISION AND FINANCIAL STABILITY

In an unsettling global environment following the war in Ukraine, the Indian banking system exhibited resilience with healthier balance sheets and a robust growth in flow of credit to the productive sectors of the economy. Several regulatory and supervisory measures of the Reserve Bank in line with global best practices preserved financial stability. Various measures for enhancing cyber security were undertaken during the year along with a greater focus on the usage of technology and examining the scope for use of Artificial Intelligence (AI) and Machine Learning (ML) tools for strengthening supervisory effectiveness. The Reserve Bank's advanced supervisory monitoring system (DAKSH) was launched during the year. Consistency in enforcement actions was ensured, nudging the regulated entities to comply with the extant guidelines of the Reserve Bank. With an aim to enhance the consumers' awareness of their rights and of the existence of alternate grievance redress mechanisms, a month-long intensive nation-wide public awareness programme was launched during the year.

VI.1 The financial system in India remained sound and resilient during the year, despite persisting global headwinds that impacted domestic macroeconomic and financial conditions. The chapter discusses regulatory and supervisory measures undertaken during the year to strengthen the financial system and to preserve financial stability. As part of the overall objective of aligning the regulatory/supervisory framework with global best practices, important strides in the areas of risk management, regulatory compliance and enforcement, and consumer education and protection in banks were made during the year. Accordingly, several guidelines were issued during the year, pertaining to classification of Non-Banking Financial Companies (NBFCs) in the middle layer of scale-based regulation (SBR), digital lending, large exposure framework for the upper layer NBFCs under the SBR, review of regulatory framework for Asset Reconstruction Companies (ARCs), establishment of digital banking units (DBUs), and a revised regulatory framework for UCBs. The FinTech Department launched pilots of the digital rupee in phases for wholesale and retail segments. The Department of Supervision (DoS) also initiated a host of measures to further strengthen both onsite and off-site supervision, including developing dynamic supervisory dashboards/early warning indicator model, strengthening cross-border supervisory cooperation, monitoring of large borrower groups, enhancement of cyber security and the launch of advanced supervisory monitoring system (*DAKSH*), among others.

VI.2 In other areas, Consumer Education and Protection Department (CEPD) continued its efforts during the year towards enhancing public awareness on financial literacy and frauds, using technology for strengthening customer protection and grievance redressal mechanisms, and also conducted a customer satisfaction survey on the Reserve Bank - Integrated Ombudsman Scheme (RB-IOS). The Deposit Insurance and Credit Guarantee Corporation (DICGC) launched new initiatives to strengthen the public awareness through the constitution of a Technical Advisory Committee (TAC) to guide the Corporation in its public outreach activities.

VI.3 The rest of this chapter is divided into five sections. Section 2 deals with the mandate and functions of the Financial Stability Unit (FSU). Section 3 addresses regulatory measures undertaken by the Department of Regulation

(DoR) along with activities of the FinTech Department during the year. Section 4 covers supervisory measures undertaken by the DoS and enforcement actions carried out by the Enforcement Department (EFD) during the year. Section 5 highlights the role played by CEPD and DICGC in protecting consumer interests, spreading awareness and upholding consumer confidence. These departments have also set out their agenda for 2023-24 in respective sections of this chapter. Concluding observations are set out in the last section.

2. FINANCIAL STABILITY UNIT (FSU)

VI.4 The mandate of the Financial Stability Unit (FSU) is to monitor risks to financial stability while evaluating the resilience of the financial system by undertaking macroprudential surveillance through systemic stress tests, sensitivity analysis and financial network analysis. It also functions as the secretariat to the sub-committee of the Financial Stability and Development Council (FSDC), an institutional mechanism of regulators for preserving financial stability and monitoring macroprudential regulations for the financial system. The FSU publishes the bi-annual Financial Stability Report (FSR) covering an assessment of the possible risk scenarios and their ramifications for financial stability and an early warning analysis.

Agenda for 2022-23

VI.5 The Department had set out the following goals for 2022-23:

- Implementation of the revised stress testing framework and publication of the results in FSR (*Utkarsh*) [Paragraph VI.6];
- Carrying out sensitivity analyses covering the impact of house price movements on bank capital (Paragraph VI.7);
- Conduct of macroprudential surveillance (Paragraph VI.8);
- Publication of half-yearly FSRs (Paragraph VI.9); and
- Conduct meetings of the Financial Stability and Development Council – Sub Committee (FSDC-SC) [Paragraph VI.10].

Implementation Status

VI.6 The stress testing framework for conducting multi-factor macroprudential stress tests has been revised, and results along with the revised methodology were published in the FSR of June, 2022.

VI.7 In order to assess the impact of house prices on bank capital, a sensitivity analysis of the impact of the fall in house prices on the capital of banks was carried out, and results were published in the FSR of June 2022. Also, the methodology for banking stability indicator was revised and published.

VI.8 In the FSR of December 2022, a financial system stress indicator was published to enhance macroprudential surveillance. Two rounds of the systemic risk survey were conducted to gather perceptions of experts, market participants and academicians, on major risks faced by the Indian financial system.

VI.9 Two editions of the FSR, providing the collective assessment of the Sub-Committee of the FSDC on the balance of risks to financial stability, were released during the year. The 25th issue of the FSR, brought out on June 30, 2022, highlighted the challenges emanating from the unsettling global outlook caused by the war in Ukraine, front-loaded monetary policy normalisation by central banks in response to high inflation that turned out to be non-transitory and multiple waves of the COVID-19 pandemic. The 26th edition of the

FSR was released on December 29, 2022 which highlighted concerns over intensification of macro-financial risks. Notwithstanding elevated risk off sentiments, strong macroeconomic fundamentals and healthy balance sheets provided resilience against global shocks. Improved asset quality of banks supported the revival in credit demand. The macro stress tests in both editions of the FSR reaffirmed the capability of scheduled commercial banks (SCBs) to withstand stress even under severe stress scenarios.

VI.10 During 2022-23, the FSDC-SC held one meeting. The Sub-Committee discussed major developments in the global and domestic economy as well as in various segments of the financial system. It also deliberated upon various inter-regulatory issues and reviewed the activities of technical groups under its purview and the functioning of state level coordination committees (SLCCs). The members resolved to remain vigilant and proactive to ensure that financial markets and financial institutions remain resilient amidst amplified spillovers arising from the evolving global macroeconomic situation.

Agenda for 2023-24

VI.11 In the year ahead, FSU will focus on the following:

- Peer review of stress testing framework;
- Conduct macroprudential surveillance;
- Publish half-yearly FSRs; and
- Conduct meetings of the FSDC-SC.

3. REGULATION OF FINANCIAL INTERMEDIARIES

Department of Regulation (DoR)

VI.12 The Department of Regulation (DoR) is the nodal Department for regulation of commercial banks, cooperative banks, NBFCs, Credit Information Companies (CICs) and All India Financial Institutions (AIFIs), which also aims at ensuring a healthy and competitive financial system, while promoting cost effective financial inclusion. The regulatory framework is fine-tuned as per the evolving requirements of the Indian economy while adapting to international best practices.

Agenda for 2022-23

VI.13 The Department had set out the following goals for 2022-23:

- Convergence with Basel III standards and issuance of final guidelines for computation of capital charge for credit risk, market risk, and operational risk (Paragraph VI.14);
- Issue of a discussion paper on the expected loss approach for provisioning (Paragraph VI.15);
- Issuance of guidelines on securitisation of non-performing assets (Paragraph VI.16);
- Issue of a discussion paper on climate risk and sustainable finance (Paragraph VI.17);
- Issuance of guidelines on prudential and conduct issues associated with digital lending (Paragraph VI.18);
- Issuance of guidelines on financial statements - presentation and disclosure for rural cooperative banks (Paragraph VI.19);
- Issuance of part II of the guidelines on raising capital funds for primary (urban) cooperative banks (Paragraph VI.20);
- Guidance note on principles for sound management of operational risk and principles for operational resilience (Paragraph VI.21); and

- Review of the following guidelines: (a) prudential framework for resolution of stressed assets; (b) restructuring of projects under implementation by aligning it with prudential framework; (c) investment guidelines and financial statements' formats for urban cooperative banks (UCBs); (d) dividend declaration policy of commercial banks; (e) liquidity management framework for commercial banks and UCBs; (f) capital adequacy framework for small finance banks (SFBs) and payments banks (PBs); (g) instructions on credit and debit cards; (h) instructions on inoperative accounts, centralised hosting of data on inoperative/unclaimed deposit accounts; and (i) recommendations of the Expert Committee on the primary (urban) cooperative banks and taking steps to issue regulatory instructions based on these recommendations (Paragraph VI.22).

Implementation Status

VI.14 Extensive internal and external consultations regarding convergence with Basel III standards and issuance of final guidelines for computation of capital charge for credit risk, market risk, and operational risk have been made. Draft guidelines on minimum capital requirements for operational risk and market risk under Basel III were issued on December 15, 2021 and February 17, 2023, respectively, for obtaining stakeholder comments thereon. The guidelines on minimum capital requirements for operational risk and market risk after taking into account the public comments along with draft guidelines on credit risk are being finalised.

VI.15 As announced in the Statement on Developmental and Regulatory Policies (September 30, 2022), a discussion paper (DP) on Introduction of Expected Credit Loss Framework for Provisioning by Banks was released on January 16, 2023 inviting comments from the stakeholders.

VI.16 As announced in the Statement on Developmental and Regulatory Policies (September 30, 2022), a discussion paper on Securitisation of Stressed Assets Framework was released on January 25, 2023 inviting comments from the stakeholders (Box VI.1).

Box VI.1
Securitisation of Stressed Assets

Stressed assets (or more specifically, stressed loans) are exposures classified as non-performing assets (NPA), or as special mention accounts (SMA) with incipient stress in loan accounts[1]. The classification of SMA was introduced in the stressed asset category for identification of stress in accounts which have defaulted but not yet classified as NPAs. There is a technical difference between NPAs and SMAs based on aging criterion, but in terms of principles, both categories include assets which are not performing as required by the loan agreement. Therefore, for the sake of theoretical simplicity, 'stressed assets' and 'NPAs' are used interchangeably.

Rising NPAs in an economy may have several adverse implications. First, it ties up the capital of lending institutions (*e.g.,* provisioning) and hinders the capacity for additional credit creation; second, NPAs entail significant costs in terms of foregone income, provisioning, recovery efforts, *etc.* which impact the profitability of the financial intermediaries (FIs); third, it may create 'adverse selection' issues - because financial institutions facing high NPAs may end-up targeting riskier borrowers in search of higher interest income leading to inefficient allocation of resources; lastly,

(Contd.)

[1] The technical definitions of SMAs can be referred to from the Prudential Framework for Resolution of Stressed Assets (2019).

financial intermediation risk can arise because depositors may lose trust in lending institutions which have high NPAs. Therefore, putting in place necessary recognition and resolution measures for stressed assets becomes a critical policy imperative.

Thematic Measures to Deal with NPAs

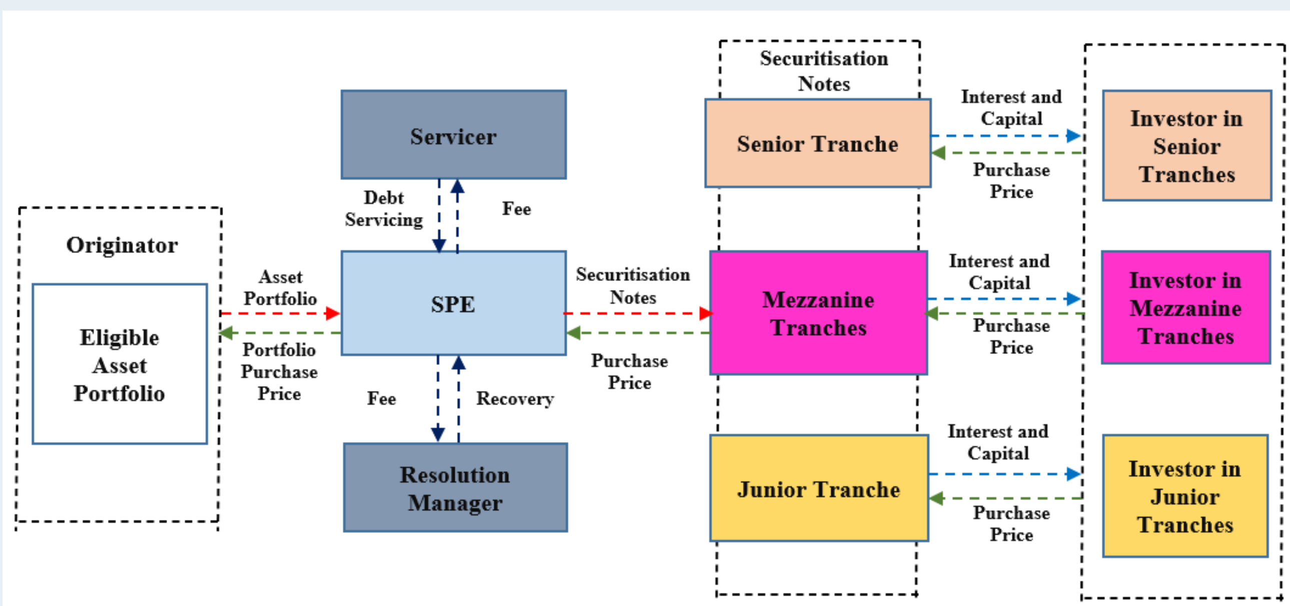
Several policy initiatives have been taken in the recent past to enable the FIs to manage stressed assets better on their balance sheets. These measures were primarily aimed at: (i) resolution of long-standing stressed assets on the books of banks; (ii) timely identification and recognition of stress immediately upon default and initiation of corrective actions for mitigation of the same; (iii) strengthening the regulatory framework for asset reconstruction companies (ARCs); and (iv) enabling market mechanisms of credit risk transfer for lending institutions to better manage their portfolios. These measures provide the necessary tools and incentives for timely and more efficient resolution of stressed assets on their balance sheets. Such measures, combined with earnest efforts of the FIs, have improved the overall credit discipline in the country but there is scope to improve it further.

Proposed Securitisation of Stressed Assets Framework

Any mechanism offered to the concerned FIs for effectively dealing with rising NPAs or stressed assets should have two important components: timeliness of the measure taken, and the capacity to unlock the full value of the concerned loan/portfolio. Recovery in cases of NPAs is a time sensitive matter as their value erodes over time. Therefore, any mechanism which is time consuming may not be very effective in dealing with the issue of NPAs. Similarly, unlocking the true value of the NPAs may require a diverse set of potential investors with expertise in resolution, to make the acquisition bids more competitive.

Securitisation of NPAs is a financial structure whereby an originator of non-performing assets sells these to a special purpose entity (SPE) that funds such an acquisition by issuing debt securities. The SPE will in turn appoint a servicing entity that will manage the stressed assets on a daily basis, typically with a fee structure that incentivises them to maximise recoveries on the underlying loans. Based on the recovery from underlying assets, investors will then be paid, in the waterfall mechanism depending upon the seniority of the tranches[2] (Chart 1).

Chart 1: Theoretical Structure of Securitisation of NPAs



Source: Structured Finance: Techniques, Products and Market (2017).

(Contd.)

[2] Senior tranche means a tranche which is effectively backed or secured by a first claim on the entire amount of the assets in the underlying securitised pool; mezzanine tranche is sub-ordinated to the senior tranche; and junior tranche (equity tranche) has the last claim on the underlying assets (bearing the maximum risk).

Securitisation of NPAs is different from that of standard assets, as for latter the credit risk associated with the borrower is borne by the investors in securitised notes, while in the former, the assets are already in default/NPA or deemed as non-performing. They are securitised at a discount on their nominal value, reflecting market's valuation of these underlying assets after discounting portfolio losses and likelihood of resolution generating sufficient recoveries to cover the net value of non-performing exposures. Thus, the investors are exposed to the risk that the resolution exercise may not generate sufficient recoveries to cover fully the net value of transferred underlying assets.

As mentioned above, securitisation can meet both the requirements of timeliness and unlocking fair realisable value, because it envisages a diverse set of agents with different expertise (*e.g.,* servicer and resolution manager) to be a part of process ensuring a wide investors base having varying risk appetite. The involvement of resolution and recovery experts in the process may likely ensure marketability of the securitisation notes. It will also enable better distribution of credit/recovery risk in favour of agents who have the appetite and ability across the system leading to build-up of economic resilience against shocks.

Further, the Task Force on the Development of Secondary Market for Corporate Loans (Chair: Shri T. N. Manoharan) constituted by the Reserve Bank which submitted its recommendations in September 2019, had specifically recommended that securitisation of NPAs may be considered as an alternative investment route in stressed assets. Therefore, after careful deliberation, collection of extensive market feedback, and stakeholder consultations, it was decided to enable securitisation of NPAs through the proposed structure, on the lines of securitisation of standard assets. Importantly, this mechanism is not intended to replace the existing resolution methods including the ARC route, but to co-exist as an alternative, and even provide additional avenues of engagement to ARCs as potential resolution managers.

International Practices and Guidelines

Securitisation of NPAs, though relatively new to the global economy, is in use in developed economies in different forms. The Basel Committee on Banking Supervision (BCBS) on 'securitisations of non-performing loans' has introduced instructions dated November 26, 2020 on non-performing exposures (NPE) securitisation for calculation of capital and risk weights applicable to exposures to NPE securitisations, which have become effective from January 1, 2023. The European Union (EU) has also released regulation for NPE securitisation, effective April 9, 2021. Further, the Prudential Regulation Authority of the United Kingdom has issued a policy statement as part of implementation of Basel standards - non-performing loan securitisations. The proposed framework by the Reserve Bank draws upon these frameworks, suitably modified to suit the domestic context.

References:

1. Fabbri A. (2017), 'Securitisation of Non-performing Loans', in C. Stefano and S. Gatti (Eds), *Structured Finance: Techniques, Products and Market* (pp 153-207), Springer.
2. Basel Committee on Banking Supervision (2023), 'Securitisation of Non-performing Loans', CRE 45, *BIS*, Basel.
3. European Union (2021), 'Regulation (EU) 2021/557 of the European Parliament and of the Council of March of 31, 2021', *Brussels*.
4. Bank of England (2021), 'Implementation of Basel Standards: Non-Performing Loan Securitisations', *Policy Statement 24/21*, London.

VI.17 To prepare a strategy based on global best practices on mitigating the adverse impacts of climate change, a discussion paper on climate risk and sustainable finance was placed on the Reserve Bank website on July 27, 2022 for public comments and feedback. Based on analysis of the feedback received in this regard, it was announced in the Statement on Developmental and Regulatory Policies (February 8, 2023) that following guidelines for regulated entities (REs) would be issued in a phased manner: (i) broad framework for acceptance of green deposits; (ii) disclosure framework on climate-related financial risks; and (iii) guidance on climate scenario analysis and stress testing. Further, it was also announced as a part of the policy that the Reserve Bank would have a dedicated webpage on its website which would consolidate all instructions, press releases, publications, speeches and related Reserve Bank's communication on climate risk and sustainable finance.

VI.18 A press release was issued on August 10, 2022 specifying the Reserve Bank's regulatory stance on the recommendations of the Working Group on Digital Lending (WGDL).[3] This was followed by issuance of a circular on September 2, 2022 covering WGDL's recommendations accepted for immediate implementation. Further, a set of Frequently Asked Questions (FAQs) was released on February 14, 2023 clarifying certain important aspects of the aforesaid circular.

VI.19 The guidelines on presentation of financial statements and disclosures for rural cooperative banks were issued on February 20, 2023.

VI.20 A Working Group, comprising various departments of the Reserve Bank as well as representatives from the Securities and Exchange Board of India (SEBI) and the Ministry of Cooperation, has been constituted to consider and provide recommendations on issues emanating from the new provisions of the Banking Regulation (Amendment) Act, 2020 and the recommendations of the Expert Committee for UCBs thereon, such as public issue/private placement of securities and issue of shares at premium by UCBs and concomitant issues of investor protection and grievance redressal. The Working Group has held a series of meetings, including engagement with various stakeholders from the sector on the operational/practical aspects pertaining to implementation of the provisions of the Banking Regulation (Amendment) Act, 2020.

VI.21 The draft 'Guidance Note on Operational Risk Management and Operational Resilience' will be issued for public comments in due course.

VI.22 The Department has reviewed and issued guidelines in following areas: (a) Master Direction - Credit Card and Debit Card - Issuance and Conduct Directions, 2022, issued on April 21, 2022; (b) Subsequent to issue of the revised regulatory framework for UCBs (July 19, 2022), circulars on housing loans limits, net worth and capital to risk-weighted assets ratio (CRAR) requirements, categorisation of UCBs for regulatory purposes and revised norms for classification of UCBs as financially sound and well managed (FSWM) were issued. Certain other recommendations of the Expert Committee on UCBs are under examination. The review of following guidelines is in progress: (a) prudential framework for resolution of stressed assets; (b) restructuring of projects under implementation by aligning it with prudential framework; (c) investment guidelines and financial statements' formats for UCBs; (d) liquidity management framework guidelines for commercial banks and UCBs; (e) guidelines on inoperative accounts and development of a web portal for centralised search of unclaimed deposits across multiple banks; (f) framework for interest rate on advances; (g) framework for export credit; (h) dividend declaration policy of commercial banks; and (i) capital adequacy framework for small finance banks (SFBs).

Major Developments

Survey on Climate Risk and Sustainable Finance

VI.23 On July 27, 2022, the results of a survey on climate risk and sustainable finance that was undertaken in January 2022 were released. The survey covered 12 public sector banks, 16 private sector banks and six foreign banks in India. The objective of the survey was to assess the approach, level of preparedness and progress

[3] Report of the Working Group on digital lending, including lending through online platforms and mobile Apps (Chair: Shri J.K. Dash, Executive Director, RBI), was released on November 18, 2021 on the Reserve Bank's website.

made by leading scheduled commercial banks in managing climate-related financial risks.

Establishment of Digital Banking Units (DBUs)

VI.24 Based on the recommendations of the committee on establishment of digital banking units (DBUs), guidelines were issued on April 7, 2022 to all domestic SCBs (excluding regional rural banks, payments banks and local area banks). It encompasses the definitions of digital banking, DBU, digital banking products and digital banking segment and covers the infrastructure and resources required by DBUs and the products and services that could be offered by DBUs. The DBUs shall facilitate the customers in adopting digital modes/channels and create awareness on digital banking.

Regulatory Framework for Branches of Indian Banks Operating in GIFT-IFSC - Acting as Professional Clearing Member (PCM) of India International Bullion Exchange IFSC Limited (IIBX)

VI.25 The Reserve Bank has laid down the regulatory framework for the participation of Indian banks' branches in Gujarat International Finance Tec-City (GIFT) - International Financial Services Centre (IFSC) [GIFT-IFSC] to provide clearing and settlement services on IIBX. The instructions are applicable to domestic SCBs (including foreign banks operating through a wholly-owned subsidiary incorporated in India) which are authorised to deal in foreign exchange and have a branch in GIFT-IFSC.

Relaxation in the Eligibility Criteria for Offering Internet Banking Facility by Regional Rural Banks (RRBs)

VI.26 RRBs are allowed to provide internet banking (INB) facility to their customers with either view rights only or with both transaction and view rights, with the latter being subject to prior approval of the Reserve Bank. Considering the small proportion of RRBs having approval for INB with transaction facility and to promote the spread of digital banking in rural areas, instructions have been revised providing various relaxations in the financial criteria.

Updates on Reserve Bank's Financial Statements - Presentation and Disclosure Directions, 2021

VI.27 *Reporting of Reverse Repos with the Reserve Bank on the Bank's Balance Sheet:* In order to bring more clarity on the presentation of reverse repo in the balance sheet, all type of reverse repos with the Reserve Bank, including those under the liquidity adjustment facility (LAF) shall be presented under sub-item (ii) 'In Other Accounts' of item (II) 'Balances with the Reserve Bank of India' under Schedule 6 'Cash and Balances with Reserve Bank of India'.

VI.28 *Disclosure of Divergence in Asset Classification and Provisioning:* Thresholds for disclosing details of divergence in asset classification and provisioning have been revised for all commercial banks as under: (i) for additional gross NPAs, if it exceeds five per cent of the reported incremental NPAs for the reference period; and (ii) for additional provisioning for NPAs, if it is five per cent of the reported profit before provisions and contingencies for the reference period. Also, disclosure requirements for UCBs for the divergence have also been made applicable for the annual financial statements for the year ending March 31, 2024 and onwards.

VI.29 *Disclosure of Material Items:* In order to ensure greater transparency, banks shall also disclose the particulars of all such items in the notes to accounts wherever any item under the Schedule 5(IV) - Other Liabilities and Provisions – 'Others (including provisions)' or Schedule 11(VI)- Other Assets – 'Others' exceeds one per cent of the total assets. Further, payments banks shall also disclose particulars of all such items in the notes to accounts, wherever any item under the Schedule 14(I) - Other Income – 'Commission, Exchange and Brokerage' exceeds one per cent of the total income.

Review of Statutory Liquidity Ratio (SLR) Holdings in Held-to-Maturity (HTM) Category

VI.30 With the onset of COVID-19 pandemic, banks were allowed to exceed the ceiling for SLR securities in HTM category from 19.5 per cent of net demand and time liabilities (NDTL), up to an overall limit of 22 per cent of NDTL, in respect of SLR securities acquired between September 1, 2020 and March 31, 2022. The banks have since been allowed to include SLR securities acquired between September 1, 2020 and March 31, 2024 under HTM within the enhanced overall limit of 23 per cent of NDTL.

Bilateral Netting of Qualified Financial Contracts - Amendments to Prudential Guidelines

VI.31 Regulated Entities (REs) have been allowed to compute their counterparty credit risk on net basis under the bilateral netting framework for qualified financial contracts [over the counter (OTC) derivatives and repo contracts]. Consequently, based on references received, it was clarified that (i) the exemption for foreign exchange (except gold) contracts which have an original maturity of 14 calendar days or less from capital requirements in *lieu* of counterparty credit risk shall henceforth be applicable only to RRBs, local area banks (LABs) and cooperative banks, where the bank has not adopted the bilateral netting framework; (ii) sold options can be exempted provided they are outside the netting and margin agreements; and (iii) the exposure of a credit default swap (CDS) seller to its buyer may be capped at the amount of premium unpaid, provided the CDS are outside the legal netting and margin agreements.

Reserve Bank of India Unhedged Foreign Currency Exposure (UFCE) Directions, 2022

VI.32 A review of the extant guidelines on the subject was undertaken and all the existing instructions on the subject (starting October 1999), including the revisions/clarifications, were consolidated in the directions. Some of the key changes to provide clarity/reduce compliance burden, *inter alia,* encompassed exclusion of 'factoring transactions' from UFCE for certain entities; and raising of threshold for smaller entities based on total exposure from banking system to ₹50 crore (up from ₹25 crore). For such smaller entities having foreign currency exposure, banks would not be required to periodically obtain hedging information. An explanatory note providing the background for these directions was also issued.

Maintenance of Statutory Liquidity Ratio (SLR) - Section 24 and Section 56 of the Banking Regulation Act, 1949

VI.33 In 2018, the amended Section 17 of the Reserve Bank of India (RBI) Act empowered the Reserve Bank to introduce the standing deposit facility (SDF) - an additional tool for absorbing liquidity without any collateral. It has been decided that the balances held by banks with the Reserve Bank under the SDF are an eligible statutory liquidity ratio (SLR) asset.

Exemption from Maintenance of Cash Reserve Ratio (CRR)/SLR- Foreign Currency Non-Resident [(FCNR(B)/Non-Resident External (NRE)] Term Deposits - Section 42 of the Reserve Bank of India Act, 1934 and Section 18 and 24 of the Banking Regulation Act, 1949

VI.34 As a part of the foreign exchange market measures announced on July 6, 2022, banks were advised that with effect from the reporting fortnight beginning July 30, 2022, incremental FCNR (B) deposits as also NRE term deposits with reference to base date of July 1, 2022, mobilised by banks till November 4, 2022 will be exempted from maintenance of CRR and SLR. The exemption on reserves maintenance will be available for the original deposit amounts till such time the deposits are held in the bank books. As a result of this, there was a marginal net increase in percentage terms (approximately 2 per cent) in FCNR(B) and NRE term deposits mobilised by scheduled commercial banks (SCBs) as on November 4, 2022 *vis-à-vis* July 1, 2022. Further, the interest rate ceiling applicable to FCNR(B) deposits, was temporarily withdrawn for incremental FCNR(B) deposits mobilised by banks. The extant restriction with respect to interest rates offered on incremental NRE deposits mobilised by banks was also temporarily withdrawn. The above concessions were granted with effect from July 7, 2022 until October 31, 2022.

Discussion Paper on Introduction of Expected Credit Loss Framework for Provisioning by Banks Released

VI.35 In line with the announcement made in the Statement on Developmental and Regulatory Policies (September 30, 2022), a discussion paper on Introduction of Expected Credit Loss Framework for Provisioning by banks was released on January 16, 2023, for stakeholders' comments. The proposed approach is to formulate principle-based guidelines supplemented by regulatory backstops, wherever necessary. The key requirement under the proposed framework shall be for the banks to classify financial assets into one of the three categories - stage 1, stage 2, and stage 3, depending upon the assessed credit losses on them, at the time of initial recognition as well as on each subsequent reporting date and to make necessary provisions. Further, RRBs and smaller cooperative banks (threshold to be decided based on comments) are proposed to be kept out of the above framework.

Circular on Board approved Loan Policy - Management of Advances - UCBs

VI.36 In order to ensure that the loan policies of UCBs have a comprehensive coverage, are in alignment with the extant regulations and reflect their approved internal risk appetite, UCBs were advised[4] that the loan policy of the bank shall be reviewed by their Board at least once in a financial year.

Revised Regulatory Framework - Categorisation of UCBs for Regulatory Purposes

VI.37 Based on the recommendations of the Expert Committee on UCBs (Chairman: Shri N. S. Vishwanathan, Former Deputy Governor, RBI), it was decided to adopt a 4-tiered regulatory framework, with the categorisation of UCBs, based on their deposit size for differentiated regulatory prescriptions aimed at strengthening the financial soundness of the UCBs. Accordingly, under the revised regulatory framework for UCBs, which was issued on July 19, 2022, UCBs have been categorised into the following four tiers for regulatory purposes: (a) Tier 1 - All unit UCBs and salary earners' UCBs (irrespective of deposit size) and all other UCBs having deposits up to ₹100 crore; (b) Tier 2 - UCBs with deposits more than ₹100 crore and up to ₹1,000 crore; (c) Tier 3 - UCBs with deposits more than ₹1,000 crore and up to ₹10,000 crore; and (d) Tier 4 - UCBs with deposits more than ₹10,000 crore.

[4] Notification on 'Board Approved Loan Policy - Management of Advances - UCBs' was released on the Reserve Bank's website on July 26, 2022.

Individual Housing Loans - Enhancement in Limits for UCBs and RCBs

VI.38 Considering the increase in housing prices and consumer needs, the limits on housing loans sanctioned by primary (urban) cooperative banks [UCBs] and rural cooperative banks (RCBs), *viz*., state cooperative banks (StCBs) and district central cooperative banks (DCCBs), for individual borrowers were enhanced.[5] The limits per individual borrower were increased to ₹50 lakh (earlier ₹20 lakh) for RCBs with assessed net worth less than ₹100 crore; and ₹75 lakh (earlier ₹30 lakh) for other RCBs. The limits for tier I and tier II UCBs were placed at ₹60 lakh (earlier ₹30 lakh) and ₹140 lakh (earlier ₹70 lakh) per individual borrower, respectively, subject to extant prudential exposure limits. As recommended by the Expert Committee on UCBs, a four-tiered regulatory framework was adopted for categorisation of UCBs, which was notified *vide* circular dated December 1, 2022. Consequently, the limits on housing loans sanctioned by UCBs to an individual borrower were reclassified[6] as ₹60 lakh for tier-1 UCBs and ₹140 lakh for UCBs categorised in tiers 2 to 4.

Permission to Rural Cooperative Banks (StCBs/ DCCBs) to lend to Commercial Real Estate - Residential Housing (CRE-RH)

VI.39 Rural cooperative banks (RCBs), *viz*., StCBs and DCCBs were not allowed to finance commercial real estate (CRE). However, considering the growing need for affordable housing and to realise their potential in providing credit facilities to the housing sector, RCBs were permitted[7] to extend finance to Commercial Real Estate - Residential Housing (CRE-RH) sector within the existing aggregate housing finance limit of five per cent of their total assets as per their board-approved policy, with periodic performance monitoring.

Circular on Housing Finance – Loans for Repairs/ Additions/Alterations - Enhancement of Limits for UCBs

VI.40 The ceiling on loans extended by UCBs to individuals for carrying out repairs/additions/ alterations to their dwelling units was revised[8] upwards to ₹10 lakh in metropolitan centres (those centres with population of 10 lakh and above) and ₹6 lakh in other centres, in alignment with the limits prescribed under the priority sector guidelines.

Issue and Regulation of Share Capital and Securities of Rural Cooperative Banks (RCBs)

VI.41 The instructions applicable for RCBs on issue and regulation of capital funds were reviewed by the Reserve Bank *vide* circular dated April 19, 2022 to ensure congruity with the provisions of the Banking Regulation (Amendment) Act, 2020. The revised guidelines prescribe terms for issuance of capital instruments as well as conditions for withdrawal of share capital for RCBs, and also permit them to raise capital by issuance of preference shares.

5 A circular for UCBs on 'Individual Housing Loans - Enhancement' and a circular for RCBs on 'Enhancement in Individual Housing Loan Limits and Credit to Commercial Real Estate - Residential Housing (CRE-RH)' were released on the Reserve Bank's website on June 8, 2022.

6 Circular on 'Individual Housing Loans - Revised Limits under Four-tiered Regulatory Framework' was released on the Reserve Bank's website on December 30, 2022.

7 Circular on 'Enhancement in Individual Housing Loan Limits and Credit to Commercial Real Estate - Residential Housing (CRE-RH)' was released on the Reserve Bank's website on June 8, 2022.

8 Circular on 'Housing Finance - Loans for Repairs/Additions/Alterations - Enhancement of Limits' was released on the Reserve Bank's website on May 24, 2022.

Revised Regulatory Framework for Urban Co-operative Banks (UCBs) – Net Worth and Capital Adequacy

VI.42 A circular dated December 1, 2022 was issued on 'Revised Regulatory Framework for Urban Co-operative Banks (UCBs) – Net Worth and Capital Adequacy'. As indicated therein, a minimum net worth stipulation of ₹2 crore for Tier-1 UCBs operating in a single district and ₹5 crore for all other UCBs has been prescribed. Further, the minimum CRAR requirement for Tier-1 banks has been retained at the present prescription of 9 per cent, while for Tier-2 to 4 UCBs, the CRAR requirement has been revised to 12 per cent. UCBs which do not meet the revised net worth and/or the CRAR requirement, have been provided a suitable glide path, with stipulation of an intermediate target as well. Further, revaluation reserves have now been allowed to be reckoned as Tier-I capital, subject to terms and conditions.

Punjab and Maharashtra Cooperative Bank Limited (Amalgamation with Unity Small Finance Bank Limited) Scheme, 2022 - Provisioning on Interbank Exposure and Valuation of Perpetual Non-Cumulative Preference Shares (PNCPS) and Equity Warrants

VI.43 The provisioning requirement for UCBs' investment in perpetual non-cumulative preference shares (PNCPS) and equity warrants, resulting from Punjab and Maharashtra Cooperative Bank Limited (Amalgamation with Unity Small Finance Bank Limited) Scheme, 2022 was clarified. Accordingly, UCBs, were allowed to spread the resulting provisions equally over two financial years. Further, investment in PNCPS and equity warrants were exempted from the prudential limits applicable on investment in non-SLR securities.

Doorstep Banking Services by UCBs

VI.44 In order to attain harmonisation of regulatory framework across REs and to provide convenience of banking services to the customers at their doorstep, UCBs which satisfy 'Financially Sound and Well Managed (FSWM)' criteria have been permitted to provide doorstep banking services to their customers without seeking prior approval of the Reserve Bank *vide* circular dated June 8, 2022. However, non-FSWM UCBs would have to seek prior approval of the Reserve Bank to provide doorstep banking services.

Opening of New Place of Business by DCCBs

VI.45 Pursuant to the amendment to the Banking Regulation Act on September 29, 2020, DCCBs are permitted to open new place of business, install automated teller machines (ATMs), or shift the location of such offices only after obtaining prior approval of the Reserve Bank. Accordingly, a circular dated August 11, 2022 was issued for opening new place of business or installation of ATMs, prescribing criteria and procedure for submission of application by DCCBs. DCCBs satisfying the criteria are allowed to open a new place of business with prior approval of the Reserve Bank. DCCBs are also allowed to install off-site/mobile ATMs, without prior permission from the Reserve Bank, subject to satisfying the criteria, which should be reported to the Reserve Bank immediately after operationalisation of the off-site/mobile ATMs.

Review of Norms for Classification of UCBs as Financially Sound and Well Managed (FSWM)

VI.46 Pursuant to the revised regulatory framework for UCBs released by the Reserve Bank based on the recommendation of the Expert Committee, a circular on revised norms for classification of UCBs as FSWM was issued on December 1, 2022 as per which such UCBs, *inter alia,* are required to maintain one per cent higher CRAR than the minimum CRAR required to be maintained by them as on the reference date. Further, the UCBs are now permitted to classify themselves as FSWM based on this revised FSWM criteria on the basis of assessed financials and findings of the Reserve Bank inspection report or audited financial statements, whichever is latest.

Scale-Based Regulation for Non-Banking Financial Companies (NBFCs)

VI.47 An integrated and scale-based regulatory framework for NBFCs was issued on October 22, 2021 in terms of which NBFCs categorised in the upper layer (NBFC-UL) are required to, *inter alia,* maintain common equity Tier-I (CET-1) capital of at least 9 per cent of risk weighted assets (RWA). As a follow-up to framework provisions, guidelines providing detailed instructions on components of, as well as regulatory adjustments from, CET-1 capital, applicable to all NBFC-UL (except core investment companies), were issued on April 19, 2022.

Identification of NBFCs in the Upper Layer

VI.48 Considering the evolution of NBFCs in terms of size, complexity, and interconnectedness within the financial sector, the Reserve Bank had put in place a scale-based regulation for NBFCs in October 2021 to align the regulations for NBFCs with their changing risk profile. This framework categorises NBFCs in base layer (NBFC-BL), middle layer (NBFC-ML), upper layer (NBFC-UL) and top layer (NBFC-TL) and states that the upper layer shall comprise those NBFCs which are specifically identified by the Reserve Bank based on a set of parameters and scoring methodology as provided in the framework and envisaged that the top ten NBFCs in terms of their asset size shall always reside in the upper layer. For this purpose, a list of 16 NBFCs-UL, identified as per methodology specified in scale-based regulation for NBFCs, was released on September 30, 2022.

Circular on Multiple NBFCs in a Group-Classification in Middle Layer under Scale-Based Regulation

VI.49 As per the instructions contained in Master Direction on Systemically Important Non-Deposit Taking NBFCs (NBFC-ND-SI), if the consolidated asset size of all NBFCs within the same group was ₹500 crore and above, all non-deposit taking NBFCs in the group were categorised as NBFC-ND-SI, irrespective of their individual asset sizes. On similar lines, under the scale-based regulatory (SBR) framework (applicable from October 1, 2022), it was advised[9] that total assets of all the NBFCs in a ‘Group’ shall be consolidated to determine the threshold for classification of NBFCs in the Middle Layer. This threshold currently stands at ₹1,000 crore as per the SBR Framework.

Large Exposures Framework for Non-Banking Financial Company - Upper Layer (NBFC-UL)

VI.50 Large Exposures Framework (LEF) for NBFCs in the Upper Layer was introduced[10] as part of the scale-based regulation for NBFCs. A summary of the LEF prescribed for NBFC-UL is given in Table VI.1.

9 Circular on ‘Multiple NBFCs in a Group: Classification in Middle Layer’ was released on the Reserve Bank’s website on October 11, 2022.

10 Circular on ‘Large Exposures Framework for Non-Banking Financial Company - Upper Layer (NBFC-UL)’ was released on the Reserve Bank’s website on April 19, 2022.

Table VI.1 Large Exposure Framework for NBFC - Upper Layer

Sum of All Exposure Value to	Large Exposure Limit as per cent of Eligible Capital Base	
	Other than Infrastructure Finance Companies	Infrastructure Finance Companies
1	2	3
Single Counterparty	• 20 per cent. • Additional 5 per cent with Board approval. • Additional 5 per cent if exposure towards infrastructure loan/ investment (single counterparty limit shall not exceed 25 per cent in any case).	• 25 per cent. • Additional 5 per cent with Board approval.
Group of Connected Counterparties	• 25 per cent. • Additional 10 per cent if exposure towards infrastructure loan/ investment.	• 35 per cent.

Source: RBI.

Instructions on Loans and Advances – Regulatory Restrictions – NBFCs

VI.51 To improve governance in NBFCs in the middle and upper layers, instructions were issued[11] authorising the Board of NBFC/ Committee of Directors to sanction loans aggregating ₹5 crore and above to directors, their relatives, and associated entities. Loans to senior officers are required to be reported to the Board. For NBFCs in the base layer, it has been mandated that they shall have a Board approved policy for granting such loans. In respect of loans to real estate sector, the regulations of NBFCs in the middle and upper layers have been harmonised with those applicable to banks, and it has been mandated that NBFCs must ensure that the borrowers have obtained necessary prior permission from government/local government/ other statutory authorities for the project, wherever required.

Guidelines on Compensation of Key Managerial Personnel (KMP) and Senior Management in NBFCs dated April 29, 2022

VI.52 On April 29, 2022, the Reserve Bank issued a set of principles for fixing compensation of key managerial personnel (KMP) and senior management of NBFCs. As per the guidelines, NBFCs are required to constitute a nomination and remuneration committee (NRC), which will be responsible for framing, reviewing and implementing the compensation policy. The guidelines, *inter alia,* prescribe that the compensation package comprising fixed and variable pay may be adjusted for all types of risks. A certain portion of variable pay may have a deferral arrangement and the deferral pay may be subjected to malus/clawback arrangement.

Voluntary Surrender of Certificate of Registration (CoR) by NBFCs

VI.53 In order to streamline the process of voluntary cancellation of CoR of NBFCs [including housing finance companies (HFCs)], a press release along with the application form and checklist of indicative documents was issued on the Reserve Bank's website on December 1, 2022 to spread awareness amongst NBFCs/ HFCs desirous of surrendering CoR voluntarily. The concerned NBFCs can now approach the regional office of the Reserve Bank under whose jurisdiction the NBFC is registered with the duly filled application form and requisite documents for voluntary cancellation while the HFCs can furnish

[11] Circular on 'Loans and Advances - Regulatory Restrictions - NBFCs' was released on the Reserve Bank's website on April 19, 2022.

the application along with documents through the National Housing Bank, New Delhi.

Disclosures in Financial Statements - Notes to Accounts of NBFCs

VI.54 After the introduction of scale-based regulation framework for NBFCs, instructions were issued on specific disclosure requirements to specific NBFC layers on areas like exposure (capital market, sectoral and real estate), related party transactions, complaints, divergence in asset classification and provisioning, corporate governance, *etc.* Also, disclosure requirements applicable to lower layers of NBFCs will be applicable to NBFCs in higher layers.

Guidelines on Digital Lending

VI.55 In order to address concerns arising out of unbridled engagement of third parties, mis-selling, breach of data privacy, unfair business conduct, charging of exorbitant interest rates, and unethical recovery practices, the 'guidelines on digital lending' were issued on September 2, 2022. The guidelines are based on the principle that lending business can be carried out only by entities that are either regulated by the Reserve Bank or are permitted to do so under any other law. The guidelines aim to make the lending process transparent and fair by, *inter alia*, (i) mandating flow of funds between lenders and borrowers only through their bank accounts without any pass-through account/pool account of any third party; (ii) ensuring that lending service providers do not collect any fee/charges directly from the customer; (iii) transparent disclosure of the key facts of the borrowing arrangement, including the all-inclusive cost to a borrower; (iv) ensuring need-based collection of data with audit trails backed by explicit customer consent; and (v) putting in place an appropriate privacy policy with regard to customer data.

Extension of Guidelines on Legal Entity Identifier (LEI) for Borrowers of NBFCs and UCBs

VI.56 The LEI guidelines were extended[12] to UCBs and NBFCs. Further, the threshold above which all non-individual borrowers were required to obtain LEI was reduced from ₹50 crore to ₹5 crore. Accordingly, all non-individual borrowers of scheduled commercial banks (SCBs), All India Financial Institutions (AIFIs), local area banks (LABs), small finance banks (SFBs), UCBs and NBFCs (including HFCs) having total exposure of ₹5 crore and above are now mandated to obtain LEI in a phased manner.

Issuance of Consolidated Circular on Opening of Current Accounts and Cash Credit (CC)/Overdraft (OD) Accounts by Banks

VI.57 To enforce credit discipline amongst the borrowers and to facilitate better monitoring by the lenders, a circular dated August 6, 2020 was issued on 'opening of current accounts by banks - need for discipline'. Considering the feedback received from various stakeholders, subsequent circulars on the subject were issued on November 2, 2020; December 14, 2020; August 4, 2021 and October 29, 2021. To provide clarity on the instructions and put all instructions in one place, a self-contained circular on the subject consolidating all the extant instructions was issued.[13]

[12] Notification on 'Legal Entity Identifier (LEI) for Borrowers' was released on the Reserve Bank's website on April 21, 2022.

[13] Consolidated circular on 'Opening of Current Accounts and CC/OD Accounts by Banks' was released on the Reserve Bank's website on April 19, 2022.

Review of Limit of Total Carve out of Government Securities under Facility to Avail Liquidity for Liquidity Coverage Ratio (FALLCR) for Liquidity Coverage Ratio (LCR)

VI.58 Due to the reduction in permissible drawdown under the marginal standing facility (MSF) from 3 per cent to 2 per cent of net demand and time liabilities (NDTL), banks were permitted to reckon government securities as level-1 high quality liquid assets (HQLA) under FALLCR within the mandatory statutory liquidity ratio (SLR) requirement up to 16 per cent of their NDTL from existing limit of 15 per cent so as to maintain the total HQLA carve out from the mandatory SLR for meeting LCR requirement at 18 per cent of NDTL (2 per cent MSF and 16 per cent FALLCR).

Treatment of Overnight Deposit of Banks with Reserve Bank under Standing Deposit Facility (SDF) for LCR

VI.59 SDF was operationalised in April 2022 as per which eligible participants can place deposits with the Reserve Bank on an overnight basis and such balances are reckoned as an eligible asset for computation of SLR. It was clarified that the overnight balances held by banks with the Reserve Bank under SDF shall be eligible as level-1 HQLA for computation of LCR.

Outsourcing of Financial Services - Responsibilities of Regulated Entities (REs) Employing Recovery Agents

VI.60 The Reserve Bank has been addressing the issues relating to recovery agents (RAs) engaged by the regulated entities (REs). Given the growing incidence of unacceptable practices followed by RAs, the Reserve Bank issued additional instructions to REs, *inter alia,* extending the scope of the guidelines to cover more REs and specifying permissible hours of calling borrowers (not before 8:00 A.M. and after 7:00 P.M.) for recovery of overdue loans. The REs were also advised to strictly ensure that they or their RAs do not resort to intimidation or harassment of any kind, either verbal or physical, against any person in their debt collection efforts, including acts intended to humiliate publicly or intrude upon the privacy of the debtors' family members, referees and friends, sending inappropriate messages either on mobile or through social media. These instructions were made applicable to all commercial banks (excluding payments banks), AIFIs, NBFCs, UCBs, StCBs, DCCBs, and ARCs. However, these instructions are not applicable to micro-finance loans covered under 'Master Direction - Reserve Bank of India (Regulatory Framework for Microfinance Loans) Directions, 2022' released on March 14, 2022.

Review of the Regulatory Framework for Asset Reconstruction Companies (ARCs)

VI.61 Against the backdrop of a significant build-up of non-performing assets (NPAs) in the financial system and concerns over the performance of ARCs, an external committee was set up by the Reserve Bank to review, *inter alia*, the existing legal and regulatory framework applicable to ARCs and recommend measures to enhance their efficacy. Based on the committee's recommendations and feedback from the stakeholders, extant regulatory framework for ARCs has been reviewed *vide* circular dated October 11, 2022. The revised guidelines are intended to enable ARCs to play a more meaningful role in resolution of stressed assets by addressing some of the structural issues in the ARC sector. The measures introduced in the revised regulatory framework for ARCs are broadly driven by the following objectives: (i) introducing a comprehensive corporate governance framework for ARCs, thus strengthening their prudent functioning, (ii) enhancing the transparency of ARCs, thus making them more attractive to investors, (iii) strengthening the prudential guidelines for ARCs, thus improving their financial soundness, and (iv) furthering their role in resolution of stressed assets by way of suitable regulatory enablement.

Diversification of Activities by Standalone Primary Dealers (SPDs)

VI.62 With a view to strengthening the role of SPDs as market makers at par with banks operating as primary dealers, SPDs have been permitted to offer all foreign exchange market-making facilities as currently permitted to category-I authorised dealers *vide* instructions dated October 11, 2022. This would provide a broader spectrum of market-makers to forex customers for managing their currency risk and the wider market presence would improve the ability of SPDs to provide support to their primary dealer activities.

Inclusion of Goods and Services Tax Network (GSTN) as a Financial Information Provider (FIP) under Account Aggregator (AA) Framework

VI.63 With a view to facilitating cash flow-based lending to MSMEs, GSTN has been included as an FIP under the AA framework *vide* circular dated November 23, 2022. The Department of Revenue, Government of India, shall be the regulator of GSTN for this specific purpose and two GST returns (GSTR), *viz.,* form GSTR-1 and form GSTR-3B, have been included as financial information.

Revised Regulatory Framework for Issuance and Conduct of Credit Cards and Debit Cards

VI.64 Master Circular on credit card, debit card and rupee denominated co-branded and pre-paid card operations of banks and credit card issuing NBFCs dated July 1, 2015 consolidated the instructions on credit card, debit card and rupee denominated co-branded prepaid cards. These instructions have been updated and issued in the form of Master Direction - Credit Card and Debit Card - Issuance and Conduct. The Reserve Bank has made an endeavour to strengthen the areas that needed attention, *viz.*, issuance of unsolicited cards, closure of a credit card account, introduction of credit cards for business purposes, billing issues, adjustment of credit transactions, new form factors, issues relating to co-branded arrangement and mis-selling. Many of these aspects were being flagged in complaints, RTI queries, media reports, suggestions from public and consumer body representations.

Operations of Subsidiaries and Branches of Indian Banks and All India Financial Institutions in Foreign Jurisdictions and in International Financial Services Centres (IFSCs) - Compliance with Statutory/Regulatory Norms

VI.65 A framework has been put in place for Indian banks/AIFIs dealing in financial derivatives, including structured derivative products, through their branches/subsidiaries operating in foreign jurisdictions and in International Financial Services Centres (IFSCs).

Claims Received from the National Credit Guarantee Trustee Company Limited (NCGTC) - Classification for the Purpose of Maintenance of CRR/SLR

VI.66 The claims received, in the event of invocation of guarantee from the National Credit Guarantee Trustee Company Limited (NCGTC) on account of any relative credit extended by a bank, held pending adjustment, is reckoned as 'liability' for the computation of NDTL for CRR/SLR. It has been decided that the amounts received by a bank from the NCGTC towards claims in respect of guarantees invoked and held by them pending adjustment of the same towards the relative advances, need not be treated as outside liabilities for the purpose of computation of NDTL for CRR and SLR.

Master Direction – Reserve Bank of India (Acquisition and Holding of Shares or Voting Rights in Banking Companies) Directions, 2023

VI.67 A Press Release was published on November 26, 2021 communicating the acceptance of 21 of (some with partial modifications, where considered necessary) 33 recommendations made by an Internal Working Group (IWG) to review the extant guidelines on ownership and corporate structure for Indian private sector banks along with notification that the consequential amendments in instructions/ circulars/ master directions/ licensing guidelines will follow in due course. Accordingly, on January 16, 2023 a Master Direction (MD) and Guidelines for major shareholders (Acquisition and Holding of Shares or Voting Rights in Banking Companies) were issued consolidating three Master Directions (MDs)[14] pertaining to shareholding and voting rights in banking companies. The major changes made in the MD/Guidelines, *inter alia*, include updates in the limits on permissible shareholding by different categories of shareholders, introduction of reporting requirements for encumbrance of shares by promoter, and strengthening of arrangements for continuous monitoring of the 'fit & proper' status of major shareholder of a banking company.

Discussion Paper on Securitisation of Stressed Assets Framework (SSAF)

VI.68 As a part of the Statement on Developmental and Regulatory Policies (September 30, 2022), the Reserve Bank had proposed to introduce a framework for securitisation of stressed assets in addition to the ARC route. Accordingly, a discussion paper (DP) on securitisation of stressed assets framework (SSAF) was released on January 25, 2023, inviting comments from stakeholders. The DP broadly covers nine relevant areas of the framework including asset universe, asset eligibility, minimum risk retention, regulatory framework for special purpose entity and resolution manager, access to finance for resolution manager, capital treatment, due diligence, credit enhancement and valuation. It draws upon similar frameworks introduced in other jurisdictions, while trying to keep it structurally aligned with the framework for securitisation of standard assets.

Circular on Governance, Measurement and Management of Interest Rate Risk in Banking Book

VI.69 Interest rate risk in banking book (IRRBB) refers to the current or prospective risk to banks' capital and earnings arising from adverse movements in interest rates that affect the banks' banking book positions. Excessive IRRBB can pose a significant risk to banks' current capital base and/or future earnings. Accordingly, final guidelines on IRRBB, in alignment with the revised framework of BCBS were issued on February 17, 2023 to enable the banks to measure, monitor and disclose their exposure to IRRBB. The date for implementation would be decided in due course.

[14] (i) MD on 'Prior Approval for Acquisition of Shares or Voting Rights in Private Sector Banks' dated November 19, 2015; (ii) MD on 'Issue and Pricing of Shares by Private Sector Banks' dated April 21, 2016; and (iii) MD on 'Ownership in Private Sector Banks' dated May 12, 2016.

Draft Guidelines on Minimum Capital Requirements for Market Risk – under Basel III

VI.70 As part of convergence of the Reserve Bank's regulations for banks with Basel III standards, the draft guidelines on minimum capital requirements for market risk - Basel III were issued on February 17, 2023, for public comments. The guidelines shall be applicable to all commercial banks (excluding local area banks, payments banks, regional rural banks and small finance banks) and shall come into effect from April 1, 2024.

Reserve Bank of India (Financial Statements - Presentation and Disclosures) Directions, 2021 (Master Direction) - Applicability to State and Central Cooperative Banks

VI.71 The Master Direction (MD) was earlier applicable to all commercial banks and Primary (Urban) cooperative banks, which, *inter alia*, harmonised disclosure related instructions for the annual financial statements across banking sector. In consultation with the National Bank for Agriculture and Rural Development (NABARD), the MD was updated making it applicable to state and central cooperative banks, *mutatis mutandis*. Some disclosure requirements of the Master Direction, as stated in Annex III A of the said Direction shall be applicable to state and central cooperative banks, from the financial year ending March 31, 2024.

Implementation of Indian Accounting Standards (Ind AS)

VI.72 To address the prudential concerns related to continued recognition of unrealised management fees even though the said fee had not been realised for more than 180 days, Ind AS implementing ARCs, shall reduce following amount from the net owned funds for calculation of capital adequacy ratio and amount available for dividend: (a) management fee recognised during the planning period that remains unrealised beyond 180 days from the date of expiry of the planning period, (b) management fee recognised after the expiry of the planning period that remains unrealised beyond 180 days of such recognition, and (c) any unrealised management fees, notwithstanding the period for which it has remained unrealised, where the net asset value of the security receipts has fallen below 50 per cent of the face value. ARCs shall also disclose information related to ageing of unrealised management fees in the prescribed format in their notes to accounts.

Agenda for 2023-24

VI.73 During 2023-24, the Department will focus on the following key deliverables:

- Comprehensive review of instructions on statutory and other restrictions in credit management (*Utkarsh* 2.0);
- Review of miscellaneous non-banking companies (MNBCs) regulations (*Utkarsh* 2.0);
- Recognition of self-regulatory organisations (SROs) for NBFCs;
- Review of liquidity management framework of UCBs (*Utkarsh* 2.0);
- Issue of harmonised regulations on 'Income Recognition, Asset Classification and Provisioning Pertaining to Advances' to regulated entities (*Utkarsh* 2.0);
- Comprehensive review of all non-fund based contingent facilities issued by lending institutions (*Utkarsh* 2.0);

- Review of policy on conduct of activities by banks and NBFCs;
- Review of regulation on agency business and referral service;
- Comprehensive review of guidelines on area of operations of UCBs;
- Review of instructions on various regulatory approvals of UCBs; and
- Regulatory initiatives on climate risk and sustainable finance.

FinTech Department

VI.74 The FinTech Department, set up on January 4, 2022, is entrusted with the responsibility to give a further boost to the FinTech sector by fostering innovation, while remaining vigilant and addressing the risks associated with the FinTech ecosystem under the adequacy framework.

VI.75 The Department undertook several measures in pursuance of this mandate to fulfil the objectives set out for 2022-23.

Agenda for 2022-23

VI.76 The Department had set out the following goals for 2022-23:

- Phased introduction of Central Bank Digital Currency (CBDC) [*Utkarsh*] (Paragraph VI.77-VI.80);
- Implementation of the roadmap laid down by 'Vision and Strategy Document on FinTech (*Utkarsh*), and policy framework for FinTechs and BigTechs (Paragraph VI.81);
- Facilitating setting up of 75 digital banking units in 75 districts of the country (Paragraph VI.82); and
- Ensuring execution of key projects of importance through the Reserve Bank Innovation Hub (Paragraph VI.83).

Implementation Status

Phased Introduction of CBDC

VI.77 During the year, the Reserve Bank issued a 'Concept Note' on CBDC to create awareness about CBDCs in general and the planned features of the Digital Rupee (e₹), in particular. It explained the objectives, choices, and benefits of issuing a CBDC in India. The concept note also sought to explain the Reserve Bank's approach towards introduction of the CBDC. Subsequently, the Reserve Bank launched pilots of e₹ for specific use cases.

VI.78 The first pilot in the Digital Rupee - Wholesale Segment (e₹-W) commenced on November 1, 2022. The use case for this pilot is settlement of secondary market transactions in government securities (G-secs). Use of e₹-W is expected to make the inter-bank market more efficient. Settlement in central bank money would reduce transaction costs by pre-empting the need for settlement guarantee infrastructure or for collateral to mitigate settlement risk. Nine banks (*viz.*, State Bank of India, Bank of Baroda, Union Bank of India, HDFC Bank, ICICI Bank, Kotak Mahindra Bank, Yes Bank, IDFC First Bank and HSBC) are participating in the pilot.

VI.79 The first pilot for Retail Digital Rupee (e₹-R) was announced on December 1, 2022. e₹-R offers features of physical cash like trust, safety and settlement finality in digital mode. It can be held or used to carry out transactions, similar to the manner in which currency notes can be used in physical form. The pilot was launched in Mumbai, New Delhi, Bengaluru and Bhubaneswar, comprising participating customers and merchants in a closed user group (CUG). Other locations including Ahmedabad, Chandigarh, Gangtok, Guwahati, Hyderabad, Indore, Kochi, Lucknow, Patna and Shimla are also being added to the pilot in phases. The pilot began with four banks (*viz.,* State Bank of India, ICICI Bank, Yes Bank and IDFC First Bank) while four other banks (*viz.,* Bank of Baroda, Union Bank of India, HDFC Bank and Kotak Mahindra Bank) have joined subsequently. Five more banks (*viz.,* Punjab National Bank, Canara Bank, Federal Bank, Axis Bank and IndusInd Bank) are in the process of joining the pilot. The scope of pilot is being expanded gradually to include more banks, users and locations as needed.

VI.80 The results of both the pilots so far have been satisfactory and in line with expectations.

Implementation of the Roadmap Laid Down by 'Vision and Strategy Document on FinTech and Policy Framework for FinTechs and BigTechs

VI.81 A working group (WG) has been constituted, under the Chairmanship of Executive Director, in charge of the FinTech Department to formulate a framework for the sustainable development of FinTech sector including BigTechs. The WG comprises representatives from various internal departments, *viz*., Department of Economic and Policy Research (DEPR), FinTech Department, Department of Regulation (DoR), Department of Supervision (DoS), Financial Inclusion and Development Department (FIDD) and Department of Payment and Settlement Systems (DPSS) along with representations from the FinTech Industry, a legal firm, and Reserve Bank Innovation Hub (RBIH). The WG has been engaging with various stakeholders of the FinTech eco-system, which includes banks and FinTechs/BigTechs. The WG is in the process of finalising its recommendations which, *inter alia,* will include vision and strategy for the development of FinTech ecosystem in India and a framework for FinTechs and BigTechs.

Establishment of Digital Banking Units (DBUs)

VI.82 The Hon'ble Finance Minister in her budget speech on February 1, 2022 announced the setting up of the 75 Digital Banking Units (DBUs) in 75 districts of the country to commemorate the 75 years of independence of the country (*Azadi Ka Amrit Mahotsav*). These 75 DBUs have been dedicated to the service of the nation by the Hon'ble Prime Minister on October 16, 2022. At present, 84 DBUs are in operation in various parts of the country. However, banks are free to set up DBUs in accordance with regulatory guidance and policy. The DBUs enable customers to have cost effective/convenient access and enhanced digital experience to/of various products and services in an efficient, paperless, secured and connected environment, in self-service as well as assisted mode. Although the Reserve Bank has provided a standardisation in terms of the minimum number of products and services which can be offered across all the DBUs *vide* its circular dated April 7, 2022 on 'Establishment of DBUs', banks have the freedom to offer any digital products and services in addition to the prescribed minimum. DBUs are organising financial literacy events to create awareness on cyber security and other relevant IT areas relating to digital financial services, with district as the catchment area. DBUs will catalyse adoption of digital banking by providing digital financial services and products to the public in a seamless and efficient manner.

Projects Undertaken through Reserve Bank Innovation Hub (RBIH)

VI.83 During 2022-23, the RBIH has undertaken multiple innovative projects of key importance to the financial sector. A pilot project for end-to-end digitalisation of *Kisan* Credit Card (KCC) lending, conceptualised and developed by the RBIH in consultation with the Reserve Bank, was operationalised in Madhya Pradesh, Karnataka and Tamil Nadu (Box VI.2). Further, RBIH conducted a *Swanari* TechSprint, that aimed to encourage the financial services ecosystem partners to create and produce smart, creative, and sustainable solutions for the underserved, low-and middle-income (LMI) women and women-owned enterprises. Additionally, to provide incubation and mentoring support to start-ups, it entered into MoUs with the IIT Madras Research Park; the Society for Innovation and Entrepreneurship (SINE), IIT Bombay and the Centre for Innovation Incubation and Entrepreneurship (CIIE), IIM Ahmedabad.

Major Initiatives

Account Aggregator Framework

VI.84 The Account Aggregator (AA) eco-system is witnessing increased traction as major public sector banks have joined the framework and other financial sector regulators (FSRs), *viz.*, the Securities and Exchange Board of India (SEBI), Pension Fund Regulatory and Development Authority (PFRDA) and Insurance Regulatory and Development Authority of India (IRDAI), have advised their respective regulated entities to join the framework as financial information provider (FIP). Further, with a view to facilitating cash flow-based lending to micro, small and medium enterprises (MSMEs), goods and services tax network (GSTN) has been included as a FIP under the AA framework. The Department of Revenue, GoI, shall be the regulator of GSTN for this specific

Box VI.2

Pilot on Digitalisation of *Kisan* Credit Card (KCC) Lending

The *Kisan* Credit Card (KCC) scheme has been one of the predominant modes of financing farmers in India. The major challenges associated with the scheme are high turn-around time (TAT), multiple branch visits, paper-based credit delivery and high transaction costs. Considering these challenges associated with the rural finance, digitalisation of agrifinance in India was ideated between the Reserve Bank and the Reserve Bank Innovation Hub (RBIH). The idea is to enable frictionless delivery of *Kisan* Credit Card (KCC) loans in a paperless and hassle-free manner and reduce the turn-around time and avoid multiple visits to bank branches. The pilot is being carried out in three states, *viz.*, Madhya Pradesh, Karnataka (with the Union Bank of India) and Tamil Nadu (with the Federal Bank and Indian Bank). The pilot enabled successful disbursal of loans up to ₹ 1.6 lakh not requiring any collateral, within a few minutes to farmers. The pilot is being scaled up to other districts of these three states as well as in other states.

This pilot requires bespoke technical integration of banks' system with different states' digital land records. Addressing these issues in digital KCC may help banks to bring in the much-needed efficiency by eliminating the manual process involved in procedures like verification of land documents, integration with banks' Business Rule Engine (BRE), assessment of the scale of finance, approval, paper-based know your customer (KYC), and processing wet signatures of loan applicants.

The pilot project of lending based on milk pouring data to dairy farmers has also commenced in Gujarat in association with HDFC Bank.

Various testings under the pilots have been found successful and the results of these pilots have been encouraging. All the learnings from the pilots are being used towards development of an Integrated Public Tech Platform for Finance (IPTPF),which would be an enabler for delivery of the frictionless credit by facilitating seamless flow of required digital information to lenders.

Source: RBI.

purpose. As a result, the number of registered non-banking financial companies (NBFCs) AA, FIPs and financial information users (FIU) are expected to increase substantially. In view of the growing number of participants in the ecosystem, the Reserve Bank is taking well considered and nuanced approach, in consultation with the Reserve Bank Information Technology Private Limited (ReBIT) and other stakeholders, to make the ecosystem more robust, address the technical issues of the growing ecosystem and facilitate further growth of the same.

Regulatory Sandbox (RS) – Cohorts and Inter-Operable Regulatory Sandbox (IoRS)

VI.85 Under the second cohort of the RS on theme 'Cross-Border Payments', eight entities tested a range of products, including, *inter alia*, blockchain-based cross-border payment system, and digitisation of cross-border payment process. Four out of the eight products were found acceptable within the boundary conditions defined during testing. Under the third cohort with the theme 'MSME Lending', the shortlisted eight entities have completed their testing of products which, among others, include end-to-end straight through processing for digital lending to MSMEs, use of proprietary business finance variables to underwrite real time cash flow-based credit for MSMEs, innovative use of blockchain technology in MSME lending and straight through process journey for MSME *Mudra* loan from lead to disbursal. The test results are currently under evaluation. This cohort on MSME lending is expected to spur innovations that can help to fill the credit gap for MSMEs through the use of technology and data analytics. Under the fourth cohort with the theme 'Prevention and Mitigation of Financial Frauds', six entities have been selected for the testing and the entities commenced testing of their products from February 2023. The entities are testing various products, including risk-based authentication solution, early warning system for credit monitoring and fraud identification using both internal and external data, Artificial Intelligence (AI)/Machine Learning (ML) based closed user group model for preventing card frauds and fraud filter system to lock login in sleep mode. This cohort is envisaged to prevent occurrence of fraud, strengthen fraud governance, reduce the response time to frauds and the lag between occurrence and detection of financial frauds. The fifth cohort under RS has been announced to be 'Theme Neutral' wherein innovative products/ services/ technologies cutting across various functions in the Reserve Bank's regulatory domain would be eligible to apply. The 'On Tap' application facility under RS is currently open for themes 'Retail Payments' and 'Cross-border Payments'. Two entities have been selected for the test phase under the on-tap application facility for the theme 'Retail Payments' and the testing of the products has been started by one entity while the other one is in the process of partnering with commercial bank/s to start the testing. Further, in order to facilitate testing of hybrid products/ services falling within the regulatory ambit of more than one financial regulator, *viz.,* the Reserve Bank, SEBI, IRDAI, International Financial Services Centres Authority (IFSCA) and PFRDA, a Standard Operating Procedure (SOP) for Interoperable Regulatory Sandbox (IoRS) has been prepared and operationalised by the Inter- Regulatory Technical Group on FinTech (IRTG on FinTech) constituted under the aegis of Financial Stability Development Council-Standing Committee (FSDC-SC). Applications have been received under the IoRS framework, which are being processed as per the provisions of the SOP.

HARBINGER 2021

VI.86 The Reserve Bank launched its first global hackathon HARBINGER 2021 on November 9, 2021 with four problem statements under the broad theme of 'Smarter Digital Payments'. The Hackathon witnessed a very good participation of 363 teams from proposals submitted by teams from within India and from 22 other countries, including the US, the UK, Sweden, Singapore, Philippines, and Israel. The final evaluation of solutions to problem statements was conducted in May 2022 wherein a jury of external experts evaluated and selected the winners and runners-up based on parameters like innovation, technology, demonstration, user experience, security and ease of implementation. These innovative products are expected to bring additional benefits in the payment ecosystem, *viz*., inclusion of the underprivileged and prevention of digital payment frauds. While the regulatory sandbox initiative is focused on fostering innovation by the Indian entities within the regulatory domain of the Reserve Bank, IoRS is inter-regulatory in approach and global hackathon 'HARBINGER' is targeted towards the global innovator community for providing solutions to specific statement of problems. The second edition of Reserve Bank's global hackathon – 'HARBINGER 2023' has also been launched with the theme 'Inclusive Digital Services' wherein innovative ideas have been invited for the four problem statements, *viz.,* innovative, easy-to-use, digital banking services for differently abled (*Divyaang*), RegTech solutions to facilitate more efficient compliance for Regulated Entities (REs), exploring use cases/solutions for CBDC-retail transactions; including transactions in offline mode and increasing transactions per second (TPS)/ throughput and scalability of blockchains.

Agenda for 2023-24

VI.87 In 2023-24, the Department will focus on the following goals:

- Conducting further pilots with various use cases in both CBDC-Retail and CBDC-Wholesale (*Utkarsh* 2.0);
- Developing an appropriate framework for managing FinTech ecosystem in the country (*Utkarsh* 2.0);
- To create an open, inter-operable integrated public tech platform for finance that can act as a single unified public platform which would facilitate integration of data in a seamless manner for all lenders, which would enable the delivery of frictionless credit;
- Conduct of global hackathons 'HARBINGER' series;
- Bringing improvements to the account aggregator technological ecosystem to achieve efficiency and facilitate further growth of the same; and
- Facilitation in development of RegTech tools for adoption by regulated entities and exploring identification of emerging SupTech tools. One of the cohorts under the RS/Hackathon would include themes relating to RegTech (*Utkarsh* 2.0).

4. SUPERVISION OF FINANCIAL INTERMEDIARIES

Department of Supervision (DoS)

VI.88 The Department of Supervision (DoS) is entrusted with the responsibility of supervising all Scheduled Commercial Banks (SCBs) [excluding Regional Rural Banks (RRBs)], Local Area Banks (LABs), Payments Banks (PBs), Small Finance

Banks (SFBs), Credit Information Companies (CICs), All India Financial Institutions (AIFIs), Urban Co-operative Banks (UCBs), Non-Banking Financial Companies (NBFCs) [excluding Housing Finance Companies (HFCs)] and Asset Reconstruction Companies (ARCs).

Commercial Banks

VI.89 The Department took several measures to further strengthen both onsite and off-site supervision of the SCBs, LABs, PBs, SFBs, CICs and AIFIs during the year.

Agenda for 2022-23

VI.90 The Department had set the following goals for 2022-23:

- Generate supervisory dashboards for senior management of the Reserve Bank (*Utkarsh*) [Paragraph VI.91];
- Back-testing of Early Warning Indicator (EWI) model to assess its predictive power/ creating a new EWI framework for SCBs (Paragraph VI.92); and
- Undertaking process audit of SCBs to identify weaknesses and initiate remedial measures (Paragraph VI.93).

Implementation Status

Supervisory Dashboards

VI.91 The Reserve Bank has developed dynamic monitoring dashboards for all supervised entities, including SCBs, UCBs and NBFCs. The dashboards, meant for senior management, are being updated on a quarterly basis.

Early Warning Indicator (EWI) Model

VI.92 A new EWI framework has been developed and back-tested which provides a comprehensive view of SCBs' financial performance. This EWI framework provides an early warning in terms of breaches of critical thresholds across a set of 18 significant ratios.

Process Audit

VI.93 Undertaking process audit of critical processes in SCBs continued to be one of the areas pursued in supervision for redressal of the weaknesses observed in the internal controls and systems in SCBs.

Other Initiatives

Strengthening Supervision in Governance and Conduct Area

VI.94 For the supervisory cycle 2022-23, major supervisory concerns in the areas of governance and conduct were identified. Besides, new parameters were introduced with metrics/ sub metrics for bringing in better objectivity in measurement of parameters in the organisational culture - comprising compliance culture and risk culture - in the risk evaluation template.

Cross-border Supervisory Cooperation

VI.95 In line with the Basel Committee on Banking Supervision (BCBS) principles on cross-border supervisory cooperation, the Reserve Bank continued to have supervisory colleges for six Indian banks, which are internationally active. During the year, the Reserve Bank conducted supervisory college meetings for select banks. The Reserve Bank also signed a Memorandum of Understanding (MoU) with the International Financial Services Centres Authority (IFSCA). With this, the Reserve Bank has so far executed 44 MoUs, two Exchange of Letters (EoLs) of supervisory cooperation and one Statement of Co-operation (SoC) with overseas supervisors/ regulators. During the year, the Reserve Bank had 17 meetings with overseas supervisors for exchange of information on supervisory concerns, and methodologies and best practices in supervision.

Review and Rationalisation of Off-site Returns

VI.96 Considering the changes in data requirements from time to time depending upon the updated supervisory processes, an Internal Group was formed to review and rationalise the off-site returns and make recommendations that will maintain the system's relevance in the contemporary supervisory environment. The Group has completed the review of all the returns pertaining to SCBs in terms of duplication of data items across returns, redundant returns and requirement of new data items and advised revision of returns. The same are under development.

Prompt Recognition of Impaired Assets

VI.97 The Reserve Bank continues to remain engaged with the SCBs in implementing system driven NPA identification, with a view to ensuring prompt and error-free recognition of asset impairment. Further, the Reserve Bank is also monitoring the movement of key asset quality parameters in the wake of the Restructuring Frameworks (RFs) introduced as part of the COVID-19 support and relief measures. A study conducted by the Reserve Bank points towards improved resilience in the banking system across the bank-groups (Box VI.3).

Fraud Analysis

VI.98 An assessment of bank group-wise fraud cases over the last three years indicates that while private sector banks reported maximum number of frauds, public sector banks continued to contribute maximum to the fraud amount during 2022-23 (Table VI.2). Frauds have occurred predominantly in the category of digital payments (card/internet),

Box VI.3
Asset Quality Post Restructuring by Banks

The COVID-19 pandemic disrupted production activity severely impacting the cash flows of bank borrowers. In response, globally, the central banks came to the rescue of such borrowers - and protected the financial system by instituting a host of supportive measures/ policies, *viz.,* allowing loan moratorium, asset quality dispensations, restructuring, additional funding and liquidity support. In India, in the wake of the pandemic, the Reserve Bank permitted regulated entities to grant loan moratoriums and allowed restructuring of loan accounts subject to specified conditions, as per their Board approved policy. The COVID-19 regulatory package was implemented in multiple phases by the Reserve Bank to accommodate disruptions due to resurgence of infections. The schemes in the COVID-19 regulatory packages were envisaged to lend necessary support with clear sunset clauses (RBI, 2022). Further, they had clear eligibility criterion and strict reporting framework to monitor the implementation. While the moratorium on loans was a temporary solution in the context of the lockdown, the resolution framework was expected to give durable relief to borrowers facing COVID related stress (Das, 2020).

The above measures ensured that the schemes were leveraged by genuine beneficiaries and did not result in accumulation of risks. As a result, the regulatory package enabled individuals and enterprises to tide over the difficulties posed by the pandemic related disruptions (Patra, 2022). Furthermore, with the effects of the pandemic abating, economic activity recovered to the pre-pandemic levels. However, concerns remain that the unwinding of support policies may result in hidden fragilities surfacing with time lags in terms of defaults from restructured assets or assets coming out of moratorium. Against this backdrop, the asset quality of Indian banks is examined, for the post-pandemic period.

The movement of key asset quality parameters point to improved resilience in the banking system across the bank-groups (Table 1). While the share of restructured assets has risen between December 2019 and March 2022, the same has moderated by December 2022. Further, during the same period the slippage ratio has fallen from 4.4 per cent to 2.0 per cent. This indicates that the asset quality remains stable despite the cessation of COVID-19 specific support schemes.

An empirical assessment conducted using a system panel generalised method of moments (GMM) model with data on

(Contd.)

Table 1: Movement in Key Asset Quality Parameters

(Per cent)

Bank Group	March 2018	March 2019	December 2019	March 2022	December 2022
1	2	3	4	5	6
PSBs					
Gross NPAs to Gross Advances	15.52	12.25	11.87	7.57	5.82
Net NPAs to Net Advances	8.58	5.12	4.89	2.33	1.65
SMA-2 Ratio (₹5 crore and Above)	2.17	1.25	2.04	0.23	0.44
Restructured to Standard Advances	0.96	0.56	0.63	2.25	1.74
Slippage Ratio	9.57	4.5	4.67	2.54	1.56
Stressed Advances to Gross Advances	16.33	12.74	12.42	9.65	7.46
Private Sector Banks					
Gross NPAs to Gross Advances	4.01	4.81	5.5	3.73	2.67
Net NPAs to Net Advances	1.97	1.89	1.75	0.96	0.66
SMA-2 Ratio (₹5 crore and above)	1.02	0.67	1.14	0.19	0.31
Restructured to Standard Advances	0.44	0.33	0.18	1.78	1.02
Slippage Ratio	4.29	3.36	4.27	3.29	2.64
Stressed Advances to Gross Advances	4.43	5.12	5.68	5.45	3.67
SCBs					
Gross NPAs to Gross Advances	11.46	9.24	9.1	5.89	4.47
Net NPAs to Net Advances	6.1	3.75	3.5	1.72	1.21
SMA-2 Ratio (₹5 crore and above)	1.69	0.99	1.63	0.2	0.38
Restructured to Standard Advances	0.74	0.45	0.43	2.0	1.40
Slippage Ratio	7.58	3.96	4.36	2.86	2.01
Stressed Advances to Gross Advances	12.12	9.65	9.49	7.77	5.81

Source: DBIE and Supervisory Returns, RBI.

43 banks from both public and private sector - covering the period from March 2015 to December 2022, confirms the salubrious effect of COVID-19 related policy measures on the banking sector (Table 2). The econometric specification used in the model includes lagged GNPA ratio as a regressor, as GNPA ratio tends to exhibit persistence, and estimated using GMM to account for endogeneity issues to get robust estimates.

Table 2: Results of GMM Regression – Asset Quality Pre- and Post - pandemic

(Dependent variable: Bank-level GNPA Ratio)

Explanatory Variable	Coefficient		
	Model I	Model II	Model III
1	2	3	4
GNPA Ratio (L1)	0.908*** (0.009)	0.908*** (0.009)	0.854*** (0.006)
CRAR(L2)			-0.151*** (0.010)
Real GDP Growth (L3)	-0.048*** (0.001)	-0.048*** (0.001)	-0.041*** (0.001)
INR-USD Exchange Rate (D1)	0.056*** (0.004)	0.056*** (0.004)	0.089*** (0.003)
Real WALR on Fresh Loans (L1)	0.014*** (0.003)	0.014*** (0.003)	
Urban Male Unemployment Rate (D1)	0.041*** (0.002)	0.041*** (0.002)	0.035*** (0.001)
Growth in House Price Index (L1)	-0.083*** (0.011)	-0.083*** (0.011)	-0.091*** (0.008)
Dummy for Post-March 2020	-0.759*** (0.086)	-0.759*** (0.086)	-0.578*** (0.063)
Constant	1.747*** (0.093)	1.747*** (0.093)	4.580*** (0.207)
Observations	612	612	612
Number of banks	43	43	43
AR(1), p-value	0.00863	0.00863	0.00737
AR(1), p-value	0.403	0.403	0.921
Hansen Test, p-value	1	1	1
Sargan Test, p-value	Less than 0.01	Less than 0.01	Less than 0.01

*** indicates significance level at 1 per cent.

Note: 1. L and D denote lagged and differenced values of the parameters in the specified horizons.

2. Regression done for period March 2016 to December 2022.

3. Standard errors are given in parentheses.

Source: RBI staff calculations.

The decline in stress in the banking sector indicates that the policies implemented to mitigate the economic disruptions caused by COVID-19 outbreak are successful in enhancing financial stability without causing an economic hysteresis.

References:

1. Das, Shaktikanta (2020), ‘It is Time for Banks to Look Deeply Within: Reorienting Banking Post-Covid’, Singapore, Unlock BFSI 2.0 with Business Standard, August 27.
2. Patra, M.D. (2022),’ RBI’s Pandemic Response: Stepping out of Oblivion’, *Council for Social Development, Hyderabad*, January 28.
3. Reserve Bank (2022), ‘State of the Economy’, *Monthly Bulletin January,* LXXVI(12), 13-41.

Table VI.2: Fraud Cases - Bank Group-wise

(Amount in ₹ crore)

Bank Group/Institution	2020-21		2021-22		2022-23	
	Number of Frauds	Amount Involved	Number of Frauds	Amount Involved	Number of Frauds	Amount Involved
1	2	3	4	5	6	7
Public Sector Banks	2,888	77,879	3,075	40,015	3,405	21,125
	(39.4)	(58.8)	(33.8)	(66.9)	(25.2)	(69.8)
Private Sector Banks	3,705	45,515	5,332	17,387	8,932	8,727
	(50.5)	(34.4)	(58.6)	(29.1)	(66.0)	(28.9)
Foreign Banks	519	3110	494	1,206	804	292
	(7.1)	(2.4)	(5.5)	(2.0)	(5.9)	(1.0)
Financial Institutions	22	5853	9	1,178	9	70
	(0.3)	(4.4)	(0.1)	(2.0)	(0.1)	(0.2)
Small Finance Banks	114	30	155	30	312	31
	(1.5)	-	(1.7)	-	(2.3)	(0.1)
Payments Banks	88	2	30	1	68	7
	(1.2)	-	(0.3)	-	(0.5)	-
Local Area Banks	2	-	2	2	-	-
	-	-	-	-	-	-
Total	**7,338**	**1,32,389**	**9,097**	**59,819**	**13,530**	**30,252**
	(100.0)	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**

- : Nil/Negligible.

Note: 1. Figures in parentheses represent the percentage share of the total.
2. Data are in respect of frauds of ₹1 lakh and above reported during the period.
3. The figures reported by banks and financial institutions are subject to changes based on revisions filed by them.
4. Frauds reported in a year could have occurred several years prior to year of reporting.
5. Amounts involved reported do not reflect the amount of loss incurred. Depending on recoveries, the loss incurred gets reduced. Further, the entire amount involved is not necessarily diverted.

Source: RBI Supervisory Returns.

in terms of number. However, in terms of value, frauds have been reported primarily in the loan portfolio (advances category) [Table VI.3]. There was a 55 per cent decline in the amount involved in the total frauds reported during 2021-22 over 2020-21. Further, proportionately, the decline in the total amount involved in frauds continued during 2022-23, with a reduction of 49 per cent over 2021-22. While small value card/internet frauds contributed maximum to the number of frauds reported by the private sector banks, the frauds in public sector banks were mainly in loan portfolio.

VI.99 An analysis of the vintage of frauds reported during 2021-22 and 2022-23 shows a significant time-lag between the date of occurrence of a fraud and its detection (Table VI.4). The amount involved in frauds that occurred in previous financial years formed 93.7 per cent of the frauds reported in 2021-22 in terms of value. Similarly, 94.5 per cent of the frauds reported in 2022-23 by value occurred in previous financial years.

VI.100 In order to improve data reliability in Fraud Monitoring Returns (FMR) submitted by SCBs, they were advised to carry out proper due diligence and ascertain the involvement (with credible proof/ evidence) before including/ adding name(s) of the non-whole time Director(s) in the FMR/CRILC while reporting fraud /non-cooperative borrower.

Table VI.3: Frauds Cases - Area of Operations

(Amount in ₹ crore)

Area of Operation	2020-21		2021-22		2022-23	
	Number of Frauds	Amount Involved	Number of Frauds	Amount Involved	Number of Frauds	Amount Involved
1	2	3	4	5	6	7
Advances	3,476	1,30,990	3,833	57,733	4,109	28,792
	(47.4)	(99.0)	(42.2)	(96.5)	(30.4)	(95.2)
Off-balance Sheet	23	535	21	1077	14	296
	(0.3)	(0.4)	(0.2)	(1.7)	(0.1)	(1.0)
Forex Transactions	4	129	7	7	13	12
	-	(0.1)	(0.1)	-	(0.1)	-
Card/Internet	2,545	119	3,596	155	6,659	276
	(34.7)	(0.1)	(39.5)	(0.3)	(49.2)	(0.9)
Deposits	504	434	471	493	652	258
	(6.9)	(0.3)	(5.2)	(0.8)	(4.8)	(0.9)
Inter-Branch Accounts	2	-	3	2	3	-
	-	-	-	-	-	-
Cash	329	39	649	93	1470	158
	(4.5)	-	(7.1)	(0.2)	(10.9)	(0.5)
Cheques/DDs, *etc.*	163	85	201	158	118	25
	(2.2)	(0.1)	(2.2)	(0.3)	(0.9)	(0.1)
Clearing Accounts	14	4	16	1	18	3
	(0.2)	-	(0.2)	-	(0.1)	-
Others	278	54	300	100	474	432
	(3.8)	-	(3.3)	(0.2)	(3.5)	(1.4)
Total	**7,338**	**1,32,389**	**9,097**	**59,819**	**13,530**	**30,252**
	(100.0)	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**

- : Nil/Negligible.
Note: 1. Figures in parentheses represent the percentage share of the total.
2. Refer to footnotes 2-5 of Table VI.2.
Source: RBI Supervisory Returns.

Table VI.4: Vintage of Frauds Reported in 2021-22 and 2022-23

(₹ crore)

2021-22		2022-23	
1	2	3	4
Occurrence of Fraud	Amount Involved	Occurrence of Fraud	Amount Involved
Before 2012-13	10,803	Before 2012-13	1,547
2012-13	3,272	2012-13	739
2013-14	7,270	2013-14	1,734
2014-15	3,155	2014-15	954
2015-16	4,661	2015-16	479
2016-17	5,620	2016-17	8,349
2017-18	7,346	2017-18	4,232
2018-19	5,448	2018-19	4,623
2019-20	4,740	2019-20	1,399
2020-21	3,719	2020-21	1,325
2021-22	3,785	2021-22	3,196
		2022-23	1,675
Total	**59,819**	**Total**	**30,252**

Note: 1. Data are in respect of frauds of ₹1 lakh and above reported during the period.
2. Refer to footnotes 3 and 5 of Table VI.2.
Source: RBI Supervisory Returns.

Agenda for 2023-24

VI.101 The Department has set the following goals for 2023-24:

- Market risk - conducting scenario analysis and providing an input for system stress test (*Utkarsh* 2.0);
- Implementation of a fraud vulnerability matrix for SCBs (*Utkarsh* 2.0); and
- Strengthening and enhancement of early warning signal (EWS) and Fraud Risk Management System (FRMS).

Urban Cooperative Banks (UCBs)

VI.102 The Department continuously monitored the performance of UCBs during the year and undertook measures to ensure the development of a safe and well-managed cooperative banking sector.

Agenda for 2022-23

VI.103 The Department had set the following goals for supervision of UCBs in 2022-23:

- Roll out of Key Risk Indicators (KRIs) for select UCBs to assess the cyber security risk profile (Paragraph VI.104);
- Extending IT examination progressively to UCBs with asset size below ₹5,000 crore (Paragraph VI.105); and
- Analysing inter-connectedness of UCBs with companies from directorship perspective (Paragraph VI.106).

Implementation Status

Cyber Security and IT Examination of UCBs

VI.104 In order to assess the inherent risks and to put in place an effective off-site monitoring mechanism, Key Risk Indicators (KRIs) were rolled out during the year for all Level IV UCBs and the Level III UCBs[15] with asset size greater than ₹5,000 crore. Based on the applicability of controls, different sets of KRIs were prescribed for these two categories of UCBs. These UCBs have started submitting KRI data and a scoring model is being formulated based on the same.

VI.105 In the wake of increasing cyber risks and recent cyber incidents that have occurred in the UCBs, a gap assessment exercise was carried out for 55 Level III UCBs by the Computer Emergency Response Team (CERT-IN) empanelled auditors to gauge the extent of compliance with cyber security framework prescribed by the Reserve Bank. Based on the outcome of the gap assessment, appropriate steps have been taken for mitigating the cyber security risks in the UCBs concerned. In addition, IT examination of 14 UCBs was also carried out till March 31, 2023.

Inter-connectedness of UCBs

VI.106 An assessment was conducted by the Reserve Bank wherein the directors of UCBs were mapped with the Ministry of Corporate Affairs (MCA) database to find out associated companies. The results of the assessment are being used as supervisory inputs for further action.

Other Initiatives

Sensitisation Workshop for Frauds

VI.107 During the year, the Reserve Bank conducted workshops for select UCBs with asset size of ₹500 crore and above to sensitise them on fraud prevention, prompt/accurate reporting and follow up action.

Review and Rationalisation of Off-site Returns Filed by UCBs

VI.108 The returns submitted by UCBs were taken up for review and rationalisation in order to enhance the quality of data collection. These revised returns will be subsequently taken up for development and adoption.

Agenda for 2023-24

VI.109 The Department has identified the following goals for supervision of UCBs in 2023-24:

- Examining introduction of risk-based supervision approach for UCBs;

[15] As defined in the Reserve Banks's circular on 'Comprehensive Cyber Security Framework for UCBs - A Graded Approach' dated December 31, 2019.

- Exploring Prompt Corrective Action (PCA) Framework for UCBs; and
- Expanding the scope/coverage of IT examination for Level III and IV UCBs.

Non-Banking Financial Companies (NBFCs)

VI.110 The Department continued to closely monitor the NBFCs (excluding HFCs) and ARCs registered with the Reserve Bank.

Agenda for 2022-23

VI.111 The Department had set the following goals for supervision of NBFCs in 2022-23:

- Review the supervisory framework and the returns' formats for NBFCs under Indian Accounting Standards (Ind-AS) based on the regulatory guidance in the matter (*Utkarsh*) [Paragraph VI.112];
- Make changes in sectoral assessment in the context of recently released scale-based regulatory framework for NBFCs (Paragraph VI.113);
- Roll out KRIs for select NBFCs to assess their cyber security risk profile (Paragraph VI.114); and
- Roll out of IT examination for select NBFCs (Paragraph VI.114).

Implementation Status

Rationalisation of NBFC Returns

VI.112 During the year, a Working Group comprising of officials from the Reserve Bank, select large NBFCs and audit firms reviewed and designed new returns' formats as per the supervisory framework for NBFCs in alignment with the Indian Accounting Standards (Ind-AS) [an Indian version of International Financial Reporting Standards (IFRS)]. These returns will be taken up for implementation.

Sectoral Assessment of NBFCs

VI.113 During the year, the Reserve Bank, for the purpose of sectoral assessment of NBFCs in the context of recently released scale-based regulatory framework for NBFCs, classified 16 NBFCs in the upper layer. The model design was also modified to cover all NBFCs in various layers, *viz.,* top, upper, middle and base layer.

Cyber Security and IT Examination of NBFCs

VI.114 In order to assess the inherent risks and put in place an effective off-site monitoring mechanism, KRIs were rolled out for select NBFCs. These NBFCs have started submitting KRI data and a scoring model is being formulated based on the same. IT examination for select NBFCs will be initiated in 2023-24.

Other Initiatives

Action Against Non-compliant NBFCs

VI.115 During the year, based on targeted scrutiny of arrangements entered into by certain NBFCs with Digital Lending Partners (DLPs), various issues such as non-adherence to outsourcing guidelines (including those pertaining to recovery agents), fair practices code and KYC norms were examined. Further, certain dormant NBFCs were also identified which were vulnerable to misuse by miscreants. Appropriate supervisory actions, including cancellation of certificate of registration (CoR) of a few NBFCs, were taken based on the supervisory examinations.

Improvement in Usage of Analytical Tools to Detect Vulnerabilities Early

VI.116 During the year, stress testing model of NBFCs was augmented to cover multiple balance sheet and profit & loss statement parameters/ ratios, the forward projections and CRAR levels under baseline, medium and severe scenarios for estimating slippages. Input and output of sample forecasts of the model were back-tested leading to improvement in model efficacy.

Fraud Reporting and Sensitisation of NBFCs

VI.117 The online fraud reporting system for NBFCs has commenced from July 1, 2022. As part of online reporting system, a separate quarterly return (FMR 4) has been introduced for reporting security incidences, *i.e.,* theft, burglary, dacoity and robbery. Further, workshops have been conducted for select NBFCs to sensitise them on fraud prevention, prompt /accurate reporting and follow up action.

Various Analytical Studies

VI.118 During the year, various analytical studies were conducted by the Department to study the compliance by NBFCs to the Reserve Bank's guidelines. Furthermore, an analysis was done to compare the Expected Credit Loss (ECL) required under Ind-AS with provisions under Income Recognition, Asset Classification and Provisioning pertaining to advances (IRACP).

Agenda for 2023-24

VI.119 The Department has identified the following goals for supervision of NBFCs in 2023-24:

- Examination of licensing requirements for NBFCs and initiating supervisory action against non-compliant NBFCs; and
- Impact assessment of recent modification in asset classification norms for NBFCs.

Supervisory Measures for all Supervised Entities (SEs)

VI.120 A unified Department of Supervision (DoS) has been operationalised in which the supervision of banks, UCBs and NBFCs is being undertaken in a holistic manner under one umbrella Department. This will improve handling of issues arising from regulatory/supervisory arbitrage, interconnectedness and information asymmetry.

Agenda for 2022-23

VI.121 The Department had set the following supervisory goals for 2022-23:

- Implementation of risk-based approach (RBA) for KYC/anti-money laundering (AML) supervision of select UCBs and NBFCs (Paragraph VI.122);
- Issuance of guidelines on compliance function and appointment of Chief Compliance Officers (CCOs) in NBFCs and UCBs (Paragraph VI.123);
- Unified fraud reporting system for all supervised entities (SEs) [Paragraph VI.124];
- Undertaking cyber security enhancement measures (Paragraph VI.125);
- Further strengthening of audit mechanisms in SEs (Paragraph VI.126-VI.127); and
- Scaling-up of operations of College of Supervisors (CoS) for capacity development and skill enhancement of supervisory staff (Paragraph VI.128).

Implementation Status

KYC-AML Supervision of UCBs and NBFCs

VI.122 The risk-based approach (RBA) for KYC/AML supervision of select UCBs and select NBFCs has been developed and implemented. A brief on the RBA for KYC-AML supervision of SEs is covered in Box VI.4.

Box VI.4
Focused Supervision of KYC/AML Risks in Supervised Entities

In order to give a specialised supervisory focus to KYC/AML risks in the SEs and to assess the varying degrees of KYC/AML risks, a risk-based approach (RBA) to KYC/AML supervision of SCBs was designed and implemented in the supervisory cycle 2020-21. The RBA, *inter alia,* involved designing KYC/AML specific supervisory data templates, an analytical model consisting of various risk indicators/drivers which would aid in appropriate risk profiling of the banks and provide useful insights about the emerging KYC/AML risks. With a view to enhance the scope of RBA for KYC/AML supervision, the same has also been extended to select UCBs and select NBFCs which, going forward, is expected to provide specialised inputs in their supervisory assessment.

The RBA, which is presently in its third-year of implementation, has helped to identify the banks which are exposed to higher KYC/AML risks on account of their business models, customer base, volume and value of transactions and such banks have been subjected to focused on-site assessments for identification of the gaps in the controls and processes in KYC/AML area. The RBA for KYC/AML supervision has aided in sensitising the SEs on their KYC/AML risks in a more focused manner and to put in place appropriate mitigation / control measures in addressing such risks.

Source: RBI.

Compliance Function and Chief Compliance Officers (CCOs) in UCBs and NBFCs

VI.123 The Reserve Bank has taken several steps to strengthen the compliance function in SEs. In this direction, it had issued certain principles, standards and procedures for compliance function and appointment of CCOs in UCBs and NBFCs separately. These guidelines prescribe, *inter alia,* roles and responsibilities of the Board and senior management in compliance function, as well as the broad contours of a robust compliance framework. While in case of UCBs, these guidelines would be applicable to tier-3 and tier-4 UCBs, in case of NBFCs these would be applicable to NBFCs in the Upper and Middle Layer (NBFC-UL and NBFC-ML).

Unified Fraud Reporting (UFR)

VI.124 The Unified Fraud Reporting system for all SEs is being implemented as part of the augmented reporting system under the Centralised Information Management System (CIMS) project. Unified returns for SCBs, UCBs and NBFCs have been developed, and are currently under adoption.

Cyber Security Measures

VI.125 During the year, the Reserve Bank continued to take various measures for enhancement of cyber security of all SEs along with the regular assessment through onsite and off-site supervisory mechanism. A cyber reconnaissance exercise was undertaken to gather information about vulnerabilities of select SEs. Two draft Master Directions on outsourcing of IT services and, IT governance, risk, controls and assurance practices were also published for public comments during the year.

Strengthening Audit Mechanisms

VI.126 A mechanism of structured meetings of senior supervisory managers (SSMs) with statutory auditors (SAs) of select UCBs and NBFCs was introduced by the Reserve Bank to improve the effectiveness of communication between supervisors and auditors, in line with international best practices. A similar mechanism is already in place for SSMs and SAs of commercial banks since 2019.

VI.127 The Reserve bank has revised the business coverage norms under statutory branch audit process of PSBs and has prescribed a minimum of 70 per cent of funded and non-funded credit exposures to be covered for 2022-23, while giving discretion to determine business coverage for 2023-24 onwards as per their Board approved policy after considering bank-specific aspects relating to business and financial risks. To ensure that adequate safeguards are in place, under this arrangement, the Reserve Bank has, amongst other suitable measures, augmented the role of Board of Directors and its Audit Committee in PSBs with respect to matters related to Statutory Branch Audit.

Capacity Development - College of Supervisors (CoS)

VI.128 The operations of CoS have been scaled up considerably including collaborations with international organisations, namely, the International Monetary Fund (IMF), World Bank, Bank for International Settlements (BIS), Federal Reserve Board (FRB), Bank of England (BoE), European Central Bank (ECB), Southeast Asian Central Banks (SEACEN) and Toronto Centre. Since its inception, the cumulative number of participants to whom CoS has so far imparted learning inputs works out to 4,012 as on March 31, 2023, which included (a) officials of the Reserve Bank in the Departments of Supervision, Regulation, Financial Stability and Enforcement; (b) officials of relevant Departments from seven other Jurisdictions; (c) supervisors of National Bank for Agriculture and Rural Development (NABARD), National Housing Bank (NHB), International Financial Services Centres Authority (IFSCA) and Insurance Regulatory and Development Authority of India (IRDAI). To sensitise the personnel in the SEs on the need of managing their own resilience in line with supervisory expectations, chief risk officers (CRO), chief information security officers (CISO), chief compliance officers (CCO) and heads of internal audit (HIA) of SCBs, NBFCs and UCBs were also included in the cohort of learners. Chief executive officers (CEO) of the top 100 NBFCs were also sensitised on the Reserve Bank's regulatory and supervisory expectations in view of changing dynamics.

Other Initiatives

Advanced Analytics Using Artificial Intelligence (AI) and Machine Learning (ML)

VI.129 In order to further enhance supervisory inputs, an Advanced Supervisory Analytics Group (ASAG) has been set up. ASAG has identified use cases such as social media analytics, KYC compliances and governance effectiveness that are being developed using machine learning models. The Department is in the process of creating effective SupTech tools using artificial intelligence (AI) and machine learning (ML) for enhancing supervisory effectiveness.

Reserve Bank's Advanced Supervisory Monitoring System (DAKSH)

VI.130 A new SupTech initiative called *DAKSH* was launched by the Reserve Bank on October 6, 2022. It is a web-based end-to-end workflow application through which the Reserve Bank shall monitor compliance requirements in a more focused manner with an objective to further improve the compliance culture among the SEs. The application will also enable seamless communication, inspection planning and execution, cyber incident reporting and analysis, and provision of various management information system (MIS) reports, through a platform which enables anytime-anywhere secure access (Box VI.5).

Box VI.5

***DAKSH* - Reserve Bank's Advanced Supervisory Monitoring System**

The Department of Supervision (DoS) has implemented *DAKSH* - Reserve Bank's advanced supervisory monitoring system, a SupTech initiative that provides end-to-end workflow solution to streamline and strengthen its various supervisory processes. The application provides secured, anytime-anywhere role-based access to the users (Reserve Bank and supervised entities). *DAKSH* is envisioned to be the single interface for all the supervisory functions of the Department as it brings DoS and the SEs on a common platform and facilitates seamless communication on various supervisory aspects.

The supervisory processes of the Department covered in *DAKSH* include inspection planning and execution, scoping and resource allocation, report finalisation and availability of inspection reports to the entities. The supervisory information/repository created by the application will result in building up institutional knowledge base along with serving as a single source of information for supervisory functions.

Source : RBI.

Inter-regulatory Cooperation with Domestic Financial Regulators

VI.131 The Reserve Bank is coordinating with other domestic financial regulators for ensuring financial system resilience. Towards this goal, the domestic regulators deliberated upon the system wide issues in financial sector during the tenth and eleventh meetings of the Inter-Regulatory Forum (IRF). Further, regulated entity specific issues were discussed during the IRF meetings with bank - led financial conglomerates (FC).

Targeted Assessments

VI.132 The Reserve Bank's supervisory emphasis has been on system-wide risk monitoring and mitigation while keeping a tab on entity-specific issues. In this context, the Reserve Bank has instituted a system of targeted thematic assessments aimed at examining root cause of system-wide concerns as well as understanding the idiosyncratic risk build-up in some of the SEs across the system. These studies have helped in initiating corrective actions besides improvements in systems and processes.

Strengthening Off-site Supervision

VI.133 The Reserve Bank attaches a lot of importance to off-site monitoring and surveillance to ensure that any threat to financial stability is identified early and acted upon promptly. To ensure that the supervisory intensity and effectiveness of the Reserve Bank remains contemporaneous with the fast-changing financial systems, efforts are being made to make off-site surveillance systems sharper, more comprehensive and in tune with the international best practices. During the year, a study was conducted comparing the international best practices in off-site monitoring with the prevailing systems in the Reserve Bank (Box VI.6).

Agenda for 2023-24

VI.134 The Department has identified the following goals for supervision of all SEs in 2023-24:

- A comprehensive review of supervisory processes, including that for rating models, based on internal and external inputs (*Utkarsh* 2.0);
- Calibrated harmonisation of the supervisory approach across segments / SEs (especially for NBFCs and UCBs in line with SCBs) by phased introduction of process audit and compliance testing (*Utkarsh* 2.0);

Box VI.6
International Best Practices in Off-site Monitoring

An assessment of international best practices in supervisory off-site monitoring and surveillance system adopted by major National Supervisory Authorities (NSAs)[16] *vis-à-vis* the prevailing system in the Reserve Bank was carried out by the Department. The assessment broadly covered organisational set-up, framework/ methodologies, tools/ technologies, and supervisory capacity building. Some of the key points are stated below:

Organisational Set-up

NSAs generally do not follow a static set-up and keep reviewing and re-organising their off-site monitoring practices to be in tune with the organisational set-up and to effectively face complex challenges posed by the rapidly evolving financial system. The organisational set-up has been augmented with new divisions/units to monitor risks in a more focused and comprehensive manner. Few examples of organisational set-up of NSAs are:

- ECB has set up a Risk Analysis Division (RAD) for off-site monitoring and supervision of Financial Institutions (FIs) across the Euro area.
- Financial Conduct Authority, the United Kingdom (UK) has established a centre of excellence for data and advanced analytics to explore usage of AI / ML in its day-to-day supervisory activities.
- The Monetary Authority of Singapore (MAS) has set up two off-site divisions within the inspection and supervisory methodologies department, for efficient and effective supervision.

Framework/Methodologies

NSAs are using integrated framework for supervisory risk assessments through a flexible mix of off-site monitoring and on-site supervision as illustrated under:

- The Australian Prudential Regulation Authority (APRA) uses an integrated supervision risk and intensity model for risk assessment of entities through a judicious mix of off-site and on-site supervision.
- The supervisory methodologies, tools and analytics division of MAS develops supervisory methodologies and analytical tools.
- The Federal Reserve Bank uses supervision, regulation and statistical assessment of bank risk model for off-site monitoring of banks.

Tools and Technologies

As most of the off-site supervisory processes are data-intensive, repetitive or highly manual, the choice of tools and technologies for off-site monitoring assumes significance. Some of the key emerging technologies used by supervisors in development of SupTech strategies are cloud technology, AI, ML, natural language processing (NLP), distributed ledger technology and application programming interfaces. Few instances of key initiatives undertaken by NSAs using emerging technologies for effective supervision are:

- The ECB has developed an early warning system using ML that helps to identify FIs in financial distress.
- The SupTech office of MAS, in partnership with their FinTech and innovation group, conducts analysis on supervisory and financial sector data and enhances data analytics capabilities to make regulatory compliance more efficient.

Conclusion

The cross-jurisdictional study reveals that there is a greater focus on off-site analytics and surveillance framework for early identification of incipient risks and initiating prompt remedial measures in coordination with on-site supervisors. Besides, emphasis is given on capacity building and skill upgradation of supervisors on a continuous basis. The Reserve Bank is undertaking most of the activities which are carried out by major national supervisors. The new activities and projects in progress or proposed shall also help to further augment the scope and capacity of off-site supervision, monitoring and surveillance. These include advanced supervisory monitoring system (*DAKSH*); use of advanced analytics, artificial intelligence and machine learning for generating supervisory inputs; automating data reporting and setting up monitoring tools for data management (CIMS) and supervisory intelligence framework-based capabilities from alternative data sources such as the social media and online news.

Source: RBI.

[16] Australian Prudential Regulation Authority (APRA), Australia; Bank Negara, Malaysia; De Nederlandsche Bank, Netherlands; European Central Bank (ECB); Bank of England and Financial Conduct Authority (FCA), UK; Monetary Authority of Singapore (MAS) and Federal Reserve Bank, USA.

- Streamlining and strengthening the onsite assessment of SEs related to KYC-AML and Cyber / IT risks (*Utkarsh* 2.0);
- Implementing various analytics and SupTech initiatives for strengthening of supervision; and
- Strengthening of cyber security across SEs including setting-up of cyber range for conducting cyber drill, examining feasibility of implementation of Cyber Sectoral Security Operations Centre (S-SOC) and conducting phishing simulation exercises for SEs.

Enforcement Department (EFD)

VI.135 The Enforcement Department was set up in April 2017 with a view to separate enforcement action from supervisory process and to put in place a structured, rule-based approach to identify and process violations by the regulated entities (REs) of the applicable statutes and the rules, regulations, guidelines and orders made, directions issued, and conditions imposed thereunder by the Reserve Bank, and enforce the same consistently across the Reserve Bank. The objective of enforcement is to ensure compliance by the REs with laws, within the overarching principle of ensuring financial stability and safeguarding public interest and consumer protection.

Agenda for 2022-23

VI.136 The Department had set the following goals for 2022-23:

- Towards facilitating improvement in compliance culture by REs, a system of preparing a report on enforcement actions at half yearly intervals for dissemination of additional information amongst REs shall be put in place (Paragraph VI.137);
- Seminars focused on sensitisation of compliance officers of REs shall also be organised (Paragraph VI.138);
- The Department will provide inputs for compliance testing of REs to the Department of Supervision (DoS), National Housing Bank (NHB) and National Bank for Agriculture and Rural Development (NABARD) for frequently observed contraventions identified using the business process application so as to improve the compliance culture in REs (Paragraph VI.139); and
- The Department will examine the feasibility of a scale-based approach to enforcement (Paragraph VI.140).

Implementation Status

VI.137 A system of preparation of report on enforcement actions at half yearly intervals has been put in place. The first such report has been shared with DoS for dissemination of information amongst the REs.

VI.138 Seminars focused on compliance and enforcement were organised for the chief compliance officers (CCOs) of commercial banks as well as chief executive officers (CEOs) of cooperative banks during the year.

VI.139 Based on the experience gained and the responses received from the REs during the process of examination of the inspection/ scrutiny reports and other references received in the Department, contraventions observed and suspected to have wider prevalence were identified and shared with DoS and NABARD for compliance testing.

VI.140 Feasibility of scale-based approach to enforcement is under a holistic examination.

Other Initiative

VI.141 During 2022-23, the Department undertook enforcement action against 205 REs (211 penalties) and imposed aggregate penalty of ₹40.39 crore for contraventions/non-compliance[17] with provisions of statutes and certain directions issued by the Reserve Bank from time to time (Table VI.5).

Agenda for 2023-24

VI.142 During 2023-24, the Department proposes to achieve the following goal:

- The Department would endeavour to implement a scale-based approach to enforcement.

Table VI.5 Enforcement Actions (April 2022- March 2023)

Regulated Entity	Number of Penalties	Total Penalty (₹ crore)
1	2	3
Public Sector Banks	7	3.65
Private Sector Banks	7	12.17
Cooperative Banks	176	14.04
Foreign Banks	5	4.65
Payments Banks	-	-
Small Finance Banks	2	0.97
Regional Rural Banks	1	0.42
NBFCs	11	4.39
HFCs	2	0.10
Total	**211**	**40.39**

-: Nil
Source: RBI.

5. CONSUMER EDUCATION AND PROTECTION

Consumer Education and Protection Department (CEPD)

VI.143 The Consumer Education and Protection Department (CEPD) frames policy guidelines for protection of the interests of customers of the Reserve Bank Regulated Entities (REs); monitors the functioning of internal grievance redress mechanism of REs; undertakes oversight on the performance of the ombudsman offices as well as implements 'the Reserve Bank-Integrated Ombudsman Scheme, 2021' (RB-IOS); and creates public awareness on safe banking practices, extant regulations on customer service and protection, as also on the avenues for redress of customer complaints.

Agenda for 2022-23

VI.144 The Department had proposed the following goals for 2022-23:

- Enhanced nation-wide awareness drive for protecting customers from financial frauds (Paragraph VI.145);
- Harnessing advanced technological tools for strengthening customer protection and improving expediency of grievance redressal by the Reserve Bank (Paragraph VI.146);
- Upgrade and expand the Reserve Bank Contact Centre at Chandigarh to include disaster recovery and business continuity solutions (Paragraph VI.147);

[17] Illustratively, some of them include contravention of Section 26A of BR Act, 1949; Cyber Security Framework in Banks; Exposure Norms and IRAC Norms; Reserve Bank of India [Know Your Customer (KYC)] Directions, 2016; Reserve Bank of India (Frauds classification and reporting by commercial banks and select FIs) directions 2016; Reporting information on CRILC; Submission of credit information to Credit Information Companies (CICs); Customer Protection-Limiting Liability of Customers in Unauthorised Electronic Banking Transactions; Director related loans; Monitoring of end use of funds; and the Housing Finance Companies (NHB) Directions, 2010.

- Set up a committee for review of the customer service standards and practices in REs and the Reserve Bank guidelines in the matter (Paragraph VI.148);
- Construction and dissemination of a Consumer Protection Assessment Matrix [Paragraph VI.149]; and
- Review of the framework for 'Strengthening of Grievance Redress Mechanism in Banks' (Paragraph VI.150).

Implementation Status

Enhanced Nationwide Awareness Drive for Protecting Customers from Financial Frauds

VI.145 In addition to the on-going initiatives for greater financial literacy, education and awareness among the customers, CEPD launched a pan-India consumer financial awareness programme for covering all regions and segments of the population, especially those in rural and semi-urban areas. All 22 Reserve Bank Ombudsmen addressed multimedia channels in regional/ local languages in addition to Hindi and English to spread the messages on customer rights, consumer protection, grievance redress mechanism and prevention of financial frauds, to the last mile. A media interaction covering various facilities of the Reserve Bank under its Alternate Grievance Redress (AGR) mechanism, *viz*., RB-IOS, 2021, Centralised Receipt and Processing Centre (CRPC), Contact Centre, the roles and responsibilities of the customers as well as the safeguards against digital/ electronic fraud was held. This was followed by a month-long Nationwide Intensive Awareness Programme (NIAP) campaign in collaboration with REs from November 1 to 30, 2022, during which awareness messages were broadcast through print, multimedia channels, RBI website, 'RBI-says', Interactive Voice Response System (IVRS) and 'RBI *Kehta Hai', etc.,* in addition to various physical interactions/ interface programmes with the common public (Box VI.7).

Harnessing Advanced Technological Tools for Strengthening Customer Protection and Improving Expediency of Grievance Redressal by the Reserve Bank

VI.146 In order to leverage Artificial Intelligence (AI) in Complaint Management System (CMS) for better complaint categorisation, for decision-making support and better customer experience, a detailed business requirement document was prepared and presented before the Technical Advisory Group (TAG) for their review. The technical submissions of the vendor on the TAG action points are currently being reviewed by Reserve Bank Information Technology Private Limited (ReBIT). Post the same, the proposal would be put up again before TAG for their guidance and go-ahead.

Broad-base and Upgrade the Reserve Bank Contact Centre at Chandigarh to include Disaster Recovery and Business Continuity Solutions

VI.147 The Contact Centre (CC) [toll-free number – 14448] timings for interaction with executives in Hindi and English was extended from 9:30 A.M. to 5:15 P.M. (7 hours and 45 minutes) to 8.00 A.M. to 10.00 P.M. (14 hours) on all weekdays except national holidays. Information on IVRS is available on 24×7×365 basis. Callers to the Contact Centre can obtain information on AGR as also the status of their complaints lodged on the CMS. Two additional languages, Assamese and Punjabi, have been added to eight regional languages, *viz*., Bengali, Gujarati, Kannada, Malayalam, Marathi, Odia, Tamil and Telugu, available at the time of its launch on November 12, 2021. The project for development of the state-of-the-art CC at three locations namely Bhubaneswar, Chandigarh and Kochi with Business Continuity (BC) and Disaster

Box VI.7
Nationwide Intensive Awareness Programme

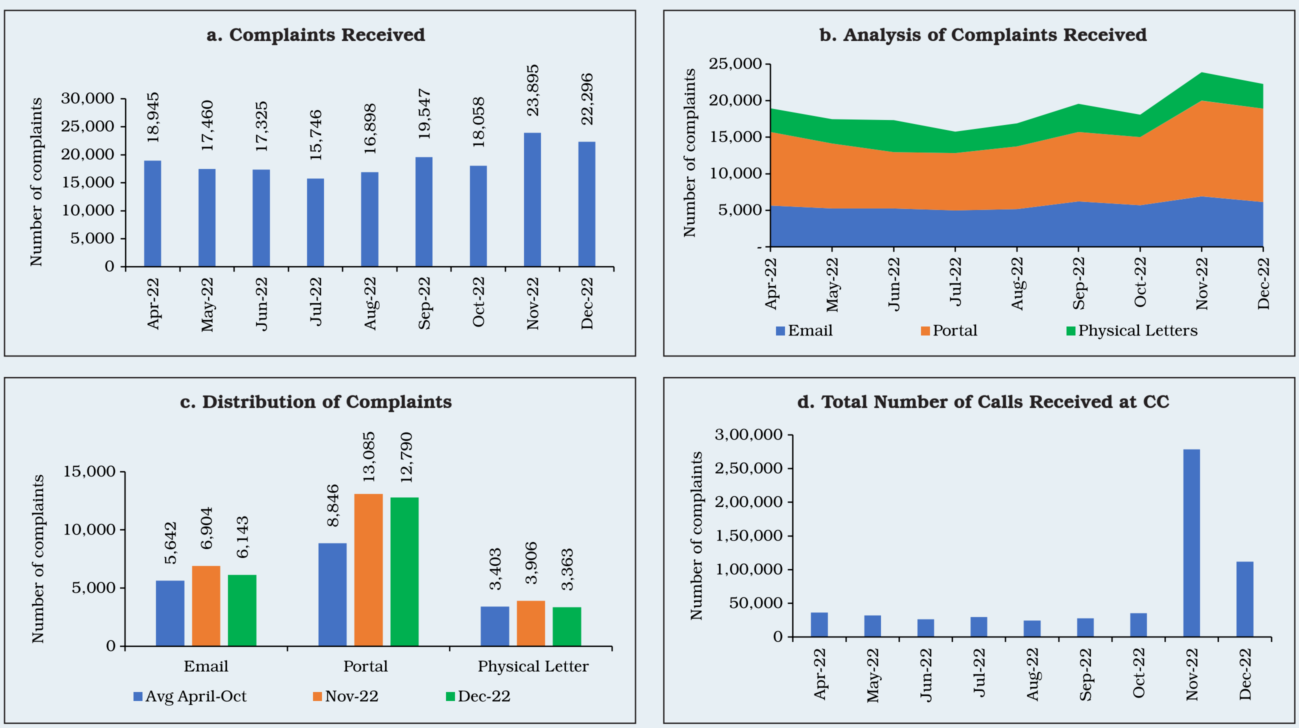
A Nationwide Intensive Awareness Programme (NIAP) was launched on November 1, 2022 and spread over the month of November, with an objective to increase the awareness among the public on their rights, Alternate Grievance Redress (AGR)/Internal Grievance Redress (IGR) mechanisms and overall financial awareness, leveraging the reach of the Reserve Bank REs. The focus of the programme was on creating awareness in the hitherto unreached and isolated segments of the population, especially in the Tier-III to VI cities and other unreached areas. Majority of the campaigns were carried out in regional / local languages using channels with local outreach.

Several innovative strategies along with regular public awareness campaigns were deployed to reach out to the public, a few among them were folk arts such as *nukkad nataks*, puppet shows, skits, magic shows, street plays; sports competitions; flash mobs, rallies, half-marathons, formation of human chains, crosswords and focused events for senior citizens, differently abled, construction workers, small shopkeepers and visually challenged.

During the NIAP campaign, around 1.63 lakh programmes were carried out, of which around 1.28 lakh programmes were carried out in physical mode. Approximately three crore persons participated physically in these programmes and the online channel reached out to around 25 crore people. Special drives were conducted for vulnerable sections of the population and around 16,000 differently abled and over 82,000 senior citizens participated in these activities. Focused drives were organised for around 22,000 recovery agents on fair practices and extant guidelines on loan recovery, *etc*.

In terms of impact, due to the awareness created by these programmes a substantial rise in the number of complaints received under the RB-IOS as well as a surge in the number of calls to the Contact Centre of the Reserve Bank, Chandigarh has been observed (Chart 1).

Chart 1: Impact of NIAP



Source: RBI.

NIAP and other awareness programmes have also increased the recall value of RB-IOS and enthused REs to strive for excellence in consumer protection.

Source: RBI.

Recovery (DR) capabilities is underway. The connectivity and network requirements for the CC would be provided by Indian Financial Technology and Allied Services (IFTAS). The CC would be staffed as per a hybrid model where the CC operations are handled by an outsourced agency while the overall supervision is handled by the Reserve Bank officials.

Committee for Review of the Customer Service Standards and Practices in REs and the Reserve Bank Guidelines in the matter

VI.148 A committee for 'Review of Customer Service Standards in Reserve Bank Regulated Entities' (Chairman: Shri B. P. Kanungo, former Deputy Governor, RBI) was constituted to review the status of customer service quality in REs as well as adequacy of customer service regulations and suggest measures to improve the overall customer protection framework. The committee has since submitted the report to the Reserve Bank and its recommendations are being examined for implementation.

Construction of a Consumer Protection Assessment Matrix (CPAM)

VI.149 A Consumer Protection Assessment Matrix is being developed by CEPD with an objective of putting in place a structured mechanism for assessing the performance of REs in areas of customer service, grievance redress and for creation of financial awareness among their customers.

Review of the Framework for 'Strengthening of Grievance Redress Mechanism in Banks'

VI.150 The framework for strengthening of internal grievance redress in banks put in place on January 27, 2021 has been reviewed, based on feedback received from REs as well as the experience in implementing the framework for the year ended March 2021 and March 2022. Based on the outcomes, further enhancement to the mechanism are being examined.

Major Developments

Inclusion of Credit Information Companies (CICs) under the RB-IOS, 2021 and Extension of the Internal Ombudsman (IO) Mechanism to CICs

VI.151 Credit Information Companies (CICs) were brought under RB-IOS with effect from September 1, 2022 to provide an avenue for cost free and expeditious Alternate Grievance Redress (AGR) to customers of REs covered under the RB-IOS, 2021 for grievances against CICs.

VI.152 The Internal Ombudsman (IO) mechanism was previously made applicable to (i) banks in 2018; (ii) non-bank payment system participants in 2019; and (iii) deposit-taking NBFCs (NBFCs-D) with 10 or more branches and non-deposit taking NBFCs (NBFCs-ND) with asset size of ₹5,000 crore and above, having public customer interface, in November 2021. To strengthen and improve the efficiency of the internal grievance redressal mechanism of CICs, the IO mechanism has now been extended to them as well. All CICs holding a Certificate of Registration (CoR) under sub-section (2) of Section 5 of the Credit Information Companies (Regulation) Act, 2005, have been directed to comply with the Reserve Bank (Credit Information Companies - Internal Ombudsman) Directions, 2022 by April 1, 2023. The direction, *inter alia*, covers the appointment/tenure, role and responsibilities, procedural guidelines, and oversight mechanism for the IO.

Satisfaction Survey on RB-IOS, CRPC and Contact Centre

VI.153 The Department conducted a satisfaction survey in the month of April-May 2022 for the customers who had approached the RBIO for redressal of their grievances regarding unsatisfactory disposal of their complaints by their financial service providers who are the REs of the Reserve Bank, including the level of satisfaction with the CRPC and the Contact Centre at Chandigarh. Nearly 60 per cent of respondents were satisfied with overall resolution provided by the Reserve Bank Ombudsmen and 58.7 per cent of respondents mentioned that the waiting time/ attempts to reach a Contact Centre executive was reasonable. As per the survey findings, 60.1 per cent of respondents were satisfied with the overall process under RB-IOS, including registration, handling of complaint and resolution time.

Agenda for 2023-24

VI.154 The Department proposes the following agenda under *Utkarsh* 2.0 for 2023-24:

- Review, consolidation and updation of the extant Reserve Bank regulatory guidelines on customer service;
- Digitalisation of data compiled through incognito visits for enhanced data utility and analysis;
- Establish Reserve Bank Contact Centre at two additional locations for local languages, including Disaster Recovery and Business Continuity Plan facility; and
- Review and integration of the internal ombudsman schemes, applicable to different RE types.

Deposit Insurance and Credit Guarantee Corporation (DICGC)

VI.155 Deposit insurance system plays an important role in maintaining the stability of the financial system, particularly assuring the small depositors of protection of their deposits, and thereby preserving public confidence in their financial system. DICGC is wholly-owned by the Reserve Bank and is constituted under the DICGC Act, 1961. The deposit insurance extended by DICGC covers all commercial banks including local area banks (LABs), payments banks (PBs), small finance banks (SFBs), regional rural banks (RRBs) and co-operative banks, that are licensed by the Reserve Bank. The number of registered insured banks as on March 31, 2023 stood at 2,027, comprising 140 commercial banks (including 43 RRBs, two LABs, six PBs and 12 SFBs) and 1,887 co-operative banks [33 state cooperative banks, 352 district central cooperative banks and 1,502 urban cooperative banks (UCBs)].

VI.156 With the current limit of deposit insurance in India at ₹5 lakh per depositor of a bank 'in the same capacity and in the same right', the number of fully protected accounts (294.5 crore) as on March 31, 2023 constituted 98.1 per cent of the total number of accounts (300.1 crore). In terms of amount, the total insured deposits of ₹83,89,470 crore as on March 31, 2023, constituted 46.3 per cent of assessable deposits of ₹1,81,14,550 crore. At the current level, insurance cover would be 2.91 times of per capita income in 2022-23.

VI.157 DICGC builds up its Deposit Insurance Fund (DIF) through transfer of its surplus, *i.e.*, excess of income (mainly comprising premium 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.

VI.158 During 2022-23, the Corporation has sanctioned supplementary claims of 11 liquidated banks aggregating ₹105.8 crore under Section 16 (1) of the DICGC Act, 1961. Besides, during 2022-23, the Corporation has also settled claims in respect of 28 banks under 'All Inclusive Directions (AIDs)' of the Reserve Bank aggregating ₹646.8 crore. The size of the DIF stood at ₹1,69,263 crore (Provisional) as on March 31, 2023, yielding a reserve ratio (DIF/insured deposit) of 2.02 per cent.

VI.159 During 2021-22, the DICGC Act, 1961 was amended which facilitated disbursal of depositors' insured money for the banks placed under AID. In terms of Section 18 (A) of the DICGC act 1961, the DICGC is now empowered to disburse to willing depositors of such banks a sum of up to ₹5 lakh each within a period of 90 days. An insured bank is required to submit its claim within 45 days of imposition of AID after which the DICGC is required to get the claims verified within 30 days and pay the depositors within the next 15 days. There is no provision in the DICGC Act to extend the timelines fixed by the statute either for the insured bank or the DICGC. However, there have been instances of non-submission of depositors claim list by some UCBs within the statutory timeline of 45 days, thereby constraining the DICGC from making pay-outs to eligible depositors of such banks. The Corporation has undertaken initiatives to strengthen the public awareness through the constitution of a Technical Advisory Committee (TAC) to guide the Corporation in its public outreach activities. The strategy and the channels of communication to create public awareness, including social media, are the focus of the communication policy.

VI.160 The efficacy of deposit insurance system in a jurisdiction can be gauged by assessing its compliance with International Association of Deposit Insurers' (IADIs') core principles for effective deposit insurance systems (Box VI.8).

Box VI.8
DICGC's Compliance with IADI Core Principles for Effective Deposit Insurance System

The International Association of Deposit Insurers (IADI) and the Basel Committee on Banking Supervision (BCBS) issued the core principles for effective deposit insurance systems (DIS) in June 2009. A compliance assessment methodology for the core principles (CPs) was completed in December 2010. The CPs and their compliance assessment methodology are used by jurisdictions as a benchmark for assessing the quality of their DISs and for identifying gaps in their deposit insurance practices and measures to address them. The CPs are also used by the International Monetary Fund (IMF) and the World Bank, in the context of the financial sector assessment programme (FSAP) to assess the effectiveness of jurisdictions' DISs and practices. The CPs were revised in November 2014 (16 CPs), keeping in view the developments in the aftermath of the global financial crisis in 2008-09.

The primary objective of an assessment should be to evaluate compliance with the CPs, after considering the structural, legal and institutional features of each jurisdiction's deposit insurance system(s). The assessment process should help the deposit insurer and policymakers benchmark their deposit insurance system against the CPs to judge how well the system is meeting its public policy objectives. The assessment, in turn, can also aid the deposit insurer and policymakers in making improvements to the deposit insurance system and financial safety net, as necessary. As per the CPs, the assessments follow a five-grade scale[18].

(Contd.)

[18] Compliant: when the essential criteria are met without any significant deficiencies. Largely compliant: when only minor shortcomings are observed, and the authorities are able to achieve full compliance within a prescribed time frame. Materially non-compliant: when there are severe shortcomings that cannot be rectified easily. Non-compliant: no substantive implementation of the CP. Not applicable: not considered given the structural, legal and institutional features of the deposit insurance system.

The Corporation has recently done a self-assessment of the DICGC's compliance with IADI CPs primarily based on the DICGC Act and the present mandate. As per the self-assessment, the Corporation is either fully compliant (five CPs) or largely compliant (five CPs) in more than half of the CPs. Of the remaining six CPs, it is materially non-compliant (two CPs), while four CPs are not applicable.[19] As per IADI, the mandate of deposit insurers can be classified into four categories based on the overall functions.[20]

The Corporation largely comes under the category of 'pay-box plus' whereby the Corporation, in addition to making payout to depositors of liquidated banks and banks placed under AID by Reserve Bank (with restriction on withdrawal of deposits), provides financial assistance in the case of merger of a weak bank with a strong bank after the approval of the merger scheme by the competent authority.

References:

1. DICGC Act, 1961 (As amended up to August 2021).
2. IADI (2014), 'Core Principles for Effective Deposit Insurance Systems', November.
3. IADI (2016), 'A Handbook for the Assessment of Compliance with the Core Principles for Effective Deposit Insurance Systems', March.

6. CONCLUSION

VI.161 In 2022-23, several regulatory and supervisory measures were undertaken to safeguard the financial system from multiple global headwinds as also to further strengthen the financial sector along with an emphasis on consumer education and protection. The results of a survey on climate risk and sustainable finance that was undertaken in January 2022 were released during the year. The objective of the survey was to assess the approach, level of preparedness and progress made by leading SCBs in managing climate-related financial risks. Accordingly, a discussion paper on climate risk and sustainable finance was also released during the year, inviting comments from regulated entities (REs) and other stakeholders. Going forward, many more new initiatives in the regulatory and supervisory space have been contemplated for implementation during 2023-24, including those under the Reserve Bank's medium-term strategy framework for the period January 2023 to December 2025 (*Utkarsh* 2.0). Concerted efforts would also be made towards further improving customer services in the financial sector through fine-tuning of the existing grievance redressal mechanisms based on stakeholders' feedback, while expanding the coverage and reach of FinTech that would make the delivery of financial services faster, safer and at a reasonable cost.

[19] CP4: Relationship with other Safety-Net Participants; and CP6: DI's role in Contingency Planning and Crisis Management are materially non-compliant. CP5: Cross-Border Issues; CP12: Dealing with Parties at Fault in a Bank Failure; CP13: Early Detection and Timely Intervention; and CP 14: Failure Resolution are Not Applicable

[20] The mandates can be broadly classified into four categories: (i) "Pay box", where the deposit insurer is only responsible for the reimbursement of insured deposits; (ii) "Pay box plus", where the deposit insurer has additional responsibilities, such as certain resolution functions (*e.g.,* financial support); (iii) "Loss minimiser", where the insurer actively engages in a selection from a range of least-cost resolution strategies; and (iv) "Risk minimiser", where the 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

The Reserve Bank managed the market borrowing requirements of the central and state governments during 2022-23 in a non-disruptive manner, despite the initial market concerns surrounding the size of the borrowing programmes and headwinds from an uncertain global environment triggered by the war in Ukraine and synchronised monetary policy tightening by the major central banks. The weighted average yield of market borrowing for the central government hardened by 104 basis points (bps) during the year, as against a cumulative increase in the policy repo rate by 250 bps, amid a shift in the stance of monetary policy to withdrawal of accommodation. The maturity profile of outstanding dated securities was elongated to contain rollover risk. Sovereign Green Bonds were issued for the first time by the central government, proceeds of which would be used in public sector projects which help in reducing the emission intensity of the economy.

VII.1 The Internal Debt Management Department (IDMD) of the Reserve Bank is entrusted with the responsibility of managing the domestic debt of the central government by statute *vide* Sections 20 and 21 of the RBI Act, 1934, and of 28 state governments and two Union Territories (UTs) in accordance with respective bilateral agreements as provided in Section 21A of the said Act. In terms of Section 17(5) of the RBI Act, 1934, short-term credit up to three months is provided to both central and state governments in the form of Ways and Means Advances (WMA) to bridge temporary mismatches in their cash flows.

VII.2 In 2022-23, the fiscal deficit of the central government was budgeted lower than the previous year but it remained above the pre-pandemic levels. The size of the borrowing requirement accordingly remained high in an environment characterised by global inflation and aggressive tightening of monetary policy by the major central banks, that amplified spillover effects on the domestic financial markets. As the inflation outlook on India deteriorated following the war in Ukraine and high global food and commodity prices, the Reserve Bank raised the policy repo rate cumulatively by 250 bps and shifted the policy stance to withdrawal of accommodation.

VII.3 Notwithstanding the impact of tightening global and domestic financial conditions on the Indian G-sec market, the Reserve Bank ensured completion of the market borrowing programme for both central and state governments in a non-disruptive manner, keeping in mind the three broad objectives of cost optimisation, risk mitigation and market development. The Reserve Bank continuously reviewed and adapted its debt management strategy in view of pressure on yields from global spillovers, the elevated domestic inflation and gradual withdrawal of excess liquidity. The weighted average yield of market borrowing for central government hardened by 104 bps during the year. The maturity profile of outstanding dated securities was elongated to contain the rollover risk. Pursuant to the government's announcement in the Union Budget 2022-23, the Reserve Bank in consultation with the central government issued Sovereign Green Bonds (SGrBs) for an amount aggregating to ₹16,000 crore during 2022-23.

VII.4 The remainder of the chapter is arranged under three sections. Section 2 presents the implementation status in respect of the agenda for 2022-23 along with major developments during the year in the areas of debt management for both central and state governments. Section 3 covers major initiatives to be undertaken in 2023-24, followed by a summary in the last section.

2. Agenda for 2022-23

VII.5 The Department had set out the following goals for 2022-23:

- Consolidation of debt through calendar driven, auction-based switches and buyback operations along with re-issuance of securities to augment liquidity in G-sec market and facilitate fresh issuances (Paragraph VII.6 - VII.9);
- The consolidated operational guidelines for primary dealers (PDs) issued in 2005 are updated from time to time. The guidelines relating to basic eligibility criteria, *viz.*, net owned funds (NOF) requirement and targets, however, remain largely unchanged. It was proposed to undertake a comprehensive review of the extant operational guidelines for PDs (Paragraph VII.10);
- Taking appropriate measures for further popularisation of the 'RBI Retail Direct Scheme' for improving its overall reach for suitable retail investors across the country (*Utkarsh*) [Paragraph VII.11];
- The Hon'ble Finance Minister in her budget speech on February 1, 2022 had announced that the government will issue SGrBs in the domestic market as a part of its overall market borrowing programme for the next financial year and the proceeds will be deployed in public-sector green projects. Accordingly, the Reserve Bank, as its debt manager, is providing necessary support to the Government of India (GoI) for formulation of the framework for issuance of SGrBs in line with the international standards. The issuance of SGrBs was envisaged to be taken up during the year after completing the preparatory work (Paragraph VII.12);
- Review of medium-term debt management strategy (MTDS) for management of public debt of the government with an objective to mobilise market borrowings at low cost over the medium to long-term, with prudent levels of risk and a stable debt structure, while also developing a liquid and well-functioning domestic debt market (Paragraph VII.13);
- Around one-third of general government debt pertains to sub-national governments. However, a document outlining the strategy of debt management for efficient and effective management at sub-national government was lacking. Therefore, a pilot MTDS for a few states was proposed to be drafted reflecting the state governments' plan for financing their activities, while taking due cognisance of the constraints and potential risks (*Utkarsh*) [Paragraph VII.14]; and
- Conduct capacity building programmes for sensitising the state governments about prudent practices in cash and debt management (Paragraph VII.15).

Implementation Status

VII.6 The Reserve Bank successfully completed the combined gross market borrowings of the central and the state governments to the tune of ₹21,79,392 crore during the year, which was 19.2 per cent higher than the previous year.

VII.7 The Reserve Bank continued with its policy of passive consolidation by way of reissuances and active consolidation through buyback/switches. During 2022-23, 161 out of 177 issuances of G-sec were re-issuances (91 per cent) as compared with 142 re-issuances out of 154 issuances (92.2 per cent) in the previous year.

VII.8 The active form of debt consolidation through switching of government securities maturing in the near-term with the long-dated government securities is generally conducted once in a month. Accordingly, switches amounting to ₹1,05,489 crore, were completed during 2022-23 as against the budgeted amount of ₹ 1,00,000 crore.

VII.9 During 2022-23, securities ranging from 2 to 40 years tenor (original maturity) were issued with the objective of catering to the demand from various investors in different maturity buckets. Floating Rate Bonds (FRBs) of 7-year and 13-year tenors (original maturity) were also re-issued during the year. The share of FRBs in total issuances during 2022-23 was 2.5 per cent as compared to 7.8 per cent in the previous year.

VII.10 The Master Directions - Operational Guidelines for Primary Dealers were published on July 1, 2016. The Reserve Bank is in the process of comprehensively reviewing the guidelines.

VII.11 During the year, several public awareness campaigns, and investor awareness programmes were undertaken across the country to improve the overall reach of the 'RBI Retail Direct Scheme'. Further, the user interface features of the 'Retail Direct Portal' have been enhanced to make the portal more user friendly. These initiatives have resulted in significant growth in the number of accounts opened as well as the total investments made under the scheme during the year.

VII.12 Issuance of SGrBs of ₹16,000 crore was notified in the half-yearly issuance calendar for marketable dated securities for H2:2022-23. Subsequently, the GoI notified the framework for SGrBs on November 9, 2022. The framework was rated as 'Medium Green' with a 'Good' Governance' score by CICERO[1], the second party opinion provider. The auction for issuance of SGrBs was held in two tranches of ₹ 8,000 crore each during January - February 2023 (Box VII.1).

VII.13 Inputs on the Medium-Term Debt Management Strategy (MTDS) for the GoI were provided to the Public Debt Management Cell, GoI. The MTDS has been articulated for the medium-term for a period of three years (*i.e.,* 2022-23 to 2024-25), which is generally reviewed annually with a roll-over period of next three years.

VII.14 Two states, *viz.*, Maharashtra and Telangana agreed for preparation of pilot MTDS. A presentation on the objectives/rationale and structure of MTDS for states was made in the 32nd Conference of the State Finance Secretaries held in July 2022. The importance and the benefits of MTDS for the states were also covered during the capacity building programmes (CBPs) on cash and debt management conducted for the states during the year. In consultation with the respective state governments, the pilot MTDS are being prepared.

VII.15 State-wise CBPs for sensitising state governments about prudent cash and debt management were conducted for eight states,

[1] Centre for International Climate Research (CICERO), Norway is an interdisciplinary climate research institute established in 1990. CICERO is a world-leading institute which delivers high-quality research that helps society to respond to the climate challenge and strengthen international climate cooperation.

Box VII.1
India's Sovereign Green Bonds

Thematic bonds are fixed-income securities issued in capital markets to raise financing for projects and activities related to a specific theme, such as climate change, education, housing, ocean and marine conservation, and the sustainable development goals (World Bank, 2022). Green bonds are a kind of thematic bonds, the other categories being social bonds, sustainability bonds and sustainability linked bonds.

In case of green bonds, the proceeds are exclusively used to finance or re-finance new and/or existing projects that are expected to have a positive impact on the environment and/or climate. While the green bond issuance is supported by several internationally recognised standards/principles, International Capital Markets Association's (ICMA's) green bond principles (GBP) are widely accepted as voluntary process guidelines, which recommend transparency and disclosure and promote integrity in the development of the green bond market.

The first green bond was issued by the World Bank in 2008. The global market for sustainable finance has registered a considerable growth since 2014 mainly led by issuances of green bonds. As per the data published (Climate Bonds Initiative, November, 2022), cumulative green bond issuances as on September 30, 2022 have surpassed US$ 2.0 trillion, which includes sovereign green bonds (SGrBs) issued by 26 sovereigns aggregating to US$ 230.9 billion. European nations are the major issuers of SGrBs with 5-year and 10-year tenors being the preferred tenors of issuance.

At COP26 Summit[2] in November 2021, India announced to achieve net zero emission by 2070. India's revised nationally determined contributions (NDCs) include targets to achieve 50 per cent of the energy requirements from renewable energy by 2030 and reduction of the carbon intensity of the economy by 45 per cent by 2030 over 2005 levels. A significantly higher amount of resources will be required by the Government of India to achieve the NDC targets. In the Union Budget 2022-23, the Government of India announced that SGrBs would be issued in the domestic market during 2022-23 as part of the overall market borrowing programme. The proceeds will be deployed in public sector projects, which will help in reducing the carbon intensity of the economy.

The Government of India, in consultation with the Reserve Bank, finalised the sovereign green bond framework on the lines of ICMA's GBP and notified the same on November 9, 2022. The framework was subject to an external review by CICERO. It rated India's green bond framework as 'medium green' with 'good' governance. The framework lists nine broad categories of eligible green projects to fulfil various environmental objectives such as reducing greenhouse gas emissions, encouraging energy efficiency, promoting climate adaptations and improving natural ecosystems. The government has constituted a 'Green Finance Working Committee' for evaluation and selection of various eligible green projects and other relevant work related to the framework. The framework provides for publication of an annual report regarding allocation of proceeds and its environmental impact. The allocation and utilisation of proceeds from issuance of green bonds would also be subject to audit.

The total issuance of SGrBs during 2022-23 was kept at ₹16,000 crore, with the issuance spread over two tranches of ₹8,000 crore each on January 25, 2023 and February 9, 2023, comprising 5-year and 10-year SGrBs for ₹4,000 crore in each tranche. The auctions of both tranches of SGrB registered robust demand from the market participants with average bid-to-cover ratio of 3.04 for the 5-yr SGrB and 3.93 for the 10-yr SGrB. The average cut-off yields for the 5-year and 10-year SGrBs were 4.26 bps and 3.53 bps, respectively, below the prevailing secondary market yields of the conventional government securities of the respective tenors.

References:

1. World Bank (2022), 'Sovereign Green, Social and Sustainability Bonds: Unlocking the Potential for Emerging Markets and Developing Economies', *World Bank*, October 2022.
2. Harrison, C., MacGeoch, M. (2022), 'Sustainable Debt Market Summary', *Climate Bond Initiative*, November 2022.

viz., Andhra Pradesh, Haryana, Punjab, Himachal Pradesh, Jharkhand, Karnataka, Tamil Nadu, Telangana and for the UT of Puducherry. Further, a two-day CBP on cash and debt management

[2] The 2021 United Nations Climate Change Conference, more commonly referred to as COP26, was the 26th United Nations Climate Change Conference, held at the Scottish Event Campus (SEC) in Glasgow, Scotland, United Kingdom, during October 31-November 13, 2021.

was conducted in the Reserve Bank's College of Agricultural Banking (CAB), Pune in December 2022 for 14 state governments and the UT of Jammu and Kashmir.

Major Developments

Debt Management of the Central Government

VII.16 During 2022-23, the gross market borrowings of GoI through dated G-secs were higher by 26.04 per cent as compared with the previous year. Net market borrowings through dated G-secs increased by 28.4 per cent as compared with the previous year. Net market borrowings through dated G-secs financed 63.1 per cent of the central government's gross fiscal deficit (GFD) [Revised Estimates] as against 54.5 per cent of GFD (Actuals) in the previous year. The net market borrowings through dated securities and T-Bills taken together increased by 26.4 per cent as compared with the previous year (Table VII.1).

Table VII.1: Net Market Borrowings of the Central Government

(₹ crore)

Item	2019-20	2020-21	2021-22	2022-23
1	2	3	4	5
Net Market Borrowings (i to iv)	5,11,500	13,75,654	9,29,351	11,74,375
i) Dated Securities@	4,73,972	11,43,114	8,63,103	11,08,261
ii) 91-day T-Bills	-9,600	10,713	45,439	-23,798
iii) 182-day T-Bills	38,354	-18,743	71,252	52,426
iv) 364-day T-Bills	8,774	2,40,570	-50,444	37,487

@: Without adjusting for buyback/switches. After adjusting for buyback/switches, net market borrowings during 2022-23 stood at ₹11,71,951 crore, ₹9,29,060 crore in 2021-22, ₹11,46,739 crore in 2020-21 and ₹4,73,990 crore in 2019-20.
Source: RBI.

Debt Management Operations

VII.17 The weighted average yield (WAY) of G-sec issuances during the year increased by 104 bps as compared to the previous year. The weighted average coupon on the entire outstanding debt stock also increased by 15 bps. The weighted average maturity (WAM) of primary issuances (excluding issuances under switch auction) stood at 16.05 years as compared to 16.99 years in the previous year. The WAM of the outstanding debt increased from 11.71 years to 11.94 years (Table VII.2).

Table VII.2: Market Loans of Central Government - A Profile*

(Yield in Per cent/Maturity in Years)

Years	Range of Cut Off Yield in Primary Issues			Issued during the Year^			Outstanding Stock#	
	Under 5 Years	5-10 Years	Over 10 Years	Weighted Average Yield	Range of Maturities @	Weighted Average Maturity	Weighted Average Maturity	Weighted Average Coupon
1	2	3	4	5	6	7	8	9
2016-17	6.85-7.46	6.13-7.61	6.46-7.87	7.15	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	7.77	1-37	14.73	10.40	7.81
2019-20	5.56-7.38	6.18-7.44	5.96-7.77	6.85	1-40	16.15	10.72	7.71
2020-21	3.79-5.87	5.15-6.53	4.46-7.19	5.79	1-40	14.49	11.31	7.27
2021-22	4.07-5.10	4.04-6.78	4.44-7.44	6.28	1-40	16.99	11.71	7.11
2022-23	5.43-7.45	5.21-7.52	5.65-7.90	7.32	1-40	16.05	11.94	7.26

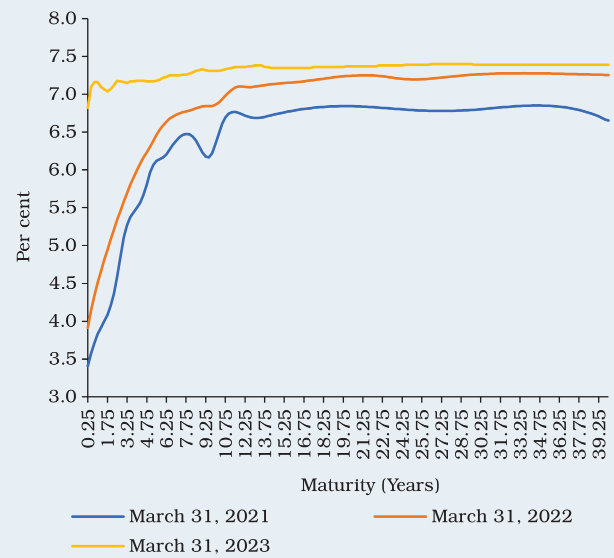
@: Residual maturity of issuance and figures are rounded off.
*: Excluding special securities. ^: Excluding switch auction. #: Including switch auction.
Source: RBI.

VII.18 Partial devolvement on PDs took place on eight instances amounting to ₹23,053 crore during 2022-23 as compared with seventeen instances for ₹97,938 crore in 2021-22. No bid was accepted on four instances for a total notified amount of ₹16,000 crore as compared to nine instances for a total notified amount of ₹99,000 crore in the previous year.

VII.19 G-sec yields hardened during the year primarily in response to the increase in domestic inflation following surge in global food and commodity prices and the successive policy rate hikes, as also spillovers from monetary policy tightening by major central banks. The 10-year benchmark yield rose by 47 bps from 6.84 per cent as at end-March 2022 to 7.31 per cent as at end-March, 2023. Yields rose sharply in Q1:2022-23 driven by the off-cycle rate hike of 40 bps and CRR hike of 50 bps by the Reserve Bank in May 2022 and rate hike of 50 bps in June along with the change in monetary policy stance to withdrawal of accommodation. Higher CPI inflation prints for April and May also weighed on the yields. The 10-year benchmark yield hardened by 61 bps in Q1 to close at 7.45 per cent as on June 30, 2022. In Q2, the yields generally declined during July and August, tracking sharp fall in the US yields and crude prices due to rising growth concerns in the advanced economies, and also on expectation of inclusion of Indian G-secs in global bond indices. The yields, however, reversed the trend and rose in September, tracking the US Fed's rate hike of 75 bps and its hawkish guidance which led to spike in the US treasury yields. The 10-year benchmark yield declined marginally by 5 bps during Q2 to close at 7.40 per cent. In Q3, the yields rose initially, tracking higher than expected domestic CPI inflation for September. The yields, however, declined sharply in November as the US yields softened significantly following the release of lower-than-expected US CPI print and decline in crude prices amid concerns about global demand slowdown. Yields hardened during December as the US Fed raised its terminal interest rate projection for 2023. The 10-year benchmark yield softened by 7 bps in Q3 to close at 7.33 per cent. In Q4, the yields declined initially after the Union Budget announcement of lower than expected government market borrowing for 2023-24. The yields hardened following the Monetary Policy Committee's decision to increase the policy repo rate by 25 bps and continue with the stance of withdrawal of accommodation. The yields declined in March, tracking fall in US treasury yields. The 10-year benchmark yield declined marginally by 2 bps in Q4 to close at 7.31 per cent as on March 31, 2023. (Chart VII.1).

VII.20 During 2022-23, about 48.9 per cent of the market borrowings was raised through issuance of dated securities with a residual maturity of 10 years and above as compared with 58.2 per cent in the previous year. Further,

Chart VII.1: FBIL Semi Annualised Par Yield Curve



Source: FBIL.

Table VII.3: Issuance of Government of India Dated Securities – Maturity Pattern

(Amount in ₹ crore)

Residual Maturity	2020-21		2021-22		2022-23	
	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	3,91,990	28.6	2,29,255	20.3	2,70,000	19.0
5 - 9.99 Years	3,07,405	22.4	2,41,865	21.5	4,56,000	32.1
10-14.99 Years	3,76,766	27.5	3,20,639	28.4	2,86,000	20.1
15 -19.99 Years	-	-	-	-	-	-
20 Years & Above	2,94,162	21.5	3,35,621	29.8	4,09,000	28.8
Total	**13,70,324**	**100.0**	**11,27,382**	**100.0**	**14,21,000**	**100.0**

- : Nil
Note: Figures in the columns might not add up to the total due to rounding off of numbers.
Source: RBI.

the 30-year and 40-year tenor securities were issued/re-issued during the year with the objective of catering to the demand from long-term investors such as insurance companies and provident funds (Table VII.3).

Treasury Bills

VII.21 Short-term cash requirements of the central government are met through issuance of Treasury Bills (T-Bills). The net short-term market borrowing of the government through T-Bills (91, 182 and 364 days) marginally decreased to ₹66,114 crore during 2022-23 as against ₹66,248 crore in the previous year.

Ownership of Securities

VII.22 Commercial banks remained the largest holders of government securities [including T-Bills and state government securities[3] (SGSs)] accounting for 37.5 per cent as at end-March 2023, followed by insurance companies (25.2 per cent), provident funds (9.8 per cent) and the Reserve Bank (9.2 per cent). The share of the foreign portfolio investors (FPIs) was 0.9 per cent. The other holders of government securities (including T-Bills and SGSs) include mutual funds, state governments, financial institutions (FIs) and corporates.

Primary Dealers (PDs)

VII.23 The number of PDs stood at 21 [14 Bank-PDs and 7 standalone PDs (SPDs)]. The PDs have the mandate to underwrite primary auctions of dated G-sec while they have a target of achieving bidding commitment and success ratio in respect of primary auctions of T-Bills/cash management bills (CMBs). The PDs individually achieved the stipulated minimum success ratio of 40 per cent in primary auctions of T-Bills. The share of PDs in auctions of T-Bills/CMBs was 68.98 per cent during 2022-23 as compared with 71.4 per cent in the previous year. The commission paid to PDs, excluding GST, for underwriting primary auctions of dated G-sec during 2022-23 was ₹91.08 crore, as compared to ₹412.7 crore during 2021-22.

[3] Refer to footnote 31 of Chapter II of this Report.

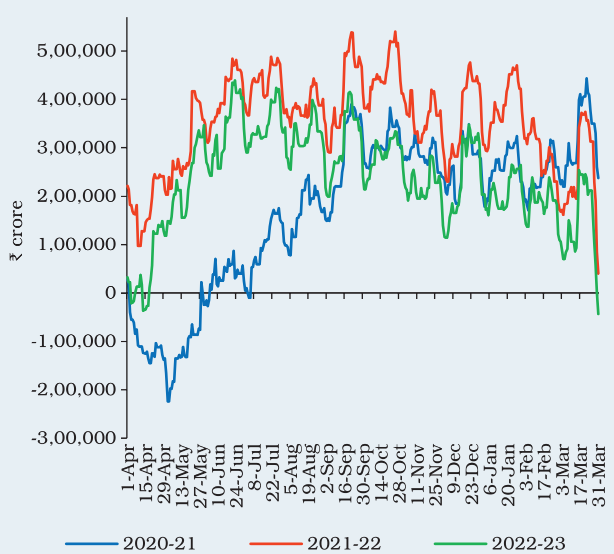
Sovereign Gold Bond (SGB) Scheme

VII.24 The Reserve Bank, in consultation with the GoI, had announced a calendar comprising four tranches of SGB for 2022-23. The aggregate sum raised during the financial year amounted to ₹6,551 crore (12.26 tonnes). Since inception of the SGB Scheme in November 2015, a total of ₹ 45,243 crore (102.63 tonnes) has been raised through 63 tranches.

Cash Management of the Central Government

VII.25 The central government started the year 2022-23 with a cash balance of ₹40,352 crore. In the beginning of the financial year, the WMA limit of the centre was fixed at ₹1,50,000 crore for the first half of 2022-23. Further, the WMA limit for the second half was set at ₹50,000 crore. The central government resorted to WMA/overdraft (OD) for 9 days during 2022-23 *vis-à-vis* nil WMA/OD in the previous year. During most part of the year, the cash balance of the central government remained comfortable with robust tax inflows (Chart VII.2).

Chart VII.2: GoI Cash Balance Position



Source: RBI.

Investments under Foreign Central Bank Scheme

VII.26 Under the Foreign Central Bank (FCB) scheme, the Reserve Bank invests in Indian G-secs on behalf of select FCBs and multilateral development institutions in the secondary G-sec market. Total volumes transacted on behalf of these institutions stood at ₹4,805 crore (face value) during 2022-23 as compared to ₹3,285 crore (face value) in the previous year.

Debt Management of State Governments

VII.27 Following the recommendations of the 14th Finance Commission to exclude states from the National Small Savings Fund (NSSF) financing facility (barring Delhi, Madhya Pradesh, Kerala and Arunachal Pradesh), market borrowings of states have been increasing over the last few years. The share of market borrowings in financing GFD of states rose to 78.1 per cent in 2022-23 (BE) from 68.1 per cent in 2021-22 (RE).

VII.28 The gross and net market borrowings of states were higher than the previous year. The gross market borrowings of states in 2022-23 stood at 76 per cent of the amount indicated in the quarterly indicative calendar for market borrowings by the state governments. There were 605 issuances in 2022-23, of which 45 were re-issuances (608 issuances in 2021-22, of which 60 were re-issuances) [Table VII.4].

VII.29 The weighted average cut-off yield (WAY) of SGSs issuances during 2022-23 was higher at 7.71 per cent than 6.98 per cent in the previous year. The weighted average spread (WAS) of SGSs issuances over comparable maturity central government securities was lower at 31 bps in 2022-23 as compared with 40.95 bps in the previous year. In 2022-23, twenty-one states and two UTs issued dated securities of tenors other than 10-year, ranging from 2 to 35 years. Seven

Table VII.4: Market Borrowings of States through SGSs

(Amount in ₹ crore)

Item	2019-20	2020-21	2021-22	2022-23
1	2	3	4	5
Maturities during the Year	1,47,067	1,47,039	2,09,143	2,39,562
Gross Sanctions under Article 293(3)	7,12,744	9,69,525	8,95,166	8,80,779
Gross Amount Raised during the Year	6,34,521	7,98,816	7,01,626	7,58,392
Net Amount Raised during the Year	4,87,454	6,51,777	4,92,483	5,18,830
Amount Raised during the Year to Total Sanctions (per cent)	89.0	82.4	78.4	86.1
Outstanding Liabilities (at the end of period)#	32,65,989	39,25,555	44,29,957	49,29,079

#: Including *Ujjwa*l DISCOM Assurance *Yojana* (UDAY) and other special securities.
Source: RBI.

states and one UT rejected all bids in one or more of the auctions. The average inter-state spread on securities of 10-year tenor (fresh issuances) was 3 bps in 2022-23 as compared with 4 bps in 2021-22.

VII.30 On a review of the existing WMA limits and keeping in view the gradual lifting of COVID-19 restrictions, it was decided to revise the WMA limits and timelines for Overdraft (OD) for state governments/UTs as recommended by the Advisory Committee on 'Ways and Means Advances to State Governments' (Chairman: Shri Sudhir Shrivastava), effective April 1, 2022. Accordingly, the WMA limit for state governments/ UTs was fixed at ₹47,010 crore. State governments/ UTs can avail overdraft on 14 consecutive days and can be in OD for a maximum number of 36 days in a quarter. During 2022-23, seventeen states/UTs availed Special Drawing Facility (SDF), twelve states/UTs resorted to WMA and eleven states/UTs availed OD.

VII.31 Over the years, states have been accumulating sizeable cash surplus in the form of intermediate treasury bills (ITBs). The outstanding investments of states in ITBs and auction treasury bills (ATBs) moderated during the year 2022-23 (Table VII.5).

Investments in Consolidated Sinking Fund (CSF) / Guarantee Redemption Fund (GRF)

VII.32 The Reserve Bank manages two reserve fund schemes on behalf of states - the consolidated sinking fund (CSF) and the guarantee redemption fund (GRF). So far, 24 states and one UT, *i.e.*, Puducherry have set up CSF. Currently, 19 states are members of the GRF. States can avail of funds through the SDF at a discounted rate from the Reserve Bank against their incremental annual investment in CSF and GRF. Outstanding investments by member states in the CSF and GRF as of March 31, 2023 were ₹1,84,029 crore and ₹10,839 crore, respectively, as against ₹1,54,255 crore and ₹9,399 crore as at end-March 2022.

Table VII.5: Investments in ITBs and ATBs by State Governments/UTs

(₹ crore)

Item	Outstanding as on March 31				
	2019	2020	2021	2022	2023
1	2	3	4	5	6
14-Day (ITBs)	1,22,084	1,54,757	2,05,230	2,16,272	2,12,758
ATBs	73,927	33,504	41,293	87,400	58,913
Total	**1,96,011**	**1,88,261**	**2,46,523**	**3,03,672**	**2,71,671**

Source: RBI.

VII.33 On a request received from the Government of Odisha, a Budget Stabilisation Fund has been established which would cater to the needs of the state in mitigating the risk of revenue shocks on the state budget. The fund aims at reducing the impact of volatile revenue on the state's economy.

3. Agenda for 2023-24

VII.34 In the Union Budget 2023-24, the gross market borrowing through dated securities for 2023-24 is budgeted at ₹15,43,000 crore as compared with ₹14,21,000 crore in 2022-23 (RE). Net market borrowing (including T-bills) is budgeted at ₹12,30,911 crore, financing 68.89 per cent of GFD in 2023-24.

VII.35 During the year 2023-24, the market borrowing programme is proposed to be conducted with the following strategic milestones so as to achieve the overall goals of debt management:

- Consolidation of debt through calendar driven, auction-based switch operations along with reissuance of securities to augment liquidity in the G-sec market and facilitate fresh issuances;
- Development of a mobile application for improving the ease of access for retail investors under the 'Retail Direct Scheme';
- Taking appropriate measures for enhancing retail investor awareness about the RBI 'Retail Direct Scheme';
- Implementation of Society for Worldwide Interbank Financial Telecommunications (SWIFT) module for putting through transactions of Foreign Central Banks (FCBs);
- Expansion of the coverage of government debt statistics in RBI's Data Warehouse System; and
- Conduct of capacity building programmes for sensitising the state governments about prudent practices in cash and debt management.

4. Conclusion

VII.36 Amidst persisting uncertain macroeconomic conditions on account of the global surge in inflation, synchronised tightening of monetary policy by the central banks, and lingering impact of the war in Ukraine on commodity prices, market borrowings of the central and state governments were conducted successfully during 2022-23. As the global uncertainties continue, the challenges for market borrowings are expected to persist notwithstanding the lower size of the budgeted fiscal deficit of the centre. The Reserve Bank would endeavour to ensure smooth completion of the government borrowing programme in line with the guiding principles of debt management while ensuring stable debt structure for the governments.

VIII CURRENCY MANAGEMENT

The focus of currency management during the year continued towards making available adequate quantity of clean banknotes in circulation. The Reserve Bank introduced the e₹ (digital Rupee) on a live-pilot basis, undertook a study for optimising currency management operations and conceptualised a pilot project on Quick Response (QR) code-based coin vending machine using the Unified Payments Interface (UPI).

VIII.1 During the year, the Reserve Bank ensured adequate supply of clean banknotes in the economy, while simultaneously sustaining the momentum of disposal of soiled banknotes. The Reserve Bank also launched the retail and wholesale versions of the e₹ (digital Rupee)[1] on a live-pilot basis, undertook a study to optimise currency management operations across the country besides conceptualising a pilot project on Quick Response (QR) code-based coin vending machine using the UPI to improve public accessibility of coins.

VIII.2 Against this backdrop, the rest of the chapter is organised into five sections. The next section covers the important developments in currency in circulation during the year. Section 3 covers the implementation status of the agenda for 2022-23 along with other major activities undertaken during the year, and section 4 presents the developments with regard to Bharatiya Reserve Bank Note Mudran Private Ltd. (BRBNMPL), a wholly-owned subsidiary of the Reserve Bank. Section 5 sets out the agenda for 2023-24, while concluding observations are presented in the last section.

2. Developments in Currency in Circulation

VIII.3 Currency in circulation (CiC) includes banknotes, coins and e₹. The e₹ was launched during the year on a live-pilot basis. Presently, the banknotes in circulation comprise denominations of ₹2, ₹5, ₹10, ₹20, ₹50, ₹100, ₹200, ₹500 and ₹2000. Coins in circulation comprise 50 paise and ₹1, ₹2, ₹5, ₹10 and ₹20 denominations.

VIII.4 In terms of Section 22A of the RBI Act, 1934, denominations as set out in Section 24 of the Act shall not apply to banknotes in digital form. Accordingly, the live-pilot of e₹-Retail has been launched in denominations of 50 paise, ₹1, ₹2, ₹5, ₹10, ₹20, ₹50, ₹100, ₹200, ₹500 and ₹2000, while e₹-Wholesale does not envisage any denomination.

Banknotes

VIII.5 The value and volume of banknotes in circulation increased by 7.8 per cent and 4.4 per cent, respectively, during 2022-23 as compared with 9.9 per cent and 5.0 per cent, respectively, during 2021-22 (Table VIII.1). In value terms, the share of ₹500 and ₹2000 banknotes together accounted for 87.9 per cent of the total value of banknotes in circulation as on March 31, 2023, as compared to 87.1 per cent as on March 31, 2022. In volume terms, ₹500 denomination constituted the highest share at 37.9 per cent, followed by ₹10 denomination banknotes which constituted 19.2 per cent of the total banknotes in circulation as on March 31, 2023.

1 Central Bank Digital Currency (CBDC).

Table VIII.1: Banknotes in Circulation (end-March)

Denomination (₹)	Volume (pieces in lakh)			Value (₹ crore)		
	2021	2022	2023	2021	2022	2023
1	2	3	4	5	6	7
2 and 5	1,11,728 (9.0)	1,11,261 (8.5)	1,10,843 (8.1)	4,307 (0.2)	4,284 (0.1)	4,263 (0.1)
10	2,93,681 (23.6)	2,78,046 (21.3)	2,62,123 (19.2)	29,368 (1.0)	27,805 (0.9)	26,212 (0.8)
20	90,579 (7.3)	1,10,129 (8.4)	1,25,802 (9.2)	18,116 (0.6)	22,026 (0.7)	25,160 (0.8)
50	87,524 (7.0)	87,141 (6.7)	85,716 (6.3)	43,762 (1.5)	43,571 (1.4)	42,858 (1.3)
100	1,90,555 (15.3)	1,81,420 (13.9)	1,80,584 (13.3)	1,90,555 (6.7)	1,81,421 (5.8)	1,80,584 (5.4)
200	58,304 (4.7)	60,441 (4.6)	62,620 (4.6)	1,16,608 (4.1)	1,20,881 (3.9)	1,25,241 (3.7)
500	3,86,790 (31.1)	4,55,468 (34.9)	5,16,338 (37.9)	19,33,951 (68.4)	22,77,340 (73.3)	25,81,690 (77.1)
2000	24,510 (2.0)	21,420 (1.6)	18,111 (1.3)	4,90,195 (17.3)	4,28,394 (13.8)	3,62,220 (10.8)
Total	**12,43,671**	**13,05,326**	**13,62,137**	**28,26,863**	**31,05,721**	**33,48,228**

Note: 1. Figures in parentheses represent the percentage share in total volume/value.
2. Figures may not add up due to rounding-off of the numbers.
Source: RBI.

Coins

VIII.6 The total value of coins in circulation increased by 8.1 per cent in 2022-23, while the total volume increased by 2.6 per cent. As on March 31, 2023, coins of ₹1, ₹2 and ₹5 together constituted 83.1 per cent of the total volume of coins in circulation, while in value terms, these denominations accounted for 72.3 per cent (Table VIII.2).

Table VIII.2: Coins in Circulation (end-March)

Denomination (₹)	Volume (pieces in lakh)			Value (₹ crore)		
	2021	2022	2023	2021	2022	2023
1	2	3	4	5	6	7
Small coins	1,47,880 (12.0)	1,47,880 (11.9)	1,47,880 (11.6)	700 (2.6)	700 (2.5)	700 (2.3)
1	5,12,597 (41.7)	5,15,879 (41.4)	5,21,618 (40.8)	5,126 (19.1)	5,159 (18.4)	5,216 (17.2)
2	3,37,863 (27.5)	3,40,792 (27.3)	3,47,277 (27.1)	6,757 (25.1)	6,816 (24.4)	6,946 (23.0)
5	1,79,360 (14.6)	1,84,331 (14.8)	1,94,155 (15.2)	8,968 (33.4)	9,217 (33.0)	9,708 (32.1)
10	51,391 (4.2)	54,044 (4.3)	59,764 (4.7)	5,139 (19.1)	5,404 (19.3)	5,976 (19.8)
20	896 (0.1)	3,372 (0.3)	8,483 (0.7)	179 (0.7)	674 (2.4)	1,697 (5.6)
Total	**12,29,988**	**12,46,298**	**12,79,178**	**26,870**	**27,970**	**30,242**

Note: 1. Figures in parentheses represent the percentage share in total volume/value.
2. Figures may not add up due to rounding-off of the numbers.
Source: RBI.

e₹ (digital Rupee) in Circulation

VIII.7 The value of e₹-Wholesale (e₹-W) and e₹-Retail (e₹-R) in circulation stood at ₹10.69 crore and ₹5.70 crore, respectively, as on March 31, 2023 (Table VIII.3).

Currency Management Infrastructure

VIII.8 The functions relating to the issuance of currency (both banknotes and coins) and their management are performed by the Reserve Bank through its 19 issue offices, 2,838 currency chests and 2,293 small coin depots spread across the country. As on March 31, 2023, the State Bank of India accounted for the highest share (53.14 per cent) of currency chests (Table VIII.4).

Table VIII.3: e₹ in Circulation (end-March)

e₹	Denomination (₹)	Volume (pieces in lakh)	Value (₹ crore)
		2023	2023
1	2	3	4
e₹-Retail	0.5	2.7 (16.1)	0.01 (0.2)
	1	3.8 (22.2)	0.04 (0.7)
	2	2.8 (16.2)	0.06 (1.0)
	5	2.4 (13.9)	0.12 (2.1)
	10	1.5 (8.8)	0.15 (2.6)
	20	1.2 (6.8)	0.23 (4.1)
	50	0.8 (4.6)	0.39 (6.9)
	100	0.8 (4.8)	0.83 (14.5)
	200	0.6 (3.4)	1.16 (20.4)
	500	0.5 (3.2)	2.71 (47.5)
	2000	-	-
Total e₹-Retail		17.1	5.70
Total e₹-Wholesale		...	10.69
Total e₹		**...**	**16.39**

- : Nil. ... : Not Applicable.
Note: 1. Figures in parentheses represent the percentage share in total volume/value.
2. Figures may not add up due to rounding-off of the numbers.
Source: RBI.

Table VIII.4: Currency Chests and Small Coin Depots

Category	Number of Currency Chests	Number of Small Coin Depots
1	2	3
State Bank of India	1,508	1,273
Nationalised Banks	1,095	827
Private Sector Banks	220	179
Cooperative Banks	5	5
Foreign Banks	4	3
Regional Rural Banks	5	5
Reserve Bank of India	1	1
Total	**2,838**	**2,293**

Source: RBI.

Indent and Supply of Currency

VIII.9 Both indent and supply of banknotes for 2022-23 were marginally higher by 1.6 per cent than that of a year ago (Table VIII.5).

Table VIII.5: Indent and Supply of Banknotes by BRBNMPL and SPMCIL (April to March)

(Pieces in lakh)

Denomination (₹)	2020-21		2021-22		2022-23	
	Indent	Supply	Indent	Supply	Indent	Supply
1	2	3	4	5	6	7
5	-	-	-	-	-	-
10	2,840	2,846	7,500	7,510	6,000	6,000
20	48,750	38,520	20,000	20,000	20,000	19,999
50	14,000	13,887	15,000	15,000	20,000	20,000
100	40,000	37,270	40,000	40,002	60,000	60,000
200	15,000	15,106	12,000	11,991	20,000	20,000
500	1,06,000	1,15,672	1,28,000	1,28,003	1,00,000	1,00,004
2000	-	-	-	-	-	-
Total	**2,26,590**	**2,23,301**	**2,22,500**	**2,22,505**	**2,26,000**	**2,26,002**

- : Nil.
BRBNMPL: Bharatiya Reserve Bank Note Mudran Private Limited.
SPMCIL: Security Printing and Minting Corporation of India Limited.
Note: Figures may not add up due to rounding-off of the numbers.
Source: RBI.

Table VIII.6: Indent and Supply of Coins by Mints (April to March)

(Pieces in lakh)

Denomination (₹)	2020-21		2021-22		2022-23	
	Indent	Supply	Indent	Supply	Indent	Supply
1	2	3	4	5	6	7
1	1,000	1,000	-	-	1,000	1,000
2	9,500	6,718	2,000	2,000	3,000	3,000
5	11,000	10,995	2,000	2,000	3,000	3,000
10	5,500	5,852	2,000	2,000	1,000	1,002
20	3,000	5,061	2,000	2,000	2,000	2,000
Total	**30,000**	**29,626**	**8,000**	**8,000**	**10,000**	**10,002**

-: Nil.
Source: RBI.

VIII.10 During 2022-23, the indent and supply for coins was higher by 25 per cent as compared with the previous year (Table VIII.6).

Disposal of Soiled Banknotes

VIII.11 The disposal of soiled banknotes increased by 22.1 per cent to 2,292.64 crore pieces during 2022-23 from 1,878.01 crore pieces in the previous year (Table VIII.7).

Table VIII.7: Disposal of Soiled Banknotes (April to March)

(Pieces in lakh)

Denomination (₹)	2020-21	2021-22	2022-23
1	2	3	4
2000	4,548	3,847	4,824
1000	-	-	-
500	5,909	22,082	51,092
200	1,186	6,167	13,062
100	42,433	59,203	58,282
50	12,738	27,696	34,219
20	10,325	20,771	21,393
10	21,999	46,778	45,077
Up to 5	564	1,257	1,315
Total	**99,702**	**1,87,801**	**2,29,264**

- : Not Applicable.
Note: Figures may not add up due to rounding-off of the numbers.
Source: RBI.

Counterfeit Notes

VIII.12 During 2022-23, out of the total Fake Indian Currency Notes (FICNs) detected in the banking sector, 4.6 per cent were detected at the Reserve Bank and 95.4 per cent at other banks (Table VIII.8).

VIII.13 Compared to the previous year, there was an increase of 8.4 per cent and 14.4 per cent in the counterfeit notes detected in the denominations of ₹20 and ₹500 (new design), respectively. The counterfeit notes detected in the denominations of ₹10, ₹100 and ₹2000 declined by 11.6 per cent,

Table VIII.8: Number of Counterfeit Notes Detected (April to March)

(Number of pieces)

Year	Detection at the Reserve Bank	Detection at Other Banks	Total
1	2	3	4
2020-21	8,107	2,00,518	2,08,625
	(3.9)	(96.1)	(100.0)
2021-22	15,878	2,15,093	2,30,971
	(6.9)	(93.1)	(100.0)
2022-23	10,465	2,15,304	2,25,769
	(4.6)	(95.4)	(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.9: Denomination-wise Counterfeit Notes Detected in the Banking System (April to March)

(Number of pieces)

Denomination (₹)	2020-21	2021-22	2022-23
1	2	3	4
2 and 5	9	1	3
10	304	354	313
20	267	311	337
50	24,802	17,696	17,755
100	1,10,736	92,237	78,699
200	24,245	27,074	27,258
500 (Specified Banknotes)	9	14	6
500	39,453	79,669	91,110
1000 (Specified Banknotes)	2	11	482
2000	8,798	13,604	9,806
Total	**2,08,625**	**2,30,971**	**2,25,769**

Source: RBI.

14.7 per cent and 27.9 per cent, respectively (Table VIII.9).

Expenditure on Security Printing

VIII.14 The total expenditure incurred on security printing during 2022-23 was ₹4,682.80 crore as against ₹4,984.80 crore in the previous year.

3. Agenda for 2022-23

VIII.15 The Department had set the following goals for 2022-23:

- Procurement of new Shredding and Briquetting Systems (SBS) [*Utkarsh*] (Paragraph VIII.16);
- Establishment of a state-of-the-art facility for conducting cutting edge research to test the robustness of security features of banknotes and introduction of new security features (*Utkarsh*) [Paragraph VIII.17];
- Study on automation and logistics in currency management (Paragraph VIII.18);
- Mobile Aided Note Identifier (MANI) App for the visually impaired persons – introduction of 11 regional languages in the App in addition to Hindi and English already available (Paragraph VIII.19); and
- Survey on the usage of cash, coins and digital mode for payments (Paragraph VIII.20).

Implementation Status

Procurement of New Shredding and Briquetting Systems (SBS)

VIII.16 A global expression of interest (EOI) was issued for procuring state-of-the-art shredding and briquetting machines for disposal of notes found unfit for circulation. The process of procurement is being taken forward with the issuance of request for proposal (RFP) to the eligible EOI applicants.

Establishment of a State-of-the-art Facility for Conducting Cutting Edge Research to Test the Robustness of Security Features of Banknotes and Introduction of New Security Features

VIII.17 Under the first phase of the currency research centre, progress has been made towards operationalisation of an adversarial analysis[2] laboratory at the Mysuru campus of Bharatiya Reserve Bank Note Mudran Private Ltd. (BRBNMPL).

Study on Automation and Logistics in Currency Management

VIII.18 The Department commissioned a study on automation and logistics in currency management through IIT Bombay. The scope of the study was

[2] Adversarial analysis is conducted to assess counterfeiting risks through in-house simulation of banknote features by trained experts/ technicians using commercially available materials and equipment.

to understand and devise the currency network design, examine the possibility of mechanisation and automation of the processes, and improve scheduling and inventory management. The report has been received and is under examination.

Mobile Aided Note Identifier (MANI) – Introduction of Multi-lingual Audio Notification and Option to Use MANI App by 'Partially-Sighted' Persons

VIII.19 Two new features were introduced in MANI App during the year. It can now identify banknote denominations through audio notification in 11 new languages (Assamese, Bengali, Gujarati, Kannada, Malayalam, Marathi, Odia, Punjabi, Tamil, Telugu and Urdu), in addition to Hindi and English that were available earlier. The App has also been enabled for use by 'partially-sighted' persons.

Survey on the Usage of Coins, Banknotes and Digital Mode for Payments

VIII.20 A country-wide survey was taken up in collaboration with Department of Payment and Settlement Systems (DPSS) to assess the demand for coins and banknotes, factors influencing the demand, reasons for lack of demand (if so) for coins and banknotes, extent and preference for usage of banknotes, coins and digital modes of payments, shortage/surfeit of banknotes and coins (seasonal/denominational).

Major Activities

Pilot Project on Mobile Coin Vans (MCVs) for Distribution of Coins

VIII.21 In continuation of the Reserve Bank's efforts to ensure that coins are available in the remotest part of the country, MCVs are being operated from October 1, 2022 by some banks in select states on a pilot basis. Based on the experience gained, the initiative is being extended to more states.

Microsite for Currency Related Matters

VIII.22 The new microsite on Indian currency will showcase information on design and security features through an interactive 360-degree view of the banknotes and various multimedia options.

Awareness Campaign on Exchange of Banknotes and Acceptance of Coins

VIII.23 To create awareness and disseminate information on customer services, a campaign was undertaken on 'Exchange of Banknotes' through SMS, FM radio and digital media (website).

VIII.24 With the objective of encouraging wider acceptance of coins by the public, the Reserve Bank undertook during the year, a campaign for dispelling misconceptions and allaying fears on coins of different designs of the same denomination in circulation.

Pilot Project on QR Code-based Coin Vending Machine

VIII.25 To enhance the accessibility of coins to the public, the Reserve Bank has conceptualised a pilot project on a dynamic Quick Response (QR) code-based coin vending machine (QCVM), which is a cashless coin dispensation system using the UPI. The pilot project is being rolled out at 19 locations in 12 cities across the country (Box VIII.1).

Procurement of New Security Features for Indian Banknotes

VIII.26 The Reserve Bank is actively taking forward the process of introduction of new/ upgraded security features for banknotes.

Box VIII.1
Pilot Project on QR Code-based Coin Vending Machine (QCVM)

As per the Coinage Act, 2011, the Government of India has the sole right to produce/mint coins including the ₹1 note. These coins are issued for circulation only through the Reserve Bank in terms of Section 38 of the RBI Act, 1934.

Presently, coins are largely distributed through the counters at all bank branches. Several measures have been undertaken recently such as enhanced incentives to banks for distribution of coins, use of mobile coin vans for coin distribution with a special focus on sub-urban, rural and remote areas along with holding of coin *melas* by currency chest branches.

To further improve distribution of coins by harnessing technology, the Reserve Bank has launched a pilot project on QCVM in collaboration with five banks (*viz.,* Axis Bank, Bank of Baroda, ICICI Bank, State Bank of India and Federal Bank).

The QCVM is a cashless coin dispensation system which allows payment transactions through UPI on scanning a dynamic QR code generated by the machine on the mobile phone of the customer.

Unlike cash-based traditional coin vending machines, the QCVM eliminates the need for physical tendering of banknotes and their subsequent authentication. Further, in QCVMs, the customers will have the option to withdraw coins in required quantity and denominations.

The pilot project is being initially rolled out at 19 locations in 12 cities across the country (*viz.,* Ahmedabad, Baroda, Bengaluru, Chennai, Hyderabad, Kanpur, Kolkata, Mumbai, New Delhi, Patna, Prayagraj and Kozhikode).

Source: RBI.

Review of Extant Mechanism of Cash Dispensation and Related Issues in the ATM Ecosystem

VIII.27 To ensure the availability of clean notes in optimal denomination mix to the public and enhance customer experience with regard to ATMs, a Committee was constituted to review the extant mechanism of cash dispensation and related issues in the ATM ecosystem. Among others, the Committee examined the issues pertaining to leveraging the infrastructure of banks and white-label ATMs for ensuring higher ATM uptime and improved currency delivery especially in remote and underserved locations such as in the north east/hilly areas. The Committee also conducted a holistic review of extant instructions on ATM downtime, cassette swap, security of ATMs/cash recyclers and need for incentives and disincentives in the ATM ecosystem.

4. Bharatiya Reserve Bank Note Mudran Private Ltd. (BRBNMPL)

VIII.28 The BRBNMPL, a wholly-owned subsidiary of the Reserve Bank, has been playing a crucial role in the designing, printing and supply of banknotes. BRBNMPL presses have increased direct remittances of banknotes to currency chests, resulting in enhanced logistical efficiency and cost effectiveness.

5. Agenda for 2023-24

VIII.29 During the year, the Department will focus on the following:

- Preparation of an implementation programme based on the recommendations of the report on currency network design, mechanisation and automation, and scheduling and inventory management, for achieving higher efficiency in currency management;
- Establishment of a state-of-the-art facility for conducting cutting edge research on banknotes (*Utkarsh* 2.0);
- Conducting survey on quality of notes in circulation (*Utkarsh* 2.0);
- Developing cash usage indicators (*Utkarsh* 2.0);

- Implementation of recommendations of the Committee for review of extant mechanism of cash dispensation and related issues in ATM ecosystem; and
- Institutionalisation of the process of certification of note sorting machines in alignment with the prescribed sorting standards.

6. Conclusion

VIII.30 During 2022-23, the Reserve Bank focused on enhancing the efficiency of currency management ecosystem, increasing public awareness about banknotes and coins with a focus on exchange facility, in addition to making available adequate quantity of clean banknotes to the public. Going ahead, the Reserve Bank's endeavour would be to promote analytical research for strengthening further, the integrity of banknotes; enhancing banknote distribution efficiency and efficacy and also understanding better, the trends in public preference for cash *vis-à-vis* other modes of payment.

IX PAYMENT AND SETTLEMENT SYSTEMS AND INFORMATION TECHNOLOGY

The Reserve Bank extended its efforts towards enhancing the efficiency of the payments ecosystem along with targeted initiatives focused on customer centricity, cyber security and digital deepening. The Payments Vision 2025 document was released during the year with the aim of strengthening payment systems by leveraging on the initiatives undertaken during the last vision period (2019-21). The Reserve Bank also stayed focused on its endeavour to ensure round the clock availability of Information and Communication Technology (ICT) infrastructure for the smooth functioning of its IT systems and applications.

IX.1 Efficient payment and settlement systems foster economic development, promote financial stability and support financial inclusion. Ensuring safe, secure, reliable, accessible, affordable and efficient payment systems has been one of the important strategic goals of the Reserve Bank. Towards the pursuit of these objectives, the role of the Reserve Bank has transformed from being a regulator, operator and facilitator to that of a creator of congenial environment for the structured development of the payments ecosystem in India. Payments Vision documents released by the Reserve Bank have provided strategic direction and implementation plans to drive this transformation since 2001. The Payments Vision 2025 released during the year builds on the Payments Vision 2019-21 and outlines the thought process for the period up to December 2025. Moreover, the evolving situation may warrant launch of new initiatives in addition to those specified in the Payments Vision 2025 document. The focus of the Department of Information Technology (DIT) during the year remained on cyber resilience through the implementation of a new advanced firewall solution across the Reserve Bank, initiative for upgradation to next generation Integrated Security Operation Centre (iSOC) for further strengthening cyber security infrastructure and also launch of the 'National Cyber Security Awareness' campaign in October 2022.

IX.2 Against this backdrop, the following section covers developments in the area of payment and settlement systems during the year and also takes stock of the implementation status of the agenda for 2022-23. Section 3 provides various measures undertaken by the DIT during the year *vis-à-vis* the agenda set for 2022-23. These departments have also set out an agenda for 2023-24. Section 4 presents a summary of the chapter.

2. DEPARTMENT OF PAYMENT AND SETTLEMENT SYSTEMS (DPSS)

IX.3 During the year, the Department of Payment and Settlement Systems (DPSS) continued its endeavour towards enhancing the payments ecosystem and released the Payments Vision 2025 document to consolidate the initiatives undertaken during the last vision period (2019-21). Payments Vision 2025 is built upon the five pillars of integrity, inclusion, innovation, institutionalisation and internationalisation (Box IX.1). These measures are expected to further strengthen the payments ecosystem and also create a regulatory environment to facilitate payment systems to excel at the national and international levels.

Box IX.1
Payments Vision 2025

Payments Vision 2025 was released with the core theme of e-Payments for Everyone, Everywhere and Everytime. The Vision aims to provide every user with safe, secure, fast, convenient, accessible, and affordable e-payment options. A snapshot of the specific initiatives, including discussions on different dimensions that are planned as part of Payments Vision 2025 is presented below:

Integrity	Inclusion	Innovation	Institutionalisation	Internationalisation
1	2	3	4	5
• Weave in alternate authentication mechanism(s) for digital payment transactions. • Broaden scope, usage and relevance of Legal Entity Identifier (LEI) in all payment activities. • Expand interoperability to contactless transit card payments in offline mode. • Enhance scalability and resilience of payment systems. • Leverage Online Dispute Resolution (ODR) system for fraud monitoring and reporting. • Provide enhancements to Central Payments Fraud Information Registry (CPFIR). • Provide payee name look-up for fund transfers. • Increase proportionate oversight of Payment System Operators (PSOs). • Include assessment of RTGS and NEFT under Principles for Financial Market Infrastructures (PFMIs). • Explore local processing of payment transactions. • Study creation of Digital Payments Protection Fund (DPPF).	• Enable geotagging of digital payment infrastructure and transactions. • Revisit guidelines for Prepaid Payment Instruments (PPIs) including closed system PPIs. • Consider framework for regulation of all significant intermediaries in payments ecosystem. • Bring in enhancements to Cheque Truncation System (CTS), including One Nation One Grid clearing and settlement perspective. • Extend Internal Ombudsman Scheme to all PSOs. • Support increase in market trading and settlement hours. • Upscale customer outreach and awareness activities. • Revisit scope and usefulness of Payments Infrastructure Development Fund (PIDF) scheme. • Attempt regulation of BigTechs and FinTechs in payments space. • Continue endeavour to collect and publish granular, disaggregated payment systems data. • Make payment systems more inclusive. • Undertake evaluation of charges for all payment systems. • Coordinate migration of government receipts and payments to digital mode.	• Facilitate framework for Internet of Things (IoT) and context based payments. • Migrate all RBI operated payment system messages to ISO 20022 standard. • Link credit cards and credit components of banking products to UPI. • Create payment system for processing online merchant payments using internet / mobile banking. • Organise payment innovation contests & hackathons. • Review need for multiple payment identifiers. • Explore guidelines on payments involving Buy Now Pay Later (BNPL) services.	• Comprehensive review of legislative aspects of the provisions and regulations of Payment and Settlement Systems (PSS) Act. • Constitute a Payments Advisory Council (PAC) to assist Board for Regulation and Supervision of Payment and Settlement Systems (BPSS). • Operationalise National Card Switch for card transactions at Point of Sale (PoS) and resultant settlements. • Active engagement and involvement in international fora (discussions of standard setting bodies).	• Global outreach of RTGS, NEFT, UPI and RuPay cards. • Expand Structured Financial Messaging System (SFMS), Indian Financial Network (InFiNet) frameworks across jurisdictions. • Two Factor Authentication (2FA) for cross-border card transactions. • Seek inclusion of INR in Continuous Linked Settlement (CLS). • Bring further efficiencies in payment processing and settlements on introduction of Central Bank Digital Currencies (CBDCs) - Domestic and Cross-Border.

Source. RBI.

Payment Systems

IX.4 The payment and settlement systems[1] recorded a robust growth of 57.8 per cent in terms of transaction volume during 2022-23 on top of the expansion of 63.8 per cent recorded in the previous year. In value terms, the growth was 19.2 per cent in 2022-23 as against 23.1 per cent in the previous year, mainly due to growth in the large value payment system, *viz.*, Real Time Gross Settlement (RTGS). The share of digital transactions in the total volume of non-cash retail payments increased to 99.6 per cent during 2022-23, up from 99.3 per cent in the previous year (Table IX.1).

Table IX.1: Payment System Indicators - Annual Turnover (April-March)

Item	Volume (lakh)			Value (₹ lakh crore)		
	2020-21	2021-22	2022-23	2020-21	2021-22	2022-23
1	2	3	4	5	6	7
A. Settlement Systems						
CCIL Operated Systems	28	33	41	1,619.43	2,068.73	2,587.97
B. Payment Systems						
1. Large Value Credit Transfers – RTGS	**1,592**	**2,078**	**2,426**	**1,056.00**	**1,286.58**	**1,499.46**
Retail Segment						
2. Credit Transfers	**3,17,868**	**5,77,935**	**9,83,695**	**335.04**	**427.28**	**550.12**
2.1 AePS (Fund Transfers)	11	10	6	0.01	0.01	0.00
2.2 APBS	14,373	12,573	17,898	1.11	1.33	2.48
2.3 ECS Cr	0	0	0	0.00	0.00	0.00
2.4 IMPS	32,783	46,625	56,533	29.41	41.71	55.85
2.5 NACH Cr	16,465	18,758	19,267	12.17	12.82	15.44
2.6 NEFT	30,928	40,407	52,847	251.31	287.25	337.20
2.7 UPI	2,23,307	4,59,561	8,37,144	41.04	84.16	139.15
3. Debit Transfers and Direct Debits	**10,457**	**12,189**	**15,343**	**8.66**	**10.34**	**12.90**
3.1 *BHIM Aadhaar* Pay	161	228	214	0.03	0.06	0.07
3.2 ECS Dr	0	0	0	0.00	0.00	0.00
3.3 NACH Dr	9,646	10,755	13,503	8.62	10.27	12.80
3.4 NETC (Linked to Bank Account)	650	1,207	1,626	0.01	0.02	0.03
4. Card Payments	**57,787**	**61,783**	**63,345**	**12.92**	**17.02**	**21.52**
4.1 Credit Cards	17,641	22,399	29,145	6.30	9.72	14.32
4.2 Debit Cards	40,146	39,384	34,199	6.61	7.30	7.20
5. Prepaid Payment Instruments	**49,366**	**65,783**	**74,667**	**1.97**	**2.79**	**2.87**
6. Paper-based Instruments	**6,704**	**6,999**	**7,088**	**56.27**	**66.50**	**71.63**
Total - Retail Payments (2+3+4+5+6)	4,42,180	7,24,689	11,44,138	414.86	523.94	659.04
Total Payments (1+2+3+4+5+6)	4,43,772	7,26,767	11,46,563	1,470.86	1,810.52	2,158.50
Total Digital Payments (1+2+3+4+5)	**4,37,068**	**7,19,768**	**11,39,476**	**1,414.58**	**1,744.01**	**2,086.87**

APBS: Aadhar Payment Bridge System. ECS: Electronic Clearing Service. NEFT: National Electronic Funds Transfer.

Note: 1. RTGS system includes customer and inter-bank transactions only.
2. Settlements of government securities and forex transactions are through the Clearing Corporation of India Ltd. (CCIL). Government Securities include outright trades and both legs of repo transactions and triparty repo transactions.
3. The figures for cards are for payment transactions at Point of Sale (POS) terminals and online.
4. Figures in the columns might not add up to the total due to rounding off of numbers.

Source: RBI.

[1] The data are for total payments, including digital payments and paper-based instruments.

Digital Payments

IX.5 Among the digital modes of payments, the number of transactions using RTGS system increased by 16.7 per cent during 2022-23 (Table IX.1). In terms of value, RTGS transactions registered an increase of 16.5 per cent; transactions through the National Electronic Funds Transfer (NEFT) system also witnessed an increase of 30.8 per cent and 17.4 per cent in volume and value, respectively, reflective of the increase in large value corporate transactions, in line with rising economic activity. As at end-March 2023, RTGS services were available through 1,65,390 IFSCs[2] of 243 members, while NEFT services were available through 1,66,544 IFSCs of 230 member banks.

IX.6 During 2022-23, payment transactions carried out through credit cards increased by 30.1 per cent and 47.3 per cent in terms of volume and value, respectively (Table IX.1). Transactions through debit cards decreased by 13.2 per cent in terms of volume, and 1.4 per cent in terms of value. Prepaid Payment Instruments (PPIs) recorded an increase in volume and value by 13.5 per cent and 2.9 per cent, respectively. The growth in digital payments can be attributed to increased availability of acceptance infrastructure, which witnessed substantial growth during the year benefitting from the Payments Infrastructure Development Fund (PIDF) scheme, operationalised in January 2021. The number of Points of Sale (PoS) terminals increased by 28.3 per cent to 77.9 lakh at end-March 2023, while the number of Bharat Quick Response (BQR) codes deployed increased by 6.7 per cent to 53.8 lakh during the same period. Further, UPI QR increased by 48.4 per cent to 25.64 crore at end-March 2023. The number of Automated Teller Machines (ATMs) also increased to 2.59 lakh at end-March 2023 from 2.52 lakh at end-March 2022.

Table IX.2: Authorisation of Payment System Operators (end-March)

(Number)

Entities	2022	2023
1	2	3
A. Non-Banks – Authorised		
PPI Issuers	37	36
WLA Operators	4	4
Instant Money Transfer Service Providers	1	1
BBPOUs	9	10
TReDS Platform Operators	3	3
MTSS Operators	9	8
Card Networks	5	5
ATM Networks	2	2
B. Banks – Approved		
PPI Issuers	57	58
BBPOUs	43	44
Mobile Banking Providers	648	725
ATM Networks	3	3

Source: RBI.

Authorisation of Payment Systems

IX.7 Payment System Operators (PSOs) comprise PPI issuers, cross-border Money Transfer Service Schemes (MTSS), White Label ATM (WLA) operators, Trade Receivables Discounting System (TReDS) platforms, ATM networks, Instant Money Transfer Service provider, card networks and Bharat Bill Payment Operating Units (BBPOUs), besides the Clearing Corporation of India Ltd. (CCIL) and the National Payments Corporation of India (NPCI) [Table IX.2]. Further, during the year, AMC Repo Clearing Limited was granted Certificate of Authorisation to act as a Central Counter Party (CCP) for repo transactions in corporate debt securities. The Reserve Bank has prescribed guidelines to include Payment Aggregators (PAs) under its regulatory purview

2 Indian Financial System Code.

and some PAs have subsequently been provided in-principle authorisation.

Agenda for 2022-23

IX.8 The Department had set out the following goals for 2022-23:

- *Formulation and Release of Payments Vision Document 2025:* With the achievement of the intended outcomes and completion of identified actions in Vision 2021, the Reserve Bank shall come out with its Vision for the payments ecosystem in the coming years to ensure continuous development of the payments landscape (Paragraph IX.9);
- *Publication of Payment Dashboard*: To enhance consumer experience and provide greater insights into payment trends, the Reserve Bank shall publish a payments dashboard with pictorial representation of trends in payment systems (Paragraph IX.10); and
- *Formulation and Implementation of Framework of Geo*-tagging *of Payment Acceptance Infrastructure*: As announced in the Statement on Developmental and Regulatory Policies of October 8, 2021, the Reserve Bank is in the process of implementing the framework of geo-tagging payment acceptance infrastructure (Paragraph IX.11).

Implementation Status

IX.9 The Reserve Bank released the Payments Vision 2025 in June 2022 laying the roadmap for payments ecosystem in the country up to December 2025. The Payments Vision 2025 builds on the earlier Payments Vision 2019-21 and envisages to further consolidate the steps initiated towards enhanced outreach, customer centricity, cyber security and digital deepening and build on the same through five pillars of integrity, inclusion, innovation, institutionalisation and internationalisation.

IX.10 The Reserve Bank commenced publication of pictorial representation of trends in payment systems. The publication covers trends in payment systems, acceptance infrastructure, payment system operators and ticket size of payment transactions over the past two years. Dissemination of such information has benefited stakeholders and facilitated analysis in payment systems leading to further innovations.

IX.11 The Reserve Bank had issued a framework for geo-tagging payment acceptance infrastructure in March 2022 and is in the process of putting in place the required infrastructure to commence collection of details of payment touch points deployed across the country by acquiring merchants.

Major Developments

Integrity

Restriction on Storage of Actual Card Data [i.e., Card-on-File (CoF)]

IX.12 The Reserve Bank mandated that, after September 30, 2022, entities other than card networks and card issuers cannot store customer card data. The initiative was undertaken to prevent misuse of card data for unauthorised transactions and subsequent monetary loss to card holders due to stolen / misused card details on account of its availability with many entities.

Prior Approval in Case of Takeover / Acquisition of Control of Non-Bank PSOs and Sale / Transfer of Payment System Activity of Non-Bank PSO

IX.13 The Reserve Bank mandated prior approval in case of takeover / acquisition of control of non-bank PSOs and sale / transfer of payment system activity of non-bank PSO taking into account the risks the unregulated transferability of PSO authorisation can pose to the payments ecosystem.

Regulation of Payment Aggregators – Timeline for Submission of Applications for Authorisation – A Review

IX.14 In terms of instructions issued by the Reserve Bank in March 2020, existing online non-bank PAs (existing as on March 17, 2020) had to seek authorisation under the Payment and Settlement Systems Act, 2007 (PSS Act). PAs had time till September 30, 2021 for submitting the application. In order to ensure smooth transition, it was decided to permit another window (up to September 30, 2022) to such PAs to apply to the Reserve Bank for seeking authorisation.

Cyber Resilience and Payment Security Controls of PSOs

IX.15 As announced in the Statement on Developmental and Regulatory Policies issued along with the Monetary Policy dated April 8, 2022, the Reserve Bank is in the process of issuing the Master Direction on Cyber Resilience and Payment Security Controls of PSOs, covering robust governance mechanisms for identification, analysis, monitoring and management of information security, including cyber security risks and vulnerabilities, and baseline security measures for ensuring safe and secure digital payment transactions.

Payment Fraud Reporting – Migration to DAKSH (*Utkarsh*)

IX.16 The Reserve Bank migrated the payment fraud reporting to *DAKSH* – the Reserve Bank's Advanced Supervisory Monitoring System on January 1, 2023. In addition to the existing bulk upload facility to report payment frauds, *DAKSH* platform provides additional functionalities, *viz.*, maker-checker facility, online screen-based reporting, option for requesting additional information, facility to issue alerts / advisories and generation of dashboards and reports.

Financial Inclusion

Bharat Bill Payment System (BBPS) – Amendment to Guidelines

IX.17 The Reserve Bank reduced the net worth requirement for non-bank BBPOUs from ₹100 crore to ₹25 crore to facilitate greater participation in the ecosystem. The revised net worth was on the lines of other non-bank payment system participants who handle customer funds (such as PAs) and have similar risk profile.

Processing of e-Mandates for Recurring Transactions

IX.18 The Reserve Bank enhanced the per transaction limit for subsequent transactions (without Additional Factor of Authentication) undertaken under the e-mandate framework for processing of recurring transactions done using cards, PPIs and UPI from ₹ 5,000/- to ₹ 15,000/- per transaction.

One Nation One Grid

IX.19 Reserve Bank has migrated the Cheque Truncation System (CTS) to facilitate single settlement for banks' position across grids. This is expected to benefit banks with regards to liquidity requirements for CTS. The initiative is being undertaken to promote efficient cheque processing and is in line with the vision of migrating from the current architecture of CTS from three regional grids to 'One Nation, One Grid'.

Payments Infrastructure Development Fund (PIDF) [*Utkarsh*]

IX.20 The Payments Infrastructure Development Fund (PIDF) continued capacity building across the country in terms of deployment of new payment acceptance infrastructure. Till March 31, 2023, 219.3 lakh payment touchpoints (213.7 lakh digital and 5.6 lakh physical) were created across the country under the PIDF through the subsidy payment of ₹ 347.65 crore.

e-BAAT Programmes

IX.21 The Reserve Bank has been conducting electronic banking awareness and training (*e-BAAT)* programmes regularly for the benefit of a cross-section of customers / bankers / students / public. During the year, 322 *e-BAAT* programmes were conducted by the regional offices of the Reserve Bank, in which safe usage of electronic payment systems, their benefits and grievance redressal mechanisms were explained to the participants.

Publication of Granular Data on Payment Systems and Payment Frauds

IX.22 The Reserve Bank has taken various initiatives to enhance the coverage of payment systems data published. In this connection, the Reserve Bank commenced publication of entity-wise data on PPI issuers and TReDS platforms. Further, the ATM deployment data was enhanced to disseminate information on district-wise distribution of ATMs across the country. The Reserve Bank also commenced publication of data on domestic payment frauds and cross-border payment transactions undertaken using cards issued in India.

Digital Payments Awareness Week 2023 – Launch of Mission "Har Payment Digital"

IX.23 The Reserve Bank launched the Mission 'Har Payment Digital' on the occasion of the Digital Payments Awareness Week (DPAW) 2023 observed from March 6 to 12, 2023 with campaign theme "*Digital Payment Apnao, Auron ko bhi Sikhao*". As part of the initiative, PSOs have pledged to adopt 75 villages across the country under the '75 Digital Villages' programme with a vision to convert them into digital payment enabled villages.

Innovation

Interoperable Card-less Cash Withdrawal (ICCW) at ATMs

IX.24 The Reserve Bank permitted banks, ATM networks and White Label ATM Operators (WLAOs) to provide an option of ICCW at their ATMs. Under this facility, UPI is used for customer authentication during ATM transactions with the settlement facilitated through the National Financial Switch (NFS) / ATM networks. The absence of need for a card to initiate cash withdrawal transactions would help contain frauds like skimming, card cloning and device tampering.

Enhancements to Unified Payments Interface (UPI)

IX.25 UPI is the single largest retail payment system in India in terms of volume of transactions and has become one of the most inclusive modes of payment in India. The Reserve Bank further expanded the scope of UPI by the introduction of various features:

- *UPI Lite On-device Wallet* : The Reserve Bank permitted small value transactions in UPI through an on-device wallet in UPI App to facilitate safe and secure payments where users can transfer a maximum of ₹2,000 to UPI Lite with the wallet subsequently debited for transaction of up to ₹200, provided sufficient balance is available. UPI Lite provides superior user experience using near real-time small value payments without the necessity of entering UPI PIN.

- *Linking of Rupay Credit Cards to UPI:* To further deepen the usage of UPI, the Reserve Bank broadened financial products / instruments that can be linked to UPI for payment processing and permitted linking of RuPay credit cards to UPI. This arrangement is expected to provide more avenues and convenience to customers while making payments through the UPI platform.
- *Processing Mandates with Single-Block-and-Multiple-Debits:* UPI has the feature for processing mandated recurring transactions and single-block-and-single-debit which is used in initial public offer (IPO) subscriptions and is observed to be utilised in over 50 per cent of the IPO applications in the last two years. The Reserve Bank permitted the introduction of single-block-and-multiple debits functionality in UPI to further enhance the capabilities in UPI by enabling a customer to create a payment mandate against a merchant by blocking funds in his / her bank account for specific purposes which can be debited, whenever needed. This feature is expected to be helpful for hotel room bookings, purchase of securities in the secondary capital market as also purchase of government securities using the Reserve Bank's Retail Direct scheme and e-commerce transactions, as it will build a higher degree of trust in transactions assuring merchants of timely payments, while ensuring funds remain in the customer's account till actual delivery of goods or services.

Expanding the Scope of BBPS to Include all Payments and Collections

IX.26 The scope and coverage of BBPS includes all categories of billers who raise recurring bills. The Reserve Bank expanded the scope of BBPS to include all categories of payments and collections, both recurring and non-recurring in nature. This enabled the BBPS platform to become accessible to a wider set of individuals and businesses who can benefit from the transparent and uniform payments experience, faster access to funds at a lower cost and improved efficiency.

Issuance of PPIs to Foreign Nationals / Non-Resident Indians (NRIs) visiting India

IX.27 Reserve Bank allowed foreign nationals and Non-Resident Indians (NRIs) access to UPI while visiting India. The facility was initially extended to travellers from G-20 countries at select international airports for merchant payments (P2M) in India. Going forward, this facility shall be enabled across all entry points in the country.

Internationalisation

Enabling BBPS to Process Cross-border Inbound Bill Payments

IX.28 The Reserve Bank extended the scope of BBPS to permit cross-border inward payments by providing NRIs additional options to undertake utility, education, and other bill payments on behalf of their families in India. NRIs can now benefit from the standardised bill payment experience, centralised customer grievance redressal mechanism and prescribed customer convenience fee offered by the BBPS.

Global Outreach of Payment Systems (*Utkarsh*)

IX.29 The Payments Vision Document 2025 has outlined expanding the global outreach of UPI and RuPay cards as one of the key objectives under the internationalisation pillar. The Reserve Bank has been working towards this vision through collaboration with various countries. Efforts are being undertaken for inter-linking UPI with

Fast Payment Systems (FPS) of other countries to enable both foreign inward and outward remittances using the UPI platform.

IX.30 The Reserve Bank and the Monetary Authority of Singapore (MAS) operationalised linkage of their respective FPS, UPI and PayNow on February 21, 2023, enabling users of the two systems to make instant and low-cost cross-border peer-to-peer (P2P) payments on a reciprocal basis. The UPI-PayNow linkage is expected to further anchor trade, travel and remittance flows between the two countries. Further, acceptance of UPI through QR codes has been enabled in Bhutan, Singapore, and the UAE. Indian tourists travelling to these countries can use their UPI Apps to make payment at merchant sites. For the global outreach of RuPay cards, arrangements have been made with Bhutan, Singapore, Nepal, and the UAE to accept RuPay cards without co-branding with other international card schemes. Issuance of RuPay cards in other countries is also being examined. Going forward, the Reserve Bank, along with the NPCI International Payments Limited (NIPL) will continue to effect partnerships for cross-border payments and enhance the global outreach of UPI and RuPay cards.

Other Initiatives

Digital Payments Index (DPI)

IX.31 The Reserve Bank had constructed a composite Digital Payments Index (DPI) in 2021 to capture the extent of digitisation of payments across the country. The RBI-DPI index is computed semi-annually and has demonstrated significant growth representing the rapid adoption and deepening of digital payments across the country in recent years. The index constructed with March 2018 as base (score 100), measured 377.46 in September 2022.

Inspection of PSOs

IX.32 Under Section 16 of the PSS Act, offsite inspections of 44 retail entities, *viz.*, 26 non-bank PPI issuers, two WLA operators (WLAOs), nine BBPOUs, three card networks, three TReDS platform providers and one ATM Network were carried out by the Reserve Bank during 2022-23.

CCIL Inspection

IX.33 The Reserve Bank conducted the onsite inspection of CCIL under Section 16 of the PSS Act. CCIL was assessed against the 24 Principles for Financial Market Infrastructures (PFMIs) formulated by the Committee on Payments and Market Infrastructures-International Organisation of Securities Commissions (CPMI-IOSCO). As a CCP, CCIL was rated 'Observed' for 19 principles and 'Broadly Observed' for one, while four were 'Not Applicable' to it. As a Trade Repository (TR), CCIL was rated 'Observed' for 10 principles, 'Broadly Observed' for 1, while 13 were 'Not Applicable'.

Developments in CCIL

IX.34 During the year, CCIL exhibited resilience in its functioning, particularly in view of the past COVID experiences. The issuances of legal entity identifiers (LEI) by CCIL's subsidiary Legal Entity Identifier India Ltd., crossed 56,000 during the year. Major developments pertaining to CCIL during the year are:

- CCIL extended the facility of settling cross-currency transactions through Continuous Linked Settlement (CLS) to overseas branches of Indian banks with effect from October 10, 2022. This initiative is on the similar lines of CCIL-CLS services of IFSC Banking Units (IBU) entities in Gujarat International Finance Tech-City (GIFT City);

- In view of the impending London Interbank Offered Rate (LIBOR) cessation, CCIL conducted three cycles of portfolio compression exercise of Interest Rate Swap (IRS) trades on the Mumbai Interbank Forward Offer Rate (MIFOR) benchmark; and
- The Reserve Bank accorded approval to CCIL for extending intra-day security shortage replenishment to allocatee members in securities segment and introduction of prefunding of securities (outright and market repo) and funds (outright, repo and triparty repo) in securities segment which is under implementation.

Benchmarking India's Payment Systems – Follow-on Exercise

IX.35 The Reserve Bank undertook a follow-on benchmarking exercise for the year 2020 with progress measured since the last benchmarking exercise undertaken for the year 2017, covering the same countries and parameters. The exercise sought to (a) arrive at an understanding of the preferences Indians have for making and receiving payments and how these preferences compare with other countries; (b) measure the efficiency of India's payment systems; (c) measure India's progress in the parameters since the last exercise; and (d) list the areas where there is scope for further improvement. The exercise validated India's progress in payments ecosystem with India categorised as a 'leader' or 'strong' in respect of 25 out of 40 indicators (21 indicators in the previous exercise).

Discussion Paper on Charges in Payment Systems

IX.36 The Reserve Bank issued a discussion paper on charges in payment systems for public consultation in August 2022. The discussion paper covered all aspects relating to charges in payment systems [such as Immediate Payment Service (IMPS), NEFT, RTGS and UPI] and various payment instruments (such as debit cards, credit cards and PPIs). The Reserve Bank is examining the feedback received from the public, which could be used to guide policies and intervention strategies.

Agenda for 2023-24

IX.37 In 2023-24, the Department will focus on the following goals:

- *Put in Place a Resilient Framework for Structured Oversight of Centralised Payment Systems* (*Utkarsh 2.0):* The Reserve Bank has completed the internal assessment of the centralised payment systems, *i.e.*, NEFT and RTGS, in compliance with the PFMI standards. Based on the learnings from the assessment, a resilient framework prescribing the standards, frequency, disclosures, *etc*. for the oversight of centralised payment systems will be formulated;
- *Review Continuation of Payments Infrastructure Development Fund (PIDF) Scheme* (*Utkarsh 2.0*)*:* The PIDF received overwhelming support from the contributors (RBI, card networks and card issuing banks) and acquirers for deployment of payment acceptance infrastructure. The scheme's initial target of creating 90 lakh payment touch points by the end of December 2023 was met by the end of the first year, *i.e.*, December 2021 itself. Implementation of the scheme resulted in various innovative ideas and field level experiences which the advisory

council members felt necessary to explore. The feasibility of continuing the scheme on these lines will be explored;

- *Implementation of Payee Name Look-up in Centralised Payment Systems*: The Reserve Bank took various proactive initiatives to ensure safety and efficiency of the payment systems, thereby ensuring public trust in the ecosystem. To enhance the payment experience further, the feasibility of real-time payee name validation before the actual fund transfer will be explored; and
- *Enhance Coverage and Granularity of Published Payment Transaction Data:* The Reserve Bank has taken initiatives to enhance the dissemination of granular data on payment systems. It envisages to continue with the initiatives on payment data dissemination to provide useful insights to stakeholders and facilitate research and further innovations in payment systems.

3. DEPARTMENT OF INFORMATION TECHNOLOGY (DIT)

IX.38 The Department of Information Technology continued with its endeavour to ensure availability of ICT infrastructure for the smooth functioning of all the IT systems and applications of the Reserve Bank. During the year, the focus remained on cyber resilience as the new advanced firewall solution was implemented across the Reserve Bank. To further strengthen cyber security infrastructure, the upgradation to Next Generation Integrated Security Operation Centre (iSOC) has been initiated. Cyber Security Drills were conducted on a regular basis to test preparedness in respect of response, coordination and recovery in the event of real-life cyber-attacks. The month of October 2022 was observed as the 'National Cyber Security Awareness' month across the Reserve Bank with an overarching theme of 'See Yourself in Cyber'. Various forms of awareness initiatives were undertaken to instil cyber hygiene amongst the staff members.

IX.39 With a view to upskilling the staff with IT and analytical knowledge, the Reserve Bank initiated work on sections of an Advanced Enterprise Computing and Cyber Security Training Centre, abutting the new greenfield data centre, work on which is expected to commence shortly (Box IX.2).

IX.40 India has been the global leader in payment systems and the Reserve Bank has played a critical role in spearheading technology

Box IX.2
Second Greenfield Data Centre and Enterprise Computing and Cyber Security Training Institute

In the Reserve Bank, data centres have been conceived, planned and constructed based on the evolving advances in information communication technology and the vision of the Reserve Bank for a digital world, besides other factors such as seismic zone, space availability and threat perception – physical as well as virtual. Consequently, safeguarding the security and preserving the reliability of data centres to ensure smooth flow of information has been accorded priority attention by the Reserve Bank. The Reserve Bank currently has three data centres – one greenfield data centre and two brownfield data centres, out of which one is identified as the Disaster Recovery Data Centre (DR Site).

With more and more core functions of the Reserve Bank getting IT enabled, the need for IT-related infrastructure has increased. The rapid pace of changes in IT has also

(Contd...)

rendered legacy systems uneconomical. Being a premier institution of the country, it is critical for the Reserve Bank to identify, select and implement technologies which will keep its data centres robust, reliable and in sync with the best in the world.

The Reserve Bank has thus initiated the project to construct a new state-of-the-art greenfield data centre to address the capacity expansion constraints, meet ever-increasing IT landscape needs and avoid region specific risks. This will be the fourth data centre and the second greenfield data centre of the Reserve Bank. This greenfield data centre complex will be built using the latest cutting-edge technology to provide highest level of redundancy (high availability of data/applications hosted in data centres), robustness, resilience and availability of the system. It is planned to have built-in counter measures against ever emerging physical threats. The design of the new data centre will ensure the segregation of applications based on highly critical payment systems and non-payment system applications, from a cyber-security perspective. Payment system applications will have multi-layered and relatively higher level of defense and controls *vis-à-vis* non-payment applications. The complex will also have facility to house the critical resources for managing the IT infrastructure during an emergency.

The new data centre complex will also host an advanced, new age training institute with experience centre, *i.e.,* 'Enterprise Computing and Cyber Security Institute'. The training institute will have modern and latest technology to provide training in advanced topics like software engineering for cloud, blockchain, internet of things, artificial intelligence/machine learning, advanced cybersecurity and data centre operations.

The idea is to develop an advanced "Enterprise Computing and Cybersecurity" training centre which would, to begin with, provide IT trainings to its officers on various related topics and areas. The facility is also envisaged to provide "hands-on" trainings to the participants on all the technologies being used by the Reserve Bank. This will help to build-in the core IT professionals specialising in the areas related to their functioning, eventually minimising external dependencies, thereby reducing risks that often accompany outsourcing. The training institute will have a virtual experience centre, which will be used by participants to explore real-world situations. This training institute will be built in such a way that it provides different types of learning experience to the participants.

While the setting up of the training centre is a long process, in the meantime, the training programmes/workshops for the Reserve Bank's officials have already started with effect from October 2022. Till the new data centre gets operational and is in a position to provide hands-on training, use of software/simulation tools for providing trainings in advanced IT technologies will be explored.

Source: RBI.

absorption and adoption in the payment system sphere. As such, there are multiple payment systems available in the country for use by individuals as well as institutions, each having its distinct character and application. Accordingly, the Reserve Bank has conceptualised a light weight and portable payment system that can be operated from anywhere by a minimum number of staff, particularly in challenging times (Box IX.3).

Box: IX.3
Lightweight Payment and Settlement System (LPSS)

The existing conventional payment systems like the RTGS, NEFT and UPI are designed to handle large volumes while ensuring sustained availability and hence they are dependent on complex wired networks backed by the advanced IT infrastructure. However, catastrophic events like natural calamities and war have the potential to render these payment systems temporarily unavailable by disrupting the underlying information and communication infrastructure. Therefore, it is prudent to be prepared to face such extreme and volatile situations.

Keeping this objective in mind, the Reserve Bank has conceptualised a light weight and portable payment system that will be independent of conventional technologies and can be operated from anywhere by a bare minimum staff.

(Contd...)

It is expected to operate on minimalistic hardware and software and would be made active only on a need basis. It would process transactions that are critical to ensure stability of the economy such as government and market related transactions.

Such a light weight and portable payment system could ensure near zero downtime of payment and settlement system in the country and keep the liquidity pipeline of the economy alive and intact by facilitating uninterrupted functioning of essential payment services like bulk payments, interbank payments and provision of cash to participant institutions. Having such a resilient system is also likely to act as a bunker equivalent in payment systems and thereby enhance public confidence in digital payments and financial market infrastructure even during extreme conditions.

Source: RBI.

Major Initiatives

Upgradation of Non-IT Physical Infrastructure at All Data Centres

IX.41 The Reserve Bank has renewed the non-IT infrastructure of its existing data centres in the last two years. The project initiated during COVID-19 induced lockdown was successfully executed and completed with zero downtime at all data centres. The measure has enhanced the operational efficiency of data centres by optimising the energy efficiency and enabling real time monitoring of effectiveness of non-IT infrastructure through dashboards.

Extension of e-Kuber for Implementation of Various Projects of the Reserve Bank and Cater to the Requirements of the Government

IX.42 During the last year, the following major enhancements were carried out in *e-Kuber*:

- *Pilot Project of Central Bank Digital Currency (CBDC):* Enhancements in *e-Kuber* were carried out to facilitate pilot CBDC project. The pilot project was operationalised in two segments - CBDC-Wholesale and CBDC-Retail, effective November 1, 2022 and December 1, 2022, respectively;
- *Implementation of Centrally Sponsored Scheme (CSS):* The Reserve Bank is in the process to implement the pilot project of CSS, wherein *e-Kuber* platform will be used to handle the CSS funds flow 'just in time' from the central government and state governments to state nodal agencies;
- *Implementation of PRAKALP (Pratyaksh Kar Lekhankan Pranali) under Tax Information Network (TIN 2.0):* The implementation of *PRAKALP* has gone live on July 1, 2022 with the integration of *e-Kuber* with TIN 2.0, Public Financial Management System (PFMS) and agency banks. The onboarding of 13 agency banks in the project is over and remaining agency banks are in the testing phase;
- *Implementation of Electronic Cash Ledger Indian Customs Electronic Gateway (ICEGATE):* ICEGATE was integrated with *e-Kuber* on July 1, 2019 for collection of central excise and service tax through NEFT/ RTGS mode. ICEGATE is now in the process of collection of receipts through the agency bank reporting framework. The functionality is being tested for implementation; and
- *Indo Nepal Pension Disbursement for Defence Pensioners:* The Controller General of Defence Accounts is in the process of initiating payments to defence pensioners domiciled in Nepal through NEFT. This functionality in *e-Kuber* is

in the final stages of user acceptance testing (UAT) and shall be implemented shortly.

Agenda for 2022-23

IX.43 The Department had set out the following goals for 2022-23:

- *Continuous Upgradation of IT and Cyber Security:* The Reserve Bank strives to continuously assess and upgrade its IT security infrastructure to enhance its efficiency and effectiveness in tackling the emerging threats and protect its IT infrastructure that caters to critical payment infrastructure. In this endeavour, the Reserve Bank is upgrading Security Operation Centre (SOC) technologies with innovative capabilities and additional advancements like security orchestration, automation and response, user entity behaviour analytics, extended detection and response (Paragraph IX.44);
- *Second Greenfield Data Centre and Enterprise Computing and Cybersecurity Training Institute:* The Reserve Bank has commenced the work on a new state-of-the-art greenfield data centre during 2022-23. The data centre will cater largely to the internal needs of the Reserve Bank and its subsidiary organisations and will also host an enterprise computing and cybersecurity training institute which will cater to the IT training needs of the banking and financial sector of the country (Paragraph IX.45);
- *Next-Generation e-Kuber:* The *e-Kuber* was planned to be upgraded to the next generation based on newer technologies with wider flexibility and stability (Paragraph IX.46);
- *Better Interface for Internal Applications to Enhance User Experience and Adoption:* The Reserve Bank has been enhancing the user interface of the internal applications by adopting the latest best practices and global standards to improve the user experience and the adoption of the applications (Paragraph IX.47);
- *Making NEFT Compliant to Global Messaging Standards:* The payment industry has evolved over a period of time and various business drivers like richness of data, standardisation across payment nodes, compliance, deeper reporting, and related requirements have been constantly driving the need for change. ISO 20022 is a global and open standard for payment messaging. The RTGS system is already based on ISO 20022. The Reserve Bank is striving to make its NEFT system also compliant to this global messaging standard (Paragraph IX.48); and
- *Robotic Process Automation (RPA) Solution for Automation of Routine and Repetitive Tasks:* The Department has envisioned RPA for automation of repetitive and manual tasks such as software installation, report generation, reconciliation issues and fault remediation activities by bots without the support of IT engineers, thereby resulting in better utilisation of their services in other critical functions. This will help in reducing human errors and bring in more efficiency and productivity in day-to-day operations across the Reserve Bank (Paragraph IX.49).

Implementation Status

Continuous Upgradation of IT and Cyber Security

IX.44 The Reserve Bank is at an advanced stage of procurement and upgradation of SOC technologies. 'Security Automation, Threat Analysis and Response Centre (SATARC): Next Generation Security Operation Centre (NGSOC)' will enable the Reserve Bank in creating a secured environment by minimising manual effort and improving security by realising intelligent automation at granular level.

Second Greenfield Data Centre and Enterprise Computing and Cybersecurity Training Institute

IX.45 The main consultant for the data centre project has been appointed and the project work is under progress. Construction work will commence in 2023. The training centre has started functioning from a remote location and is on the path of developing into a high-class training institution by carrying out quality programmes covering relevant themes with a special focus on emerging technologies. While the process for setting up the institute's infrastructure is in progress, two trainings have been conducted till December 2022.

Next-Generation e-Kuber

IX.46 The process of upgradation of *e-Kuber* has been initiated with state-of-the-art technology using microservices with application programming interface (API) based integration. The upgraded system will have functionalities like reporting with comprehensive real time dashboards, enhanced user experience, scalability, resilience and easier process orchestration. Additionally, it will have ease of integration with external and internal systems, front-end improvements for enhancing productivity, robust controls, and integrated security architecture platform. The implementation will be completed by March 2024.

Better Interface for Internal Applications to Enhance User Experience and Adoption

IX.47 A design review of the different internal applications was conducted during the year, based on which the improvement in interface, designs, features and product upgrades are being undertaken. Special focus has been placed on user-centric design and continuous accessibility in a safe and secure manner.

Making NEFT Compliant to Global Messaging Standards

IX.48 The project is expected to be completed in the early months of 2023. Adoption of ISO 20022 will provide structured and granular data, improved analytics, end-to-end automation, and better global harmonisation. It will also pave the way for interoperability between RTGS and NEFT. While many countries are still making their large value system compliant with ISO 20022 standard, the Reserve Bank will have its retail payment system also compliant with these standards.

Robotic Process Automation (RPA) Solution for Automation of Routine and Repetitive Tasks

IX.49 The requirement analysis of the project is underway, as part of which certain processes related to IT operations and service request management have been identified as potential use cases. Different products available in the market are being assessed for the purpose. Post assessment, the procurement and pilot, full implementation of the solution shall be done keeping in view the emerging IT and business risk scenarios.

Agenda for 2023-24

IX.50 The Department's goals for 2023-24 are set out below:

- *Upgradation of e-Kuber* (*Utkarsh 2.0*)*:* The *e-Kuber* being designated as a Critical Information Infrastructure (CII) by the National Critical Information Infrastructure Protection Centre (NCIIPC), the significance of the application cannot be undermined. The *e-Kuber* application has interface with many important stakeholders including Government of India and state governments, and thus needs to be up to date with the latest technology architecture to match the evolving IT and financial landscape. The upgradation of *e-Kuber* to the next generation based on newer technologies with wider flexibility and greater stability has, therefore, been included in the Reserve Bank's *Utkarsh* 2.0 milestones. The upgraded *e-Kuber* shall employ latest technologies using application programming interfaces (APIs), microservices and containers, and is expected to be completed for implementation in 2023-24;
- *Next Generation Data Centre* (*Utkarsh 2.0*)*:* The Reserve Bank has initiated the project to construct a new state-of-the-art greenfield next generation data centre to address the capacity expansion constraints, meet ever-increasing IT landscape needs and avoid region specific risks. Considering the criticality of the project for fulfilling the Reserve Bank's IT infrastructure requirements, the next generation data centre project has been included in the Bank's *Utkarsh* 2.0 milestones. The construction of the data centre has commenced and shall be in an advanced stage of completion in 2023-24;
- *Upgradation of RTGS:* The Reserve Bank, in its continuous endeavour to update and upgrade India's national payment systems, has planned to upgrade the RTGS system. This will include improvements in existing functionalities and introducing several new functionalities supported by RTGS. The upgraded RTGS will take care of the futuristic requirements like scalability, enhanced security and performance; and
- *Enhancement of Internal Applications leading to Digital Transformation of Work Culture in the Reserve Bank:* The Department will be enhancing the internal applications to facilitate a transformation towards digital modes and reducing dependence on manual and paper-based procedures in day-to-day work. Continuous improvements in *Sarthi* (Electronic Document Management System), a revamped Enterprise Knowledge Portal, improved Visitor Management System and development of a web interface for regulated entities to submit applications/ requests has been planned to be undertaken by the Department, which will help bring about the digital transformation.

4. CONCLUSION

IX.51 The Reserve Bank continued with its endeavour towards improving the payments ecosystem along with a focus on further enhancing outreach, customer centricity, cyber security and digital deepening. The Reserve Bank published the Payments Vision 2025 and sustained its efforts to ensure round the clock availability of ICT infrastructure for the smooth functioning of its IT systems and applications. The focus of the Reserve Bank during the year also remained on strengthening the cyber resilience with the implementation of the new advanced firewall solution across the Reserve Bank, supplemented with various forms of cyber awareness initiatives to instil cyber hygiene amongst the staff members. The Reserve Bank has also conceptualised a light weight and portable payment system that can be operated from anywhere by minimum staff, particularly relevant in the challenging times. Further, with a view to upskilling the staff with IT and analytical knowledge, the Reserve Bank initiated work on development of an Advanced Enterprise Computing and Cyber Security Training Centre abutting the new greenfield data centre, construction of which is expected to commence shortly. Upgradation of *e-Kuber* and RTGS systems would also be undertaken during 2023-24, reflecting the Reserve Bank's continuous efforts to use the latest technologies to build a robust and sound payments ecosystem.

X COMMUNICATION, INTERNATIONAL RELATIONS, RESEARCH AND STATISTICS

During the year, with the intensification of uncertainty following the war in Ukraine, the thrust of communication was on greater transparency and clarity, and an endeavour to improve effectiveness by reaching out to a wide spectrum of the audience. Economic policy analysis and research work in the Reserve Bank covered wide-ranging contemporary and strategic issues to aid in policy making and communication. The information management systems were further improved. India took over the G20 Presidency from December 1, 2022, where the Reserve Bank's focus would be on the Finance Track priorities and related deliverables. Efforts were also made towards effective cash management on behalf of the government and sound management of foreign exchange reserves. Legislative initiatives/amendments were pursued during the year to ensure a robust legal framework.

X.1 The Reserve Bank's communication strategy, which adheres to the principles of relevance, transparency, clarity, comprehensiveness and timeliness, has facilitated in effectively managing public perception about its various policies and actions. Further, the verbal and informal way of communication, supplementing structured and written communication, are gaining prominence as they provide an opportunity to communicate directly with the public. During the year, the Reserve Bank strengthened the economic and financial relations with the international organisations and multilateral bodies, and also presented the Indian perspective at various international fora. From December 1, 2022, the Reserve Bank is actively engaged in the G20 Finance Track events in collaboration with the Ministry of Finance for India's G20 Presidency. With the objective to provide greater convenience to taxpayers and to improve the ease of doing business, the Reserve Bank facilitated the migration of the existing process of direct tax collection through online tax accounting system (OLTAS) to Tax Information Network (TIN) 2.0 and promoted the Electronic Cash Ledger (ECL) framework for indirect tax collections (including customs duty) through Indian Customs Electronic Gateway (ICEGATE). In managing the country's forex reserves, the Reserve Bank continued to operate with the overarching objective of safety, liquidity and return, in that order. Alongside, the Reserve Bank sustained its focus on conducting research on contemporary themes that are critical for policy making and communication, strengthened its publications through release of the fifth volume of 'Reserve Bank of India's History' covering the period 1997-2008 and the maiden 'Report on Municipal Finances', besides ensuring timely release of its flagship publications. Information management system was further strengthened through development of the next generation data warehouse [*viz.,* centralised information management system (CIMS)] and use of non-traditional data sources and advanced statistical and artificial intelligence (AI)/machine learning (ML) techniques. Further, the Reserve Bank's Basic Statistical Returns (BSR)[1] system, which provides the distributional aspects of Indian banking, successfully completed fifty years of operation in 2022. The year also witnessed a number of amendments/introduction of legislations pertaining to the financial sector.

[1] Introduced in 1972, it has metamorphosed into a sound and comprehensive reporting system, generating a wide array of useful statistics.

X.2 Against this backdrop, the rest of the chapter is divided into eight sections. The next section presents major initiatives of the Reserve Bank with regard to its communication policy and processes. Section 3 discusses the Reserve Bank's international relations, including interactions with international organisations and multilateral bodies. Section 4 deals with the activities of the Reserve Bank as a banker to governments and banks. Section 5 analyses the conduct of foreign exchange reserves management. Section 6 focuses on research activities, including statutory reports and frontline research publications. Section 7 outlines the activities of the Department of Statistics and Information Management (DSIM), whereas Section 8 presents the activities of the Legal Department. Concluding observations are given in the last section.

2. COMMUNICATION PROCESSES

X.3 In the wake of the dynamic and uncertain global economic conditions following events like the war in Ukraine, climate risk, and synchronised tightening of the monetary policy across central banks, the communication strategy of the central banks has witnessed a distinct shift. Central bank communication, which earlier primarily aimed at conveying the policy actions and their rationale, is now increasingly being used for perception management, recognising the role of adverse and undue shifts in market expectations on tampering the effectiveness of policies. Managing public perception, when dealing with policies and actions relating to complex and technical central banking topics like monetary and macro-prudential policies, regulation and supervision and financial inclusion, is continuing to be a challenge for the central banks.

X.4 For greater transparency, providing a forward guidance in monetary policy communication has become an important policy tool for most of the central banks in the recent past. With the emerging domestic and global economic and financial conditions, some of the central banks are, however, refraining from giving explicit forward guidance. Monetary policy communication is, thus, undergoing a shift amidst an environment of volatility, uncertainty, complexity and ambiguity.

X.5 Structured and written communication, which used to be the only way to communicate to the financial markets and other related stakeholders, is now supplemented by verbal communication in terms of speeches and interviews, informal media interaction, and media workshops on important policy issues. The verbal and informal way of communication has become an effective way of communication as they provide an opportunity for the central bank to communicate directly with the public and provide the rationale behind its policies and actions and the way ahead. This two-way communication, wherein clarifications are also sought on the spot during the question and answer session, is becoming the new norm. The language of speeches and interviews is non-technical and easy to comprehend. Studies have shown that communication is more effective when the central bank uses simple and relatable language as this helps in building public trust and anchoring the expectations of the public. Of late, central banks are using such formal and informal verbal communication to mitigate reputational risk, build trust and confidence in the central bank's operations and strengthen its transparency efforts.

X.6 The role of transparency in communication has risen significantly in recent decades. This trend accelerated with the advent of new-age digital platforms like social media, which allowed the dissemination of information faster and among a larger audience. The Reserve Bank also uses its

360-degree pan-India public awareness campaigns for demystifying the role and functions of the Reserve Bank, communicating policy actions of public interest in an informal and educative format, while aiming at greater engagement with the public. The overarching objective of the Reserve Bank's public awareness campaign (PAC) under the tagline - RBI *Kehta Hai… Jaankar Baniye, Satark Rahiye!* (RBI Says… Be Aware, Be Alert!) - was to create general awareness among bank customers about good practices, regulations and initiatives of the Reserve Bank towards enhancing customer protection while equipping them with the knowledge on how to protect themselves against fraudsters. Further, the process of communication is periodic, calendar-based, and systematic, and includes all social groups.

X.7 The Reserve Bank pursues a proactive communication policy, which is dynamic and aimed at a wide and diversified social spectrum with well-defined interlocutors to reach all groups within society. The messages are tailored to each group as PAC aims at channelising the Reserve Bank's awareness messages to targeted segments of society. The layering of the Reserve Bank's communication *via* social media helped in reaching out to various strata of society.

X.8 During 2022-23, the Department of Communication (DoC) disseminated customised communication using various channels, *viz*., television (TV), print, radio, digital, out-of-home (OOH), short messaging system (SMS) and cinema, in 12 major regional languages apart from Hindi and English. The details of the customised campaign are set out in Table X.1.

X.9 Apart from these thematic campaigns, the Reserve Bank has also participated in high impact/unique events like the Indian Premier League (IPL), *Kaun Banega Crorepati* (KBC) and Fédération Internationale de Football Association

Table X.1: Customised Campaigns: 2022-23

Campaign Details	Period
1	2
1. Retail Direct Scheme	June 2022
2. Unclaimed Deposits	July - August 2022
3. Tokenisation	July - October 2022
4. Campaign on Coins	August - September 2022
5. Campaign on Forex Trading Platforms	September - October 2022
6. Repeat Campaign on RB-IOS	September - October 2022
7. CEPD SMS Campaign	November 2022
8. Frauds Using UPI/QR Code	November 2022
9. Limited Liability in Digital/ Banking Transaction	November - December 2022
10. Positive Pay System	November - December 2022
11. Exchange of Notes	November - December 2022
12. Financial Literacy Week	February 2023
13. Digital Payment Awareness Week	March 2023

RB-IOS : Reserve Bank - Integrated Ombudsman Scheme.
CEPD : Consumer Education and Protection Department.
UPI/QR : Unified Payments Interface/Quick Response.
Source: RBI.

(FIFA) World Cup, for using these platforms for disseminating information to the public. For greater reach in tier-III and IV cities, campaigns were also released through the national broadcasters, *viz*., All India Radio and *Doordarshan*.

X.10 Public awareness messages are also released on social media platforms almost every week through engaging posters, short videos, infographics, animation clips, polls, graphics interchange formats (GIFs) and narratives. For better recall, a mascot 'Money Kumar' is used in all PACs. From January 2023, Ms. Money as a mascot is also being used. These campaigns through digital media supplement the 360-degree campaign involving all the modes of mass media. This communication initiative of the RBI is unique in all respects – with a focus on the larger public, deeply rooted in the nation's culture, still in sync with time and evolving technology (Box X.1).

Box X.1
Use of Social Media in Central Bank Communication

In today's fast-moving and technology-driven world, social media is an essential tool in central banking communication. Many central banks have now set up their own social media channels on popular platforms such as Instagram, Facebook, Twitter and YouTube. With each platform having its own functionalities and target audiences, central banks have become more specific in tailoring their messages to different social media. Social media has also enabled central banks to approach previously unreachable audiences such as people who do not consume news on traditional media. More fundamentally, social media has enabled central banks to speak directly to the public.

The Reserve Bank has made conscious efforts to effectively communicate through social media. The Reserve Bank has its presence on social media platforms such as Instagram, Facebook, Public, Twitter, and YouTube. The Reserve Bank has two Twitter handles (@RBI and @RBIsays), two Facebook accounts (@RBIsays and @therbimuseum), one YouTube channel (Reserve Bank of India) & one Instagram account (reservebankofindia). The Reserve Bank has also launched an account on the 'Public App' (@RBIsays) in January 2023. By using this App, public awareness messages and videos of the Reserve Bank can be targeted and shared in a particular area as per the requirement, that too in vernacular languages, so as to ensure last-mile reach and to make the campaigns more effective. Information on these platforms is updated constantly and consistently for wider dissemination among various stakeholders and the general public. Social media is also used as an important medium for promoting financial literacy, public awareness and information dissemination on the Reserve Bank's policy decisions to the public (Table 1). The introduction of Ms. Money, alongwith Money Kumar, has further enhanced the reach of PACs and their effectiveness (Illustration 1).

The Reserve Bank, through its social media command centre (SMCC), monitors its social media platforms on a regular basis and releases posts on these platforms. The response is provided to the social media posts *via* direct messages in a limited manner. Fictitious pages in the name of the Reserve Bank are regularly identified and reported to social media platforms for removal of the pages. Further, the Department regularly analyses the posts, reach, key messages and top hashtags on social media platforms.

Table 1: Social Media Presence*

Platform	Name of Social Media Handle/Page	Launch Date	Number of Followers/ Subscribers
1	2	3	4
Twitter	i. @RBI	January 2012	19.7 lakh
	ii. @RBIsays	August 2019	1.95 lakh
YouTube	Reserve Bank of India	August 2013	1.71 lakh
Facebook	i. @RBIsays	August 2019	7,800
	ii. @therbimuseum	February 2020	1,460
Instagram	@reservebankofindia	January 2022	2.1 lakh
Public	@RBIsays	January 2023	29,000

*: As on March 31, 2023.
Source: RBI.

Illustration 1: Ms. Money and Money Kumar

Source: RBI.

Agenda for 2022-23

X.11 The Department had set out the following goals for 2022-23:

- Layering of public awareness messages for last-mile connectivity by adding illustrations, animations and infographics for interactive campaigns (Paragraph X.10);
- Revamp the Reserve Bank's website with improved information architecture (*Utkarsh*) [Paragraph X.12];

- Greater engagement with the general public through additional social media platforms, such as Instagram and enhance two-way communication efforts through active social media listening (*Utkarsh*) [Paragraph X.13];
- Targeted media monitoring at the level of regional offices of the Reserve Bank (Paragraph X.13);
- Revisiting the style and usage in written communication as a step towards simplifying the Reserve Bank's internal and external communication content (Paragraph X.14); and
- Conducting impact assessment of the Reserve Bank's public awareness campaigns to gauge their effectiveness (Paragraph X.15).

Implementation Status

RBI Website Revamp

X.12 The work for redesigning and development of the website and mobile application is in advanced stage. The objective is to create a seamless digital experience for the users while ensuring transparency and timely dissemination of information for all its stakeholders. The revamped website and mobile application will go live in 2023.

Social Media Command Centre

X.13 The Reserve Bank has social media presence on Facebook, Instagram, Twitter, Public App, and YouTube. Information on these platforms is updated constantly and consistently for wider dissemination among various stakeholders and the general public. SMCC monitors the Reserve Bank's social media platforms on a regular basis and releases post on its social media platforms.

Revisiting the Style and Usage in Written Communication

X.14 Communications from a central bank assume great significance as they are aimed at informing, regulating, supervising and managing the country's banking and financial system better. The form and the content are integral parts of any communication. The Department has undertaken the work to revisit the 'style and usage' of the Reserve Bank's communication and the same is under progress.

Impact Assessment of the Reserve Bank's Public Awareness Campaigns

X.15 The Reserve Bank has initiated the work of impact assessment of the public awareness campaigns. The overall survey is currently in progress. The assessment is expected to be completed in May 2023.

Other Initiatives

Second Phase of 'The RBI Museum'

X.16 The Reserve Bank has set up a state-of-the-art 'The RBI Museum' in RBI, Kolkata, which was inaugurated on March 11, 2019. The Museum explains the concept of money, its role in the economy and the role of public in it, how different money forms have evolved over the centuries, how and why gold still holds an important place in our society, in an enjoyable and interactive way. As at end - March 2023, the Museum had over 17,300 visitors since its inception. The work pertaining to phase II of The RBI Museum is in progress, under which the various functions of the Reserve Bank will be depicted. The Museum also uses 'The RBI Museum' page on Facebook to promote awareness.

Post-Monetary Policy Press Conferences

X.17 The Governor announces the bi-monthly monetary policy after the meeting of the Monetary Policy Committee (MPC). Subsequent to the announcement, Governor and Deputy Governors interact with the media persons during the post-monetary policy press conference. Six such interactions were conducted during the year.

Workshop for Regional Media Persons

X.18 The Reserve Bank conducts regular workshops and interactions with the regional media. The intent of such workshops is to enable the media persons to appreciate the central bank's functioning in a better and more nuanced manner and to be aware about the latest happenings, concepts and rationale behind the Reserve Bank's policies. Three such workshops were conducted during the year in Guwahati, Ahmedabad and Kochi.

Informal Media Interactions

X.19 Apart from the monetary policy press conferences, the Reserve Bank conducts media interactions in an informal set up and as and when such an engagement is necessary. Thirty such interactions were held during the year.

RBI Website

X.20 During 2022-23, the Department has released 1,952 press releases, 200 notifications, 22 circulars, six Master Directions and uploaded 18 interviews and 36 speeches of the top management, six RBI reports, 10 working papers, 1,375 tenders and 32 recruitment-related advertisements.

Agenda for 2023-24

X.21 During 2023-24, the Reserve Bank's communication channels would be further strengthened, and efforts will be made towards:

- Completion of impact assessment of RBI's public awareness campaigns (*Utkarsh* 2.0);
- Launch of redesigned website, capable of communicating effectively with all stakeholders (*Utkarsh* 2.0); and
- Completion of second phase of 'The RBI Museum' at Kolkata (*Utkarsh* 2.0).

3. INTERNATIONAL RELATIONS

X.22 During 2022-23, the Reserve Bank further reinforced the economic and financial relations, with the international organisations (IOs) and multilateral bodies, through its International Department (ID), and articulated India's perspectives at various international fora such as the International Monetary Fund (IMF), G20, Bank for International Settlements (BIS), Financial Stability Board (FSB), BRICS[2] and SAARCFINANCE. India has taken over the G20 Presidency from December 1, 2022 onwards. Under the G20 Presidency, the Reserve Bank is taking forward the Finance Track priorities and related deliverables in coordination with the Ministry of Finance (MoF), Government of India (GoI). India took over the Chair of Shanghai Cooperation Organisation (SCO) for the year 2023 and the Reserve Bank would work on the deliverables under the Finance Track. The Reserve Bank will assume the chairmanship of the South East Asian Central Banks (SEACEN) centre for a

[2] Brazil, Russia, India, China, and South Africa.

year beginning December 2023 and will host the 59th SEACEN Governors' Conference/High-Level Seminar and the 43rd meeting of the SEACEN Board of Governors.

Agenda for 2022-23

X.23 The Department had set out the following goals for 2022-23:

- Deepening engagement with multilateral institutions, including on issues under the International Financial Architecture Working Group (IFA WG) of the G20 (Paragraph X.24-X.26 and X.34);
- Participation in Advisory Group for G20 Finance Track agenda set up by the MoF, GoI to ideate on priorities, suggest outcomes/ deliverables and provide expert guidance on the Finance Track agenda under the 2023 Indian Presidency of the G20 (Box X.2);
- Strengthening BRICS central banks' cooperation through various channels of engagement (Paragraph X.27);
- Increasing exposure visits and capacity building support for SAARC and other countries through formal memorandum of understandings (MoUs) or otherwise (Paragraph X.28-X.32); and
- India will take over the G20 Presidency on December 1, 2022 and several high-level and working group meetings will be organised in collaboration with the Government of India (Paragraph X.33-X.37).

Implementation Status

IMF

X.24 The Department provided inputs for the International Monetary and Financial Committee (IMFC) deliberations on the early warning exercise; the global policy agenda; and the IMF quota and governance reforms during the Fund-Bank meetings held in April and October 2022.

X.25 The Department facilitated the completion of the IMF Article IV mission held during September 14-27, 2022. The India 2022 Article IV consultation staff report was published on December 23, 2022. The Department participated in various surveys of the IMF such as the Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER), the macroprudential policy survey, the survey on climate issues and policies, and the survey on sustainability initiatives of central banks. The Department also participated in the IMF's survey on governance for country authorities.

X.26 The Department firmed up the Reserve Bank's stance and provided inputs to the MoF, GoI on various international policy issues. It also provided inputs for the World Bank's India Development Update 2022 and participated in the Organisation for Economic Co-operation and Development's (OECD) Advisory Task Force on the Codes[3] (ATFC) meetings.

BRICS, SAARC, SCO and Bilateral Cooperation

X.27 The BRICS Contingent Reserve Arrangement (CRA) technical team finalised the major recommendations for the amendments to the CRA treaty, documents and procedures which will bring more flexibility to the CRA mechanism

[3] OECD Codes of Liberalisation of Capital Movements and of Current Invisible Operations.

including use of alternate payment currencies, thus, strengthening the regional financing arrangement (RFA). The BRICS research group brought out the BRICS Economic Bulletin 2022 covering economic developments in the BRICS countries, while reflecting on recent policy measures and continued the System of Exchange of Macroeconomic Information (SEMI) to track the performance of the BRICS economies. The BRICS central banks conducted two stocktaking surveys on central bank digital currencies (CBDCs) and on transition finance, and continued dialogues and discussions on information security and payment systems.

X.28 The Reserve Bank, with the approval of the GoI, extended the validity of the SAARC framework on currency swap arrangement 2019-22 from November 13, 2022 till June 30, 2023. Bilateral swap agreements were signed by the Reserve Bank with the Royal Monetary Authority of Bhutan (RMAB) in November 2022 and with the Maldives Monetary Authority (MMA) in December 2022. The Reserve Bank also extended currency swap support aggregating US$ 0.9 billion to three SAARC central banks during 2022-23.

X.29 Strengthening the Reserve Bank's efforts for capacity building in the SAARC region, a first of its kind internship opportunity was provided to ten officers from the MMA with the Reserve Bank on data analytics for six weeks. In addition, the Reserve Bank extended technical assistance to the Nepal Rastra Bank (NRB) and the RMAB. A seminar was organised for the SAARC central banks on 'Dynamics of Inflation and its Control in South Asia' in August 2022.

X.30 A country paper on the theme, 'Use of High-Frequency Indicators by Central Banks: Experience and Plans Going Forward', was presented in the SAARCFINANCE database (SFDB) seminar organised by the MMA. Along with the SFDB seminar, the Reserve Bank conducted the SFDB working group meeting and updated the SAARC central banks about the proposed revamp in the database for making it more user friendly and dynamic.

X.31 The Reserve Bank produced the 'Report on Digital Financial Inclusion in the SCO Countries', as a part of the central bank agenda under the SCO Chair for 2023. India hosted the SCO Finance Ministers and Heads of Central Banks meeting on March 3, 2023 and discussed the issue of advancing financial inclusion through the use of digital technology.

X.32 The Senior Level Dialogue between the Bank of Japan and the Reserve Bank was held on March 16, 2023 covering the topics of macroeconomic developments in both the countries, issuance of green bonds by public sector, digital lending regulations and select G20 issues under the Indian presidency.

G20 and its Working Groups

X.33 Under the Indonesian Presidency in 2022, India as a G20 Troika member participated in the G20 Finance Minister and Central Bank Governors (FMCBG) meetings and Finance and Central Bank Deputies (FCBD) meetings, apart from various working group meetings.

X.34 In 2022, under the G20 Indonesian Presidency, the Department participated in the meetings of the G20 IFA WG, and provided inputs on issues relating to capital flows, and engaged in discussions on a review of the International Monetary Fund's (IMF) institutional view on the liberalisation and management of capital flows; the IMF's work on an integrated policy framework; the BIS work on macro financial stability policy framework; adequacy of global financial safety net (GFSN); and the channelling of the special drawing rights (SDRs) of the IMF.

X.35 India assumed the G20 Presidency on December 1, 2022. The theme of India's G20 Presidency - '*Vasudhaiva Kutumbakam*' or 'One Earth · One Family · One Future' - affirms the value of all life - human, animal, plant, and micro-organisms - and their inter-connectedness on the planet earth and in the wider universe. Within the Finance Track, India's priorities encompass, *inter alia*, opportunities and risks emerging from digital technologies, managing climate change risks, financing development and infrastructure, strengthening global financial safety nets, and advancing financial inclusion through leveraging digital public infrastructure (Box X.2).

Box X.2

Finance Track (FT) Priorities Under the G20 India Presidency 2023

India assumed the Presidency of the Group of 20 (G20), amidst a global economic and financial landscape that is confronted with a 'polycrisis', on account of headwinds from weakening global growth momentum, multi-decade high inflation, synchronised monetary policy tightening by central banks and associated spillovers, geopolitical tensions, debt distress, climate change, and the lingering effects of the pandemic.

Within the G20, the FT discusses global macroeconomic issues through its meetings of Finance Ministers and Central Bank Governors, their Deputies and various working group meetings, in collaboration with a number of international organisations. Some of the key issues dealt with by the FT are global economic outlook and monitoring of global economic risks; reforms for a more stable and resilient global financial architecture; international taxation; financing quality infrastructure; sustainable finance; financial inclusion; financial sector issues and financing for future health emergencies and investments in pandemic prevention, preparedness and response. To deal with these diverse issues, G20 has established Working Groups over time, namely, the Framework Working Group (FWG), International Financial Architecture (IFA), Global Partnership for Financial Inclusion (GPFI), Infrastructure Working Group (IWG), Sustainable Finance Working Group (SFWG), and Joint Finance and Health Task Force (JFHTF). In addition, issues concerning the financial sector and international taxation are dealt with directly at the Deputies level with assistance from FSB and OECD, respectively, and presented for approval of the Finance Ministers and the Central Bank Governors.

The Reserve Bank contributed to the meetings of the Advisory Group set up by the MoF, GoI to finalise priorities and deliverables for the G20 FT. Under India's Presidency, the key FT priorities include strengthening Multilateral Development Banks (MDBs) and strengthening financial resilience through sustainable capital flows. There is a priority to take forward the discussion on central bank digital currencies (CBDCs) with a focus on their macro-financial implications, assessing the macroeconomic consequences of food and energy insecurity for the global economy and the resulting implications for macro policy setting, financing inclusive, resilient and sustainable cities of tomorrow and developing a country-driven assessment of the macroeconomic impact of climate change and transition pathways. With regards to sustainable finance, the priorities include work on mechanisms for mobilisation of timely and adequate resources for climate finance, enabling finance for the Sustainable Development Goals (SDGs) and capacity building of the ecosystem for financing toward sustainable development.

Within financial sector regulation, India has proposed focusing on both the risks and opportunities offered by technological developments. The recurring turmoil in crypto markets, de-pegging of some stablecoins and the resultant fall in the market value of the broader crypto markets has reinforced apprehensions that cryptocurrencies are a material threat to financial stability. The intent of India's Presidency is to expand the G20 crypto asset narrative beyond financial stability and financial integrity concerns to capture the macro-financial and cross-sectoral implications and risks of crypto assets. The Presidency intends to shape a coordinated and comprehensive policy approach in G20 jointly, by creating a framework for global regulation of crypto-assets, stablecoins, and decentralised finance (DeFi). Rapidly growing digital financial services and increased dependence on third-party services expose the financial system to operational, liquidity and concentration risks. Under its Presidency, India would like to strengthen financial institutions' ability to manage third-party risks and outsourcing, *inter alia*, arising from BigTech and FinTech. As

(Contd.)

the economy gets more digitised, cyber risk becomes a threat to the financial system, as an outage anywhere in the chain may cause cascading effects impacting the entire financial system. During the India Presidency, focus would be placed on creating a reporting framework for global cooperation to strengthen the financial sector's cyber resilience.

With an aim to bring down the remittance cost of migrants to less than 3 per cent by 2030, in line with the Sustainable Development Goals; and to reduce the time taken between origination and settlement of payments, India's Presidency would prioritise sharing information on national experiences and international initiatives on the interoperability of national fast payment systems for seamless flow of funds. India's Presidency would also work towards leveraging digital public infrastructure for advancing financial inclusion and productivity gains with the help of constructive and actionable policy recommendations for developing a digital financial ecosystem and aid in economic development. Furthermore, under India G20 Presidency, GPFI will prepare and adopt a new Financial Inclusion Action Plan 2023. Also, in the recently concluded 2nd G20 Global Partnership for Financial Inclusion Meeting in Hyderabad during March 6-7, 2023, India and Italy were announced as the new GPFI Co-Chairs with support from the whole membership.

X.36 After India took over the G20 Presidency, the Department in coordination with several domain departments has been piloting the work on several G20 Finance Track priorities relating to RBI. Under the IFA WG, the Department is steering work on priorities, *viz.,* (i) assessing macrofinancial implications of CBDCs; and (ii) strengthening financial resilience through sustainable capital flows. In financial sector issues, the Reserve Bank is leading work on (i) information sharing on national experiences and international initiatives on the interoperability of national fast payment systems for seamless cross-border flow of funds; (ii) strengthening financial institutions' ability to manage third-party risks and outsourcing, among other things, concerning BigTech and FinTech; and (iii) creating a reporting framework for global cooperation to strengthen the financial sector's cyber resilience.

X.37 The first finance and central bank deputies (FCBD) meeting was held under the Indian Presidency in December 2022, where the Presidency priorities met with broad support of membership and IOs. The first G20 Finance Ministers and Central Bank Governors (FMCBG) and second FCBD meetings were held in February 2023. The Chair Summary and Outcome Document of the G20 FMCBG outlines the priorities and future work of G20 in 2023 under India's Presidency, on subjects ranging from global debt crisis, MDB reforms, climate finance, global approach on cryptos, digital public infrastructure, financial inclusion, financing cities of tomorrow, and taxation. The Reserve Bank organised a seminar for central bank delegates on 'Role of Central Banks in Green Financing' on the sidelines of first FCBD meeting, and on 'Cross Border Payments: Perspectives on the Role of National Payment Systems' on the sidelines of the first FMCBG meeting and second FCBD meeting. The Reserve Bank also organised a Panel Discussion on 'Central Bank Digital Currencies: Opportunities and Challenges' in January 2023, and G20 Seminar on 'Strengthening the GFSN in a Fragmenting World' in March 2023, on the sidelines of first and second IFA WG meetings, respectively. In addition, the Reserve Bank has been organising several domestic outreach and public participation (*Jan Bhagidari*) events prior to the G20 Finance Track meetings.

Other Initiatives

Engagement with BIS

X.38 The Department provided analytical support that shaped the Reserve Bank's stance on issues discussed at the Bank for International Settlements (BIS) meetings and the Committee on the Global Financial System (CGFS). The BIS being a forum for dialogue and analysis, discusses economic and financial developments and offers insights on core policy issues. During the year, developments pertaining to inflation, commodity prices and wages were the major themes of discussion. Issues related to monetary tightening spillovers, global supply chains and world trade, financial stability risks and macro-financial linkages in the Asia-Pacific region, decentralised finance, climate change and central bank profitability were widely discussed at the BIS meetings. The CGFS assesses potential sources of stress in global financial markets and promotes improvements in their functioning and stability. During 2022-23, CGFS meetings focused on consequences of volatile commodity markets and monetary tightening on financial stability, potential risks from a downturn in property markets, role of non-bank financial institutions (NBFIs) in cross-border spillovers, vulnerability of NBFIs to rising interest rates and the impact of exchange rate movements.

X.39 The Department contributed to CGFS surveys on the future CGFS work programme and ways to strengthen CGFS. Further, the Department coordinated the Reserve Bank's participation in the BIS Annual Emerging Market Deputy Governors' meeting, BIS working group on inflation, external financial conditions, and macro-financial stability frameworks in the Asia-Pacific, CGFS study group on mitigating housing-related risks and CGFS workshop on climate risks and asset prices. Webinars by the BIS on topical issues such as central bank digital currency were also organised by the Department. In addition, the Department provided support and inputs for activities related to the BIS Board and its administrative committee.

FSB Initiatives on Global Financial Regulation

X.40 The Department provided inputs for formulating India's stance in the FSB on wide-ranging issues that included, *inter alia*, the assessment and monitoring of vulnerabilities in the global financial system; enhancing the resilience of non-banking financial intermediation (NBFI) sector; crypto-assets and other digital innovation; enhancing cross-border payments; cyber and operational resilience; and addressing financial risks from climate change.

X.41 India being the co-chair of FSB's Regional Consultative Group Asia (RCG-Asia), the Department was involved in its two meetings. These meetings focused on the members' outlook for financial stability in the region arising from volatile commodity prices, tightening global financial conditions; progress being made within the region on addressing financial risks from climate change; and FSB's ongoing work on cross-border payments and the emerging market economies' perspectives on cross-border payments.

X.42 The Department contributed to the various surveys conducted by the FSB and the Network for Greening the Financial System (NGFS). The Department also contributed to the FSB's annual monitoring exercise, which assesses global trends in the NBFI sector. As part of the exercise, the Department provided data and inputs for the 'FSB's 2022 Global Monitoring Report on Non-Bank Financial Intermediation'.

Other Activities

X.43 The Reserve Bank continued its active engagement with the IMF South Asia Regional

Training and Technical Assistance Centre (SARTTAC), SEACEN Centre and other IOs such as the World Trade Organisation (WTO), International Finance Corporation (IFC), Group of Thirty (G30) and the Intergovernmental Group of Twenty-Four on International Monetary Affairs and Development (G-24).

X.44 The Department coordinated participation from the Reserve Bank in various international workshops by the SARTTAC, the IMF and other capacity development centres of the IMF. During the year, the Department in coordination with other departments of the Reserve Bank, continued its active engagement with the SEACEN research and training centre. The Department arranged a technical assistance (TA) mission of the IMF for the Financial Stability Unit (FSU) to undertake a review of its analytical capacity and suite of models used for solvency risk analysis, liquidity risk analysis, and balance sheet connectedness of banks in India.

X.45 The Department facilitated the signing of a memorandum of understanding (MoU) between the Reserve Bank of India and the Bank of Indonesia (BI) on July 16, 2022, in Bali, Indonesia, on the sidelines of the G20 Finance Ministers and Central Bank Governors (FMCBG) meeting to improve mutual cooperation between the two central banks. With this MoU, RBI and BI committed to deepen relations between both central banks and strengthen the exchange of information and cooperation in the area of central banking, including payment systems, digital innovation in payments services, and regulatory and supervisory framework for Anti-Money Laundering and Combating the Financing of Terrorism (AML-CFT). The MoU will be implemented through policy dialogues, technical cooperation, exchange of information and joint work.

X.46 The Department is the nodal point in the Reserve Bank for coordination of bilateral dialogues/ meetings with other countries and preparation of inputs on wide-ranging bilateral issues. In this context, the Department provided inputs on diverse issues, covering bilateral trade and investment relations, financial regulation, macroeconomic outlook, economic policies, and other issues of mutual interest with various countries including the US, the UK, Singapore, Australia, Japan and the UAE.

Agenda for 2023-24

X.47 During the year, the Department will intensify the Reserve Bank's international engagement and focus on the following:

- G20 Presidency Finance Track (*Utkarsh* 2.0);
- IMF-WB Joint Quinquennial Surveillance - Financial Sector Assessment Programme (FSAP) for India 2024 (*Utkarsh* 2.0); and
- The Reserve Bank, with the concurrence of the GoI, will put in place SAARC currency swap framework for 2023-26 (*Utkarsh* 2.0).

4. GOVERNMENT AND BANK ACCOUNTS

X.48 The Department of Government and Bank Accounts (DGBA) manages the functions of the Reserve Bank as the banker to banks and banker to governments, besides maintaining internal accounts and formulating accounting policies of the Reserve Bank.

Agenda for 2022-23

X.49 The Department had set out the following goals under *Utkarsh* for 2022-23:

- Enhancing the payments (non-pension) by central civil ministries through integration between *e-Kuber* and public fund management system, including Inter-Government Adjustment Advice (Paragraph X.50);

- Enhancing the e-payment transactions (non-pension) of state governments who are already integrated with *e-Kuber* (Paragraph X.51);
- Integrating remaining state governments in North-East region with *e-Kuber* (Paragraph X.51); and
- Integration of state governments with *e-Kuber* for e-receipts for direct NEFT/ RTGS based receipts and agency bank reporting (Paragraph X.52);
- Onboarding of agency banks for collection of customs duty and other indirect tax receipts through ICEGATE portal of the Central Board of Indirect Taxes and Customs (CBIC) [Paragraph X.53].

Implementation Status

X.50 Integration between e-*Kuber* and Public Fund Management System (PFMS) is being used by central government civil ministries/departments for their large payments. This integration has been enhanced for payments of central government autonomous bodies through a Treasury Single Account (TSA) framework. The TSA framework has also been extended for certain central sector schemes and central public sector enterprises (CPSEs) and statutory bodies. Currently, PFMS is also using integration with e-*Kuber* for electronic inter-government adjustment advice, and the Department is working to migrate the same to an enhanced version.

X.51 Except three state governments in the North-East region, all other state governments have been integrated with *e-Kuber* for e-payment. Many of these state governments are using the Reserve Bank's *e-Kuber* for majority of their e-payment transactions, which is facilitating 'just-in-time' payment for governments.

X.52 During the year, four more state governments got integrated with e-*Kuber* for direct NEFT/RTGS based e-receipts, bringing the total number of state governments integrated with e-*Kuber* for NEFT/RTGS based e-receipts to seven.

X.53 The Indian Customs Electronic Gateway (ICEGATE) system of CBIC was integrated with e-*Kuber* and implemented from July 1, 2019 for collection of indirect taxes [other than Goods and Service Tax (GST)], such as central excise and service tax, by the Reserve Bank through NEFT/RTGS. Later from July 1, 2020, collection of customs duty was also enabled through integration of ICEGATE of CBIC with e-*Kuber.* Electronic Cash Ledger (ECL), an advance or pre-paid payment wallet, for collection of customs duty receipts and other related indirect taxes through ICEGATE portal, has been implemented from April 1, 2023. In addition, during the year, agency banks have also migrated from OLTAS platform to TIN 2.0 platform for direct tax collection (Box X.3).

Other Initiatives

Development of the Dashboard Facility on Status of Certain Government Transactions Processed through e-Kuber

X.54 Development of the dashboard facility for viewing the status of certain government transactions processed through *e-Kuber* was completed. The Reserve Bank is in the process of on-boarding the governments on pilot basis to use this functionality.

Box X.3
Initiatives for Convenience to Taxpayers and Ease of Doing Business

Taking into account the Government of India's overall objective of providing convenience to the taxpayers and enabling ease of doing business, the Reserve Bank has taken several initiatives in the recent past. Some of these initiatives are integration of e-*Kuber* (core banking solution of the Reserve Bank) with systems of central government ministries and departments such as the Public Financial Management System (PFMS) and of state governments so that receipts and payments of government can be processed electronically. This is convenient not only to the taxpayers but also to the government as the reconciliation of the transactions is faster and efficient, leading to efficient cash management in the government. Some of the initiatives taken by the Reserve Bank during 2022-23, which will be continued in the ensuing financial year also, are as follows:

Direct Tax Collections under TIN 2.0

The existing process of collection of direct taxes through the Online Tax Accounting System (OLTAS) is being migrated to the Tax Information Network (TIN) 2.0, which is hosted by the Income Tax Department and the office of the Principal Chief Controller of Accounts (Pr. CCA), Central Board of Direct Taxes (CBDT). The accounting of government transactions under TIN 2.0 are being facilitated through 'PRAKALP' (*Pratyaksh Kar Lekhankan Pranali*), an application of PFMS under the office of the Controller General of Accounts (CGA). The Reserve Bank is working as a collecting bank through NEFT/RTGS as well as an aggregator for accounting and settlement of direct taxes through *e-Kuber*, which is being integrated with the systems of agency banks, TIN and PRAKALP.

During the year, agency banks which were hitherto collecting direct taxes under OLTAS platform have gone live for collection of direct taxes under TIN 2.0 and are reporting the direct tax collections made by them under TIN 2.0 through electronic files to the Reserve Bank on a T+1 basis, enabling quick and efficient reconciliation. Under the OLTAS, tax payers could pay their taxes only through agency banks. However, to ensure the taxpayers having accounts in non-agency banks are able to pay taxes under TIN 2.0, collection of direct taxes under TIN 2.0 by the Reserve Bank through NEFT/RTGS has also been made live, *w.e.f.,* August 1, 2022. This provides ease of paying direct tax to taxpayers from their accounts in any bank in India, which is NEFT/RTGS participant bank[4], on 24 X 7 basis, enabling credit of the tax amount to the government on the same day.

Customs Duty - Electronic Cash Ledger (ECL) for ICEGATE Related Indirect Tax Collections

Since July 1, 2019, the Reserve Bank is the collecting bank for ICEGATE [Indian Customs Electronic Commerce/Electronic Data Interchange (EC/EDI) Gateway] receipts through NEFT/RTGS. The ECL, an initiative of the Central Board of Indirect Taxes and Customs (CBIC), GoI envisages receipt of ICEGATE related indirect tax collections through agency banks authorised by CBIC and also directly by the Reserve Bank through NEFT/RTGS. In the ECL framework, the ECL would function like an advance or pre-paid payment wallet wherein taxpayers can pre-pay amount decided by them which would be credited to their tax ledger, but the actual allocation of taxes from this pre-paid amount to respective tax heads (like customs, cess, excise, *etc.*) would be done at a later stage as per actual tax incurred to be paid by the taxpayer. Like in the case of GST, the Reserve Bank is a collecting bank through direct NEFT/RTGS as well as an aggregating bank for transactions reported by agency banks for ECL.

The ECL framework provides convenience to the taxpayers as they can make ICEGATE related indirect tax payments not only through agency banks but also directly to the Reserve Bank from their accounts in any commercial bank in India which is a NEFT/RTGS participant bank on 24X7 basis, enabling credit of the tax amount to the government on the same day. ECL has been implemented from April 1, 2023.

Source: RBI.

Implementation of Central Sector Schemes through Treasury Single Account (TSA) Model

X.55 As per the Government of India (Department of Expenditure, Ministry of Finance) memorandum dated March 9, 2022, a revised procedure for flow of funds under central sector scheme through the Treasury Single Account (TSA) model was implemented during the year

[4] More than 200 such banks as on date, which includes cooperative banks, regional rural banks, small finance banks, payment banks and foreign banks in India.

in coordination with the office of the Controller General of Accounts. The office memorandum specifies that in case of central sector schemes having an annual outlay of more than ₹500 crore and implemented without the involvement of state agencies, it shall be mandatory to implement such schemes through the TSA model. This will ensure that the funds of these schemes are released 'just in time'.

5. MANAGING FOREIGN EXCHANGE RESERVES

X.56 The continued strengthening of the US dollar during the year and the emerging recent global trend towards de-dollarisation and diversification of reserve assets has started impacting the reserve management practices of central banks. There has been a synchronised rise in policy rates across advanced and emerging market economies in response to elevated inflation. The market is now adapting to the new reality of higher policy rates, with reserve managers facing challenges of preserving the value of foreign exchange reserves in the backdrop of revaluation losses of fixed income securities, volatile foreign exchange markets while still looking for reasonable returns on their portfolios.

X.57 In this backdrop, the Department of External Investments and Operations (DEIO) continued to operate with the overarching objective of safety, liquidity and return in that order for management of foreign exchange reserves (FER). On a year-on-year basis, FER decreased by 4.8 per cent during 2022-23 as compared with 5.3 per cent increase in the previous year.

X.58 Deft management of the forex reserves during the adverse environment of volatile international markets, disruptions in global supply chains, global macroeconomic challenges such as recessionary concerns, high inflation, and monetary policy tightening, has provided the necessary cushion to the economy. In such a situation, internationalisation of the Indian Rupee (INR) as a means to reduce dependence on foreign currencies has got renewed thrust. Accordingly, to realise the vision of enhanced relevance and significant global role (*Utkarsh* 2.0), the Department launched new initiatives like exploring the usage of domestic currencies [of Asian Clearing Union (ACU) member states] including INR for payment and settlement in the ACU, and enabling the Central Bank of Sri Lanka (CBSL) to grant the status of designated foreign currency to INR. Efforts are also being made to facilitate the further internationalisation of INR by setting up a framework for usage of domestic currencies in settlement of bilateral trades as well as for other permissible current and capital account transactions.

X.59 The Department also sustained its endeavour to ensure effective diversification of reserves by exploring new asset classes/ jurisdictions for deployment of foreign currency assets (FCA) as per its defined policy objectives. The process of scaling up of newly introduced products such as forex swaps and repos also continued during the year.

Agenda for 2022-23

X.60 The Department had set out the following goal for 2022-23:

- In order to ensure effective deployment of forex reserves, the Department will continue to explore new products/ opportunities, while ensuring the safety and liquidity of FCA (Paragraph X.61).

Implementation Status

X.61 With the objective of portfolio diversification, the Department has started investing in a few additional markets.

Agenda for 2023-24

X.62 The Department has set the following goals for 2023-24:

- To ensure effective execution of the reserve management functions by implementing the Next Generation Treasury Application (NGTA) [*Utkarsh* 2.0];
- As part of the Reserve Bank's quest for enhancing the role of the INR globally, and given the Department's unique position in assessing the international economic and monetary environment, it will work towards further internationalisation of the INR. Further, the Department will promote the use of INR and other domestic currencies in the ACU mechanism (*Utkarsh* 2.0); and
- Continue to actively manage the forex reserves and adopt strategies for enhancing returns, while conforming to the broad objectives of reserve management.

6. ECONOMIC AND POLICY RESEARCH

X.63 The Department of Economic and Policy Research (DEPR), being the knowledge centre of the Reserve Bank, provides analytical and research-based inputs for policy formulation and communication. The Department is involved in (a) preparation of various statutory and non-statutory publications of the Reserve Bank; (b) collection of primary data, and compilation/dissemination of secondary data on various economic heads relating to the Indian economy; (c) research publications containing papers/articles prepared by the Reserve Bank's research and other staff; (d) release of studies involving collaborative research by the Reserve Bank's staff with external researchers; and (e) analytical support to policy making and technical groups/committees constituted by the Reserve Bank from time to time.

X.64 The 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 was completed on time, while maintaining the quality of data.

X.65 In 2022-23, the Department reverted seamlessly to working from office after the third wave of COVID-19 receded and continued to provide all analytical and research inputs required for policy making in a timely manner. The Department released all statutory and non-statutory reports on time. The number of research papers prepared and published during the year increased significantly, while the peer review process was also strengthened to ensure the quality of research.

Agenda for 2022-23

X.66 The Department had set out the following goals for 2022-23:

- Publishing a minimum of 100 research papers every year and to improve the quality of analysis and research, with broader coverage of emerging issues (*Utkarsh*) [Paragraph X.67- X.69];
- Making Municipal Finance Report timely and improving the coverage of the report (*Utkarsh)* [Paragraph X.70];
- Annual compilation of the [capital (K), labour (L), energy (E), material (M) and services (S)] (KLEMS) dataset and manual by the Department (*Utkarsh*) [Paragraph X.71];
- Application of new machine learning techniques for assessing macro-economic outlook (Paragraph X.72); and

- Embedding climate risk in the traditional macro-modelling framework and analysing its impact on macroeconomic aggregates (Paragraph X.72).

Implementation Status

X.67 During 2022-23, the Department released its flagship statutory reports, *viz*., the RBI Annual Report and the Report on Trend and Progress of Banking in India in a timely manner. The fifth volume of the 'Reserve Bank of India's History' encompassing the 11-year period from 1997 to 2008, and the State Finances Report titled 'State Finances: A Study of Budgets – 2022-23' were released during the year. Furthermore, the 'Handbook of Statistics on Indian States – 2021-22' was also released during the year. The Report on Currency and Finance 2022-23, carrying the theme 'Towards a Greener Cleaner India' was released on May 3, 2023.

X.68 The Department published 121 research papers/articles during the year, which included 33 papers in external international and domestic journals, ten papers in RBI Working Papers, eight papers in the RBI Occasional Papers, two DRG Studies, and 68 articles in the RBI Bulletin.

X.69 A number of contemporary issues crucial for informed policy making were covered as part of these published research papers/articles, *viz*., (a) Measuring India's Digital Economy; (b) Composite Coincident Index for Unorganised Sector Activity in India; (c) Index of Supply Chain Pressures for India (ISPI); (d) Inflation Expectations Anchoring Index (IEAI); (e) Forecasting Food Inflation using News-based Sentiment Indicators; (f) Estimation of Green GDP; (g) Revisiting India's Natural Rate of Interest; (h) Financial Inclusion through Microfinance in the North-East; (i) India's Innovation Ecosystem for Productivity-led Growth; (j) Economic Impact of Climate Change on Coastal States; (k) Digitisation in the Cooperative Banks; (l) Industrial Revolution 4.0; and (m) Decomposition Analysis of Carbon Dioxide Emissions from India's Manufacturing Sector.

X.70 During the year, the Department also made a unique foray into municipal finances through its publication of the 'Report on Municipal Finances'. The Report was themed on 'Alternative Sources of Financing for Municipal Corporations' and used budgetary data of 201 municipal corporations covering all states.

X.71 The Department completed the independent compilation of KLEMS data during the year and released the data along with the manual on the Reserve Bank's website in October 2022.

X.72 During 2022-23, the Department conducted nowcasting of inflation based on financial market data using a supervised forecast model and worked on embedding climate risk in traditional macro-modeling framework to quantify the direct and cascading effects of transitioning towards a greener economy. Furthermore, studies based on machine learning techniques for assessing (a) the macro-economic outlook; and (b) the implications of climate change for Indian agriculture were undertaken during the year.

Other Initiatives

X.73 During the year, the DEPR Study Circle, an in-house discussion forum, organised 38 online seminars/presentations of research papers on diverse topics. The Department also organised its Annual Research Conference in Hyderabad in November 2022 wherein topical issues, such as public health in the post-pandemic period, and the economics of climate change were discussed.

X.74 During the year, the central library subscribed to three new online databases and facilitated uninterrupted remote access to various databases and other reference resources required for undertaking research. During the year, the RBI Archives accessioned 210 files from various central office departments, regional offices, and training establishments. The digitisation of about five lakh pages was completed during the year.

Agenda for 2023-24

X.75 The Department's agenda for 2023-24 will focus on achieving the following goals:

- Publication of a minimum of 100 research papers and to improve the quality of analysis and research with broader coverage of emerging issues (*Utkarsh* 2.0);
- Development of a 'Global Monetary Policy and Global Spillovers Dashboard' with indices to measure spillovers (*Utkarsh* 2.0);
- Development of a 'Global Supply Chain Monitoring Framework' (*Utkarsh* 2.0); and
- Studies on various topical issues having policy relevance will be undertaken during the year.

7. STATISTICS AND INFORMATION MANAGEMENT

X.76 The Department of Statistics and Information Management (DSIM) consolidated its core functions of compilation, analysis, and dissemination of macro-financial statistics by deploying new technology-enabled tools, and provided statistical support through enterprise and household surveys, data management and analysis for policy formulation and also assisted in other functions of the Reserve Bank. The investment over the years in technology and human resources, including hand-holding and other guidance of the data reporting entities, stood in good stead for providing continuity and refinement of data in periods of disruptions. The evolving dynamics since the pandemic has also highlighted the pressing need to explore non-traditional data sources for supporting informed decision making and the Department has made use of Big data/ artificial intelligence (AI) / machine learning (ML) techniques in analysing the unstructured/non-traditional data sources, to supplement traditional analysis. Select modules of the next generation data warehouse [*viz.*, centralised information management system (CIMS)] were also released for parallel run.

Agenda for 2022-23

X.77 The Department had set out the following goals for 2022-23:

- Completion of all integration in the advanced analytics environment and automate publication workflow of all regular data publications in the next generation data warehouse (*Utkarsh*) [Paragraph X.78];
- Populating the comprehensive credit information repository in a phased manner starting with SCBs (*Utkarsh*) [Paragraph X.79];
- Implementation of the new data governance framework through a flexible element-based repository (EBR) with the facility to convert from a return-based repository (RBR) by carrying out forward and reverse engineering to ensure completeness (Paragraph X.80);
- Maintaining a 'Regulatory Reporting' link on the Reserve Bank's website giving all

resources and validation rules to aid banks and other reporting entities for further improving the quality of data reporting to the Reserve Bank (Paragraph X.81);

- Further refinement of the estimation procedures for monetary policy surveys under the guidance of the Technical Advisory Committee on Surveys (TACS) [Paragraph X.82]; and
- Exploring alternate sources of data, including satellite data in the areas relevant to the Reserve Bank and use of advanced statistical tools, including Big data and ML techniques (Paragraph X.83).

Implementation Status

X.78 As a part of CIMS implementation, all components of the advanced analytics environment are presently under testing and will be released to the users in a phased manner. Automation of publications workflow for all regular publications has also reached the testing stage.

X.79 Application development for the comprehensive credit information repository (CCIR) is underway. After completion of testing and a pilot run with select SCBs, the repository will go live.

X.80 A convertor tool for converting data from RBR to EBR has been developed and successfully tested for major supervisory returns, and more items are being added. Also, the tables for mapping RBR to the corresponding Statistical Data and Metadata eXchange (SDMX) elements have been designed for a substantial number of returns as well as non-return data.

X.81 The 'Regulatory Reporting' tab on the website has been revamped and augmented with frequently asked questions (FAQs), manuals, guidance notes, and validation rules to facilitate reporting by regulated entities.

X.82 Efforts were made towards refinement in the data quality and compilation methodologies for robust estimation from the regular surveys, under the guidance of the Technical Advisory Committee on Surveys (TACS). It included: (a) launching a pilot household survey in rural and semi-urban areas; and (b) capturing the sentiments of construction companies engaged in infrastructure projects and real estate activities separately in the services and infrastructure outlook survey (SIOS).

X.83 In analytical work, the use of Big data, natural language processing (NLP) and ML techniques increased, and alternate sources of data were also used. These included media sentiment on macroeconomic variables, online prices of food and housing, central bank communication as well as economic forecasting using payment systems indicators and forward-looking surveys. The scope of remote sensing projects was extended to cover more sensitive agricultural commodities [*viz.,* pulses, oilseeds, onion, and wheat, having significant weight in consumer price index (CPI) basket] by including a host of indicators (*viz.*, vegetation, precipitation, soil moisture, temperature and global climatic factors, such as sea surface temperature and sea level pressure).

Other Initiatives

X.84 The Basic Statistical Returns (BSR) system, which provides the distributional aspects of Indian banking for the last five decades, was revisited in two conferences organised during October-November 2022, where bankers and other experts also participated. Based on the deliberations, the frequencies of BSR-1 (details of credit) and BSR-2 (details of deposits) returns

Box X.4
Basic Statistical Returns @50 Years

The BSR system was crafted on the recommendation of the Committee on Banking Statistics in 1972 in such a way that it not only fulfilled the requirement for policy decisions and detailed monitoring with the best available data from banks, but also reduced the reporting burden for banks. Subsequently, the Committee of Direction on Banking Statistics (CDBS) was constituted with representatives from banks, Indian Banks' Association (IBA) and other stakeholders, besides the concerned departments of the Reserve Bank, to guide the BSR system.

The BSR system successfully completed fifty years of operation in 2022. Over the course of fifty years, the system along with banking infrastructure details supplied crucial inputs for public policy. It provided comprehensive statistics on several important factors, including the economic sector, geography, institutions, occupations, bank groups, and the types of loans and deposits, among others. It covers all the scheduled commercial banks including regional rural banks, and all of them have remained committed partners of the Reserve Bank in the system.

Two conferences were organised on October 28, 2022 at the central office in Mumbai and on November 4, 2022 at Indian Institute of Bank Management (IIBM) in Guwahati to celebrate the conclusion of the journey of fifty years and to consider the way forward. The conference events comprised:

1. Fifty years of Indian Banking through the lens of Basic Statistical Returns, speech delivered by Deputy Governor, Dr. Michael Debabrata Patra;
2. A 50-year journey (1972-2022) of BSR: A Presentation;
3. Knowledge sharing - Presentation of five research articles utilising banking statistics; and
4. The way forward in BSR - Discussion on major changes to be implemented in the system from next year onwards.

The major upcoming changes in the system that were emphasised are:

1. Discontinuation of the quarterly BSR-7 reporting;
2. Release of BSR-2 with quarterly frequency; and
3. Collection of additional information on age-wise distribution of deposits owned by individuals and females in BSR-2.

References:

1. Patra, M. D. (2022), 'Fifty Years of Indian Banking Through the Lens of Basic Statistical Returns', *RBI Bulletin November 2022*.
2. Rangarajan, C. (2008), 'Report of the Committee on Financial Inclusion'.
3. RBI (2022), 'BSR@50 Commemorative Volume (1972-2022)'.
4. RBI (1972), 'Report of the Committee on Banking Statistics (Chairman: Shri A. Raman)'.

Source: RBI.

are being synchronised, and the BSR-7 return has been discontinued after December 2022. On this occasion, a commemorative volume 'BSR@50', containing a 50-year history of BSR and the Central Information System for Banking Infrastructure (CISBI: erstwhile Master Office File) as well as select research work based on BSR data, was also released (Box X.4).

X.85 Information sources for the completion of balance of payment (BoP) data were expanded to cover foreign exchange transactions by the branches and subsidiaries of banks operating in International Financial Services Centre (IFSC). The coverage of the annual census on foreign liabilities and assets (FLA) of Indian direct investment entities was also improved. Publication lag of all the regular banking and external sector surveys was reduced with persistent efforts and handholding of banks and other reporting entities.

X.86 The COVID-19 pandemic induced disruptions have necessitated suitable adjustments in methodologies for analysis and generating reliable forecasts of critical macroeconomic variables. Methodological improvements were carried out for estimation of seasonal behaviour of output and price indicators to address the issue.

Agenda for 2023-24

X.87 The Department will focus on the following goals during 2023-24:

- Build advanced analytical environment in the state-of-the-art data portal and customised dashboards for users (*Utkarsh* 2.0);
- Implement the remaining modules of CIMS, provide query and visualisation tools, onboard all the regulated entities, and decommission the old systems [centralised database management system (CDBMS) and eXtensible business reporting language (XBRL) portal];
- Extend the Reserve Bank's regular household surveys to rural and semi-urban areas (*Utkarsh* 2.0);
- Refine data quality for banking returns using AI/ML techniques (*Utkarsh* 2.0); and
- Build additional high-frequency indicators of economic activity by using non-traditional data.

8. LEGAL ISSUES

X.88 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 also functions as the secretariat to the First Appellate Authority under the Right to Information Act, 2005 and represents the Reserve Bank 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), Centre for Advanced Financial Research and Learning (CAFRAL), and other RBI-owned institutions on legal issues, litigation and court matters.

Agenda for 2022-23

X.89 The Department had set out the following goals for 2022-23:

- Completion of the implementation of the workflow automation process application (*Utkarsh*) [Paragraph X.90];
- Merging the existing opinion database management system and the litigation management system (*Utkarsh*) [Paragraph X.90]; and
- Digitisation of available/existing legal records and providing their access to the users (Paragraph X.91).

Implementation Status

X.90 The workflow automation process application, case management system (CaMS), of the Legal Department has been developed by the Reserve Bank Information Technology Private Ltd. (ReBIT). This application integrates the existing opinion database management system and litigation management system. The application was tested on a pilot basis. The feedback obtained from the pilot users has been integrated into the application. The first phase of the application comprising three modules has gone live.

X.91 The digitisation of available legal records is under progress.

Other Developments

X.92 The following important legislations/ regulations concerning the financial sector were brought in/amended during the year:

- *Amendment to the Reserve Bank of India Act, 1934:* The Finance Act, 2022 amended the Reserve Bank of India Act, 1934 by inserting the definition of 'bank note' in Section 2 of the Reserve Bank of India Act, 1934. This has paved the way for introduction of digital currency in the country by the Reserve Bank.
- *Bringing Credit Information Companies within the Ambit of RBIOS 2021:* The Reserve Bank Integrated Ombudsman Scheme (RBIOS), 2021 has been amended to include 'Credit Information Company', as defined in the Credit Information Companies (Regulation) Act, 2005, as a 'Regulated Entity' for the purpose of the Scheme. As a result, the Scheme shall also be applicable to Credit Information Companies to the extent not specifically excluded under the Scheme. The amendment in the Scheme has come into force with effect from September 1, 2022.
- *Amendment of Foreign Exchange Management (Non-Debt Instruments) Rules, 2019* : The central government has made Foreign Exchange Management (Non-debt Instruments) (Amendment) Rules, 2022 to further amend the principal rules, *i.e.,* Foreign Exchange Management (Non-Debt Instruments) Rules, 2019. The amendment has come into force on April 12, 2022.

Agenda for 2023-24

X.93 In 2023-24, the Department will focus on the following goals:

- Upgrading the case management system (CaMS) to CaMS 2.0 for enabling: (a) integration with external judicial websites for real time case status; and (b) access to CaMS over internet, facilitating 'work from anywhere' mode (*Utkarsh* 2.0)*;*
- Drafting and publishing a Legal Department manual for the internal use of the Reserve Bank (*Utkarsh* 2.0)*;* and
- Continuing the digitisation of available/ existing legal records and providing access to the same.

9. CONCLUSION

X.94 The Reserve Bank's communication strategy and verbal and informal communication is increasingly supplementing structured and written communication to enhance its effectiveness. The Reserve Bank also utilised its 360-degree pan-India public awareness campaigns for demystifying its role and functions, communicating policy actions of public interest in an informal and educative format, while aiming at greater engagement with the public. The Reserve Bank further reinforced the economic and financial relations, particularly with the international organisations and multilateral bodies. India has taken over the G20 Presidency from December 1, 2022, and the Reserve Bank will assume the chairmanship of the SEACEN Centre for a year beginning December 2023. The analytical and research inputs required for policy making and communication were met in a timely manner and statutory and non-statutory publications disseminated the research work conducted in the Reserve Bank on a whole range of contemporary policy and strategic issues. The statistics and information management at the Reserve Bank consolidated its core functions of compilation, analysis, and dissemination of macro-financial statistics by deploying new technology enabled tools, and provided statistical support through enterprise surveys, data management and analytical inputs for policy formulation.

XI

GOVERNANCE, HUMAN RESOURCES AND ORGANISATIONAL MANAGEMENT

The Reserve Bank continued to undertake pro-active measures to strengthen its human resources through new recruitments and training programmes (including e-learning) to build a diverse and robust set of capabilities in sync with the dynamically changing requirements and the wide canvas of its working and operations. Also, an Employee Assistance Programme (EAP) was introduced during the year to enhance the emotional and psychological well-being of its employees. It also unveiled its medium-term strategy framework for the period January 2023 to December 2025 (Utkarsh 2.0). The risk monitoring and internal audit mechanism was strengthened by creating an institutional feedback loop between the Inspection Department and Risk Monitoring Department.

XI.1 This chapter discusses key aspects of the Reserve Bank's organisational functioning - governance, human resource management, risk monitoring and corporate strategy and budgeting, apart from covering the activities of departments dealing with internal audit, Rajbhasha and premises. The chapter reviews the major developments, evaluates their outcomes during 2022-23 *vis-à-vis* the goals set at the beginning of the year and sets out priorities for 2023-24.

XI.2 During the year, human resources were strengthened through recruitment and trainings, both in-house and external. Also, a new framework for training was prepared that dovetails into organisational objectives, leverages latest available technology to deliver learning inputs and reduces observable areas of overlap amongst the Reserve Bank's training establishments (TEs). In addition to training, the Reserve Bank also facilitated study schemes for its officers as well as nominated them for seminars and conferences to benefit from the expertise available in India and abroad. While the Employee Assistance Programme (EAP) was unveiled to address the emotional and psychological needs of the employees, the 'work from anywhere' paradigm is under examination considering the unique organisational requirements.

XI.3 In line with the goals set for 2022-23, the Risk Monitoring Department (RMD) achieved the harmonisation of risk-rating determined under the Risk Assessment Methodology for Operational Risk (RAM-OR), with the risk assessment under the Risk-Based Internal Audit (RBIA) and creation of an institutional feedback loop between the Inspection Department and RMD. Further, the automated risk register module was operationalised.

XI.4 The Inspection Department focused on enabling a convergent view on the various risks facing the Reserve Bank through a greater synergy with RMD. The Department also implemented the various recommendations of the Internal Working Group (IWG), including setting up of zonal inspectorates (ZIs) to improve the quality of compliance and also strengthen the internal control system.

XI.5 During the year, the Corporate Strategy and Budget Department (CSBD) formulated the Reserve Bank's medium-term strategy framework[1] for the period January 2023 to December 2025

[1] The Reserve Bank's medium-term strategy framework for the period June 2019 to December 2022 was covered under *Utkarsh* 2022.

(*Utkarsh* 2.0). Also, CSBD, the nodal Department for business continuity management (BCM) framework of the Reserve Bank, reviewed the BCM policy and business continuity plans (BCPs) of all the business units, including updation of time sensitive critical activities (TSCAs) and released a compendium on business continuity measures undertaken by the Reserve Bank during the COVID-19 pandemic.

XI.6 The Rajbhasha Department ensured compliance of various statutory requirements under the Official Language Policy in accordance with the Annual Programme on Rajbhasha and other instructions issued by Government of India (GoI). The Department also conducted various review meetings regarding the use of Hindi, organised training programmes, conferences, lectures, seminars and contributed to making the Reserve Bank's publications bilingual, while encouraging creative writing through publication of e-magazines and Hindi journals.

XI.7 The Premises Department pursued its mandate of construction, maintenance and upgradation of physical infrastructure in an environment-friendly manner, while ensuring aesthetic appeal. During the year, apart from making progress in completion of ongoing construction projects, the Department surpassed the target for energy savings, secured green ratings for office and residential buildings of the Reserve Bank, and also operationalised platforms/software for monitoring major construction projects.

XI.8 This chapter is organised into nine sections. The developments relating to the governance structure of the Reserve Bank are set out in section 2. Section 3 outlines the initiatives undertaken by the Human Resource Management Department (HRMD) during the year in the areas of human resource management and development. Developments relating to enterprise-wide risk management framework are presented in section 4. The activities of the Inspection Department during the year are discussed in section 5. The functioning of the CSBD, which coordinates and develops strategies for the Reserve Bank, is covered in section 6. The activities and accomplishments of the Rajbhasha and Premises departments are presented in section 7 and 8, respectively. The chapter has been summarised at the end.

2. GOVERNANCE STRUCTURE

XI.9 The Central Board of Directors is entrusted with the governance functions of the Reserve Bank in accordance with the Reserve Bank of India (RBI) Act, 1934. It comprises the Governor as the Chairperson, Deputy Governors and Directors nominated by the Central Government. There are four Local Boards, one each for the Northern, Southern, Eastern and Western areas, to advise the Central Board on matters referred to them and perform duties delegated by the Central Board. Members of the Local Boards are also appointed by the Central Government in accordance with the RBI Act, 1934.

XI.10 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 five Sub-Committees: the Audit and Risk Management Sub-Committee (ARMS); the Human Resource Management Sub-Committee (HRM-SC); the Building Sub-Committee (B-SC); the Information Technology Sub-Committee (IT-SC) and the Strategy Sub-Committee (S-SC). Each of these Sub-Committees are headed by an external Director.

Meetings of the Central Board, CCB and Local Boards

XI.11 The Central Board held seven meetings between April 1, 2022 and March 31, 2023.

XI.12 The CCB held 46 meetings between April 1, 2022 and March 31, 2023, 34 of which were held as e-meetings, 11 in person and one through video conferencing. The CCB attends to the current business of the Reserve Bank, including approval of its Weekly Statement of Affairs.

XI.13 As on April 1, 2022, a Standing Committee of the Central Board, consisting of two external Directors, was functioning *in lieu* of those Local Boards, *viz.*, Western, Eastern and Southern Local Boards, which were unable to function for want of quorum. Subsequent to the end of term of a Member on September 18, 2022, the Northern Area Local Board also could not function due to lack of quorum. Therefore, as on March 31, 2023, the Standing Committee was functioning *in lieu* of the Northern, Western, Eastern and Southern Area Local Boards. The Standing Committee of the Central Board held one meeting for the Northern Area and two meetings each for the Western, Eastern and Southern Area during the period April 1, 2022 to March 31, 2023. The Northern Area Local Board held two meetings during April to September 2022. The details of participation of Directors / Members in meetings of the Central Board, its Committees and Sub-Committees, Local Boards and Standing Committee of the Central Board *in lieu* of Local Boards are given in Annex Tables XI.1-5.

Central Board/Local Boards

XI.14 The Central Government re-appointed Dr. Michael Debabrata Patra as Deputy Governor, Reserve Bank of India for a further period of one year with effect from January 15, 2023 or until further orders, whichever was earlier.

XI.15 The Central Government nominated Shri Anand Gopal Mahindra, Shri Venu Srinivasan, Shri Pankaj Ramanbhai Patel and Dr. Ravindra H. Dholakia as Directors on the Central Board of the Reserve Bank under Section 8(1)(c) of the RBI Act, 1934 on June 14, 2022 for a period of four years or until further orders, whichever was earlier.

XI.16 The Central Government re-nominated Shri Satish Kashinath Marathe and Shri S. Gurumurthy as Directors on the Central Board of the Reserve Bank under Section 8(1)(c) of the RBI Act, 1934 on August 11, 2022 for a period of four years or until further orders, whichever was earlier.

XI.17 Smt. Revathy Iyer was re-appointed as Member of the Northern Area Local Board under Section 9(1) of the RBI Act, 1934 and re-nominated as Director on the Central Board of the Reserve Bank under Section 8(1)(b) of the RBI Act, 1934 for a period of four years, after completion of her tenure on September 18, 2022 or until further orders, whichever was earlier.

XI.18 Prof. Sachin Chaturvedi was re-appointed as Member of the Eastern Area Local Board under Section 9(1) of the RBI Act, 1934 and re-nominated as Director on the Central Board of the Reserve Bank under Section 8(1)(b) of the RBI Act, 1934 for a period of four years, after completion of his tenure on September 18, 2022 or until further orders, whichever was earlier.

XI.19 The Central Government nominated Dr. Vivek Joshi, Secretary, Department of Financial Services, Ministry of Finance, Government of India with effect from November 15, 2022 and until further orders *vice* Shri Sanjay Malhotra as Director on the Central Board of the Reserve Bank under Section 8(1)(d) of the RBI Act, 1934.

XI.20 The term of Shri R. N. Dubey as Member of Northern Area Local Board ended on September 18, 2022.

Executive Directors

XI.21 Dr. Mridul K. Saggar, Executive Director superannuated on April 29, 2022. Shri Anil Kumar Sharma, Executive Director superannuated on March 31, 2023. Dr. Rajiv Ranjan and Dr. Sitikantha Pattanaik were promoted as Executive Directors on May 2, 2022. Shri Neeraj Nigam was promoted as Executive Director on April 3, 2023.

3. HUMAN RESOURCE DEVELOPMENT INITIATIVES

XI.22 The Reserve Bank has a wide canvas of operations, requiring diversified skills and a robust set of internal capabilities to fulfill its mandate. The Human Resource Management Department (HRMD) plays the role of an enabler and a facilitator to build and maintain an efficient and motivated workforce in the Reserve Bank. During the year, the Department continued its focus on upscaling the skillset through recruitment and training, including e-learning, and prioritised staff welfare, especially emotional and psychological well-being of employees and their families. Major initiatives undertaken during the year in these and other areas are highlighted below, along with a status of implementation of the agenda set for 2022-23 as also the agenda for 2023-24.

Agenda for 2022-23

XI.23 Last year, the Department had set out the following goals:

- Providing optimum opportunities to and upgrading skills and knowledge of the officers who participate in international meetings/conferences/seminars (IMF/BIS/G-20/SAARC, *etc.*) [*Utkarsh*] (Paragraph XI.24);
- To devise a policy on 'Working from Anywhere' for building a seamless work environment as part of business continuity planning (Paragraph XI.25);
- To review the Reserve Bank's training establishments, apart from reviewing and consolidating the various training related schemes (Paragraph XI.26);
- To set up an 'Employee Assistance Programme' on wellness related matters (Paragraph XI.27); and
- To develop an 'Employee Engagement Platform' as a single access point to online resources of the Reserve Bank and for strengthening Bank-employee and employee-employee communication (Paragraph XI.28).

Implementation Status

XI.24 The domain experts who have represented the Reserve Bank in International meetings/forums across all departments in the Reserve Bank are being provided with inputs focusing on upgradation of skills and knowledge. The guidance which is provided to the officers are prepared on the basis of deliberations with the top management of the Reserve Bank and premier academic institutions of the country.

XI.25 The 'Work from Anywhere' paradigm in the Reserve Bank is under examination, given the unique characteristics and requirements of a full-service central bank like the Reserve Bank. There is a need to strike a balance between employee welfare and parity in working conditions across various centres and cadres.

XI.26 The scope and coverage of working of the Reserve Bank's training establishments was reviewed to reduce the observable areas of overlap and to optimise the training infrastructure of the Reserve Bank. The training related schemes of the Reserve Bank which were introduced at various points in time, were synchronised and reviewed, wherever necessary, in order to further align them with the organisational objectives.

XI.27 An Employee Assistance Programme (EAP) was launched on October 11, 2022 for the employees and their eligible family members. The major objective of EAP along with its *modus operandi* are covered in Box XI.1.

XI.28 The work related to developing an 'Employee Engagement Portal' has been subsumed in a project currently being undertaken for revamping the intranet portal of the Reserve Bank, namely, Enterprise Knowledge Portal (EKP).

Major Developments

In-house Training

XI.29 The effectiveness of trainings begins with an effective analysis of training needs which dovetail into the organisational objectives. Accordingly, a new framework for training was prepared. The framework covers (a) various levels for training requirements ranging from induction level trainings for officers joining a department/functional area, trainings for ensuring business continuity through seamless succession, trainings for upskilling/reskilling and transformation-oriented trainings, which would help the Reserve Bank leverage latest developments including those in technology; (b) the continued focus of the Reserve Bank's training establishments (TEs) and Zonal Training Centres (ZTCs) focusing on upgradation of functional and behavioural skills of employees to enhance their efficiency and effectiveness and conducting a number of programmes during the year towards achievement of these objectives; and (c) the leveraging of technology to provide learning inputs through online and e-learning modes through the Reserve Bank's training establishments (Table XI.1).

Training at External Institutions

XI.30 The Reserve Bank nominated its officers for training programmes, seminars and conferences conducted in India and abroad, through both online and offline modes, in order to tap the expertise available in leading external institutes (Table XI.2). Class III and IV employees were also deputed for training in external institutions in India.

Box XI.1
Employee Assistance Programme

Stress at the workplace, whether due to physical work conditions or the prevailing interpersonal environment, negatively impacts employee health as well as productivity.

Since dealing with such problems at work is tricky and complicated, for both an employee and the team leader; intervention of a neutral party can be helpful in such situations.

The Employee Assistance Programme (EAP) provides support and coaching across a wide range of concerns including stress, anxiety and depression. The EAP provides employees with access to third-party professional counselling service, *i.e.*, counsellors having an accredited degree in psychology/counselling, who may be accessed through multiple modes including mobile phone, video conference and face-to-face meetings. The employees are provided with access through a 24/7 hotline so that an appointment with a psychologist/counsellor can be arranged quickly with the option to access through the service provider's App (containing positive psychology tools and resources and enabling access to the EAP hotline on the go). The programme provides support while ensuring confidentiality of the user employee as the employer does not know who uses the service.

Source: RBI.

Table XI.1: Programmes Conducted at Reserve Bank's Training Establishments

Training Establishment	2020-21 (July-March)#		2021-22 (April-March)		2022-23 (April-March)	
	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
RBSC, Chennai	89	3,629 (72)	122	4,267 (325)	97	2,800 (12)
CoS##	3	74*	43	1,726*	59	2,212*
RBI Academy	25	840	18	1185	15	1,274
CAB, Pune	183	10,308* (45)	216	13,308* (134)	194	23,657*
ZTCs (Class I)	135	3,682	127	3,140	112	2,511
ZTCs (Class III)	104	4,568	109	3,920	103	3,396
ZTCs (Class IV)	11	417	23	820	36	983

RBSC: Reserve Bank Staff College. CAB: College of Agricultural Banking.

\# : With change in the Reserve Bank's accounting year to April-March from 2020-21 onwards, the first year of the Reserve Bank's transition year was of nine months (July 2020 - March 2021).

\## : College of Supervisors (CoS) is administratively attached to Department of Supervision (DoS), Central Office and has a vision of creating a world-class, reputed capacity-building institution, committed to developing knowledgeable, skilled and proactive supervisors, regulators and regulated entity personnel in India and around the world.

* : Figures comprise RBI participants, non-RBI participants (domestic), foreign participants and/or participants from external institutions.

Note: Figures in parentheses pertain to foreign participants and/or participants from external institutions.

Source: RBI.

Study Schemes

XI.31 A total of 13 officers availed the schemes for pursuing higher studies during the year. Of these, five officers are pursuing higher studies overseas.

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
2020 - 21 (July-March)*#	194	258
2021 - 22 (April-March)	326	496*
2022 - 23 (April-March)	401	420 (266)*

*: Online mode. #: Refer to footnote of Table XI.1.

Source: RBI.

Other Initiatives

Grants and Endowments

XI.32 As a part of its mission to promote research, training and consultancy in the banking and financial sector, the Reserve Bank provided financial support amounting to ₹33.56 crore to the Indira Gandhi Institute of Development Research (IGIDR), Mumbai; ₹8.14 crore to the Centre for Advanced Financial Research and Learning (CAFRAL), Mumbai; ₹0.76 crore to the London School of Economics (LSE) India Observatory and the IG Patel Chair; ₹0.47 crore to the National Institute of Bank Management (NIBM), Pune and ₹0.72 crore to the Indian Institute of Bank Management (IIBM), Guwahati.

Industrial Relations

XI.33 Industrial relations in the Reserve Bank remained cordial during the year. Periodic meetings were held with recognised Associations/ Federations representing officers and workmen on various matters related to service conditions and welfare measures for employees. During April 2022-March 2023, HRMD, Central Office, held nine meetings with central units of recognised union/ associations. As per the extant instructions, regional offices (ROs) also held meetings with local units of recognised trade unions at quarterly/ half yearly intervals.

Interface with Employees

XI.34 The Reserve Bank sustained its efforts towards developing a continuous listening culture with a view to involving employees, to harness their ideas and feedback to achieve the organisation's purposes and goals. The VOICE (Voicing Opinion to Inspire, Contribute, and Excel) initiative of the Reserve Bank provides a platform for employees to interact in a free-flowing format with the Department. This indeed helped create a 'connect' between management and employees. During April 2022-March 2023, the Reserve Bank conducted 12 VOICE sessions covering around 200 participants from various ROs and the Central Office.

XI.35 The Department continued with the practice of conducting internal surveys to ascertain the employees' engagement levels and the contributing factors for the same. These surveys provide key insights which guide the Reserve Bank's initiatives in human resource management. The employee engagement framework was disseminated amongst offices through workshops, which also aimed at guiding participants on prospective approaches to prepare and implement a robust action plan to improve workplace engagement of staff attached to their respective units.

Recruitment and Staff Strength

XI.36 During January-December 2022, the Reserve Bank recruited a total of 1,121 employees in various cadres (Table XI.3).

XI.37 The total staff strength of the Reserve Bank as at end-December 2022 was 13,298, registering an increase of 3.44 per cent from the position as at end-December 2021 (Table XI.4). As at end-March 2023, the staff strength of the Reserve Bank stood at 13,815, comprising 6,858 in Class I, 3,698 in Class III and 3,259 in Class IV.

XI.38 The total strength of ex-servicemen in the Reserve Bank stood at 1,115 as at end-December 2022, while the total number of differently abled employees stood at 303 (Table XI.5). During January-December 2022, 56 ex-servicemen and 23 persons with benchmark disabilities (PwBD) were recruited in the Reserve Bank.

XI.39 During January-December 2022, four meetings between the management and representatives of the All-India Reserve Bank

Table XI. 3: Recruitments by the Reserve Bank in 2022*

Category	Total	*of which:*			
		SC	ST	OBC	EWS
1	2	3	4	5	6
Class I	52	7	3	17	1
Class III	378	83	36	87	44
Class IV	691	51	49	290	79
Total	**1,121**	**141**	**88**	**394**	**124**

*: January - December. EWS: Economically Weaker Section.
Source: RBI.

Table XI.4: Staff Strength of the Reserve Bank*

Category	Total Strength		Category-wise Strength						Per cent to Total Strength		
			SC		ST		OBC		SC	ST	OBC
	2021	2022	2021	2022	2021	2022	2021	2022	2022		
1	2	3	4	5	6	7	8	9	10	11	12
Class I	6,598	6,653	1,071	1,048	462	459	1,399	1,544	15.75	6.90	23.21
Class III	3,337	3,369	489	541	191	228	1,077	1,044	16.06	6.77	30.99
Class IV	2,921	3,276	648	597	231	250	693	962	18.22	7.63	29.37
Total	**12,856**	**13,298**	**2,208**	**2,186**	**884**	**937**	**3,169**	**3,550**	**16.44**	**7.05**	**26.70**

*: End-December 2021 and 2022.
Source: RBI.

Scheduled Castes (SC)/Scheduled Tribes (ST) and the Buddhist Federation were held to discuss issues pertaining to implementation of the Reserve Bank's reservation policy. Two meetings were also held with the representatives of All India Reserve Bank Other Backward Classes Employees' Welfare Association.

Prevention of Sexual Harassment of Women at the Workplace

XI.40 A formal grievance redressal mechanism for prevention of sexual harassment of women at the workplace has been in place since 1998. It was 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 April 2022-March 2023, three complaints were received, and six cases have been disposed off. Several awareness programmes on the subject were organised at various Regional Offices (ROs) and the Central Office for sensitising the staff, including the newly recruited employees. The Central Complaints Committee of the Reserve Bank organised the 9th All India seminar on prevention, prohibition and redressal of sexual harassment of women at the workplace.

Right to Information (RTI)

XI.41 The Reserve Bank received 18,694 requests for information and 1,733 appeals under the RTI Act during April 2022 to March 2023.

Table XI.5: Total Strength of Ex-Servicemen and PwBD*

Category	Ex-Servicemen (ESM)	PwBD (Persons with Benchmark Disabilities)			
		Visually Impaired (VI)	Hearing Impaired (HI)	Orthopedically Handicapped (OH)	Intellectual Disabilities ('d')**
1	2	3	4	5	6
Class I	261	48	6	90	0
Class III	169	42	2	54	4
Class IV	685	13	6	38	0

* : End-December 2022.
** : As per Rights of Persons with Disability Act, 2016, the PwBD classification is defined as: (a) blindness and low vision; (b) deafness and hard of hearing; (c) locomotor disabilities including cerebral palsy, leprosy cured, dwarfism, acid attack victims and muscular dystrophy; (d) autism, intellectual disability, specific learning disabilities and mental illness; and (e) multiple disabilities from amongst persons under clauses (a) to (d) including deafness-blindness.
Source: RBI.

Four training programmes on RTI Act were also conducted by the Reserve Bank Staff College at Chennai and Zonal Training Centres at Kolkata and Chennai, during this period.

Promotion of Sports and Sportspersons

XI.42 Over the years, the Reserve Bank has been actively promoting sports. Accordingly, the Reserve Bank regularly recruits meritorious sportspersons in various disciplines and provides multifarious facilities to promote sports. The Reserve Bank has recruited 23 sportspersons of International/National repute under talent scouting mode from diverse disciplines which include athletics, archery, wrestling, cricket, *kabaddi* and boxing. The Reserve Bank also introduced a new scheme for felicitating meritorious sportspersons who have won medals in National and International events.

Agenda for 2023-24

XI.43 The roadmap for the year would include the following milestones for the Department:

- Introducing a robust mechanism, guided by a well-distilled policy framework, for conducting townhall meetings for the employees of the Reserve Bank in all ROs (*Utkarsh* 2.0);
- A comprehensive review of the RBI (Staff) Regulations,1948 which define the service conditions of all the employees of the Reserve Bank (*Utkarsh* 2.0); and
- Drawing up of a reference booklet in order to ensure a smoother on-boarding process for all new recruits.

4. ENTERPRISE-WIDE RISK MANAGEMENT

XI.44 The Risk Monitoring Department (RMD) is the nodal Department for formulation and operationalisation of Enterprise-wide Risk Management (ERM) in the Reserve Bank. During the year, the focus of the Department was on strengthening the internal risk governance of the Reserve Bank by adopting international best practices through the formulation of relevant policies and frameworks, strengthening operational risk and cyber-security risk monitoring, improving risk analysis by formulating an Integrated Risk Governance Dashboard and bolstering risk reporting through formulation of Risk Tolerance Limits (RTLs).

Agenda for 2022-23

XI.45 The Department had set out the following goals for 2022-23:

- *Harmonisation of Risk-Rating* :
  Harmonisation of risk-rating determined under the Risk Assessment Methodology for Operational Risk (RAM-OR), with the risk assessment under Risk-Based Internal Audit (RBIA) and creating an institutional feedback loop (Paragraph X1.46);
- *Automation of Risk Register Module* :
  Operationalising the automation of the risk register module in the Integrated Risk Monitoring and Incident Reporting System (IRIS) portal (Paragraph X1.47);
- Framework for models used by different departments and the outsourcing policy (Paragraph X1.48); and
- *Strengthening Application Security* :
  This shall comprise application profiling at the functional and technical level and reviewing and establishing perimeter security (web application firewalls) protection for applications and developing a proper response framework (Paragraph X1.49).

Implementation Status

Harmonisation of Risk-Rating

XI.46 A feedback loop has been created between the Inspection Department and RMD to enable convergence of views on the various risks facing the Reserve Bank and risk discovery process.

Automation of Risk Register Module

XI.47 The functionality of creating, updating, and reviewing of risk register (RR) was automated and made operational in the IRIS portal.

Framework for Models used by Different Departments and Outsourcing Policy

XI.48 An Enterprise-wide outsourcing risk management policy and a governance policy and framework for model risks have been formulated.

Strengthening Application Security

XI.49 The profile of various IT applications in the Reserve Bank have been compiled. Based on the details contained in the profiles of applications, statistical analysis has been done to determine the distribution of the IT applications in the Reserve Bank in terms of users, exposure to internet/ intranet, architectures, *etc*. Web application firewalls and their implementation in the Reserve Bank has been reviewed.

Other Initiative

XI.50 Based on the international best practices, the Reserve Bank is in the process of formulating a framework for fostering risk culture among its staff (Box XI.2).

Box XI.2
Fostering of Risk Culture

Risk culture is defined as the norms of behaviour for individuals and groups that determine collective ability to identify and understand, openly discuss, and act on current and future risks. Risk culture influences the decisions of management and employees during their day-to-day activities and has an impact on the risks they assume. Risk culture is time, person, and entity-specific and thus, difficult to measure. For any organisation, there exists an underlying cycle of risk culture formation. The culture of an organisation arises from repeated behaviour, which, in turn, is shaped by the attitudes of people within the organisation.

There are two broad categories of elements that underpin the risk culture of an organisation: (a) structural elements such as risk framework effectiveness, risk manager quality, risk training quality, knowledge and skills, remuneration and communication channels; and (b) behavioural elements such as individual's/group of individuals' risk behaviours, accepted risk behaviour in the organisation, decision-making biases, role-modelling, risk and human factors and attitude to errors.

In order to ensure that an effective risk culture is developed, and its elements embedded in decision-making across the organisation, robust mechanisms and techniques that combine the structural and behavioural elements are required to be put in place. The first step towards this would be to define and generate awareness across the organisation about the various elements of risk culture and the roles/expectations from employees towards nurturing a robust risk culture. The Reserve Bank's framework to foster the risk culture is envisaged to be dependent on the following four pillars:

- Risk *Leadership (Tone from the Top):* Management sets clear expectations and strategic direction for risk management and to lead by example;
- Risk *Governance (Responsibility and Accountability):* Staff/ group of staff understands its responsibility and accountability towards risk management and adheres to the expectations of the management. Management ensures effective risk oversight and response;
- Risk *Communication (Transparency and Risk Informed Decisions):* Transparency in the communication of risk information, both top-down and bottom-up. Availability of comprehensive risk information in a timely manner and in a meaningful format. Establishing right forums to discuss relevant decisions; and

(Contd...)

- Risk *Competency (Performance and Incentives):* Performance and talent management policies/processes that encourage and reinforce maintenance of the entity's desired risk management behaviour.

While the Reserve Bank has taken several initiatives to ensure an effective internal risk governance architecture, the framework to foster risk culture among staff is expected to further strengthen its overall risk management.

References:

1. Financial Stability Board, (2014), 'Guidance on Supervisory Interaction with Financial Institutions on Risk Culture: A Framework for Assessing Risk Culture', *BIS*, April.
2. Institute of Risk Management (2012), 'Risk Culture: Resources for Practitioners', *Institute of Risk Management*, London, United Kingdom.

Agenda for 2023-24

XI.51 For the year, the following goals for the Department have been proposed:

- *Review of Incident Reporting and Risk Register Framework:* The extant frameworks of incident reporting and risk register will be reviewed to enable business areas to identify primary risk drivers and forecasting of risks along with scenario analysis;
- *Formulation of Handbook of Instructions for Risk Officers:* A handbook for guiding risk officers in undertaking their roles as risk managers in their workplace will be formulated;
- Formulation of key risk indicators for various business areas and a framework for management of transversal risks[2]; and
- *Review of Vulnerability Assessment and Penetration Testing (VAPT) Policy, 2019:* A holistic review of the existing VAPT policy would be carried out covering aspects such as approaches to VAPT, compliances, standards, tools, and risk acceptance among others. The review would also include streamlining change management process of applications and operationalisation of compliance monitoring system.

5. INTERNAL AUDIT / INSPECTION

XI.52 The Inspection Department of the Reserve Bank examines, evaluates and reports on internal control and governance processes and provides risk assurance to the top management and the Central Board through a Risk-Based Internal Audit (RBIA) framework. Thus, the Department acts as the third line of defence (*viz.,* assurance) under the enterprise-wide risk management (ERM) function in the Reserve Bank while RMD, as the second line of defence[3], monitors and facilitates implementation of effective risk management practices, including reporting of risks to the Risk Monitoring Committee (RMC) and the Audit and Risk Management Sub-Committee (ARMS) of the Central Board. The Department also oversees the functioning of the concurrent audit (CA) system and control self-assessment audit (CSAA) in the Reserve Bank. The RBIA, CA and CSAA functions are performed through an automated system

[2] Risks which result from activities/processes that are common to multiple business areas or whose materialisation could simultaneously impact different functions, areas, or activities, beyond the area or process in which the risk arises.

[3] Under the three lines of defence model for effective risk management and governance, the first line of defence is management controls and internal control measures, while the second line of defence involves various risk control, compliance, and oversight functions established by the management and the third line of defence is the internal audit.

named audit management and risk monitoring system (AMRMS). The Department acts as the secretariat to the Audit and Risk Management Sub-Committee of the Central Board and also to the Executive Directors' Committee (EDC) in overseeing the internal audit function.

Agenda for 2022-23

XI.53 The Department had set out the following goals for 2022-23:

- Putting in place a framework for feedback loop with RMD so as to get near convergent outcomes on the overall operational risks (*Utkarsh*) [Paragraph XI.54];
- Full development and generation of visual analytics reports for data mining and analysis purposes, and for the management information system (MIS) (*Utkarsh*) [Paragraph XI.54];
- Implementation of the revised risk rating and scoring model based on the recommendations of the Internal Working Group (IWG) [Paragraph XI. 54];
- Making the RBIA more risk focused (*Utkarsh*) [Paragraph XI.54];
- Pursuing specialisation and capacity building as an area of priority (*Utkarsh*) [Paragraph XI.54];
- Developing a framework for deployment of skilled officers for inspection of specialised areas of departments (*Utkarsh*) [Paragraph XI.54]; and
- Creation of zonal inspectorates (ZIs) in different zones for close monitoring of quality of compliance by auditee offices as also adequacy of coverage of different types of audits, with independent reporting to Inspection Department (*Utkarsh*) [Paragraph XI.55].

Implementation Status

XI.54 As per the recommendation of the Internal Working Group (IWG) constituted in August 2021 to "Revisit the Current Processes of Risk-Based Internal Audit (RBIA) and Related Issues" a feedback loop between RMD and Inspection Department has been created enabling a convergent view on the various risks facing the Reserve Bank and facilitating greater synergy between the second and the third line of defence. Further, as a part of strengthening the MIS, the Department has prepared an 'Offsite Monitoring Template' (OMT) for auditee offices in consultation with select Central Office Departments (CODs)/ROs/TEs. As of now, OMT contains 26 data points which, *inter alia*, capture important details of various audits, risk register, breaches of risk tolerance limits (RTLs), incident reporting, pendency position, budget, business continuity plan, project and policy implementation status. The template was implemented from the first quarter of 2023. Another major recommendation of the IWG was to make RBIA more risk focused through revised risk rating and scoring model. Accordingly, the risks are now classified under six categories (*viz.,* people risk, BCM risk, legal risk, process risk, technology risk and others) and necessary changes have been carried out in the AMRMS portal to reflect the same, prospectively. Other recommendations of the committee such as conducting tailor-made training programmes for principal inspecting officers (PIOs)/inspecting officers (IOs) for capacity building, requisition of experienced officers in the specialised areas and possible incentive structure for posting to Inspection Department, as part of developing a framework for deployment of skilled officers are also being implemented.

XI.55 As per the recommendations of the IWG to revisit the current processes of RBIA, five ZIs have been set up at the regional offices of Ahmedabad, Bhubaneswar, Chennai, Mumbai and New Delhi, with the objective to further strengthen the existing internal control system in the Reserve Bank, by ensuring adequacy of coverage of different types of audits and quality of compliance of various internal audits and also assist the Inspection Department in fulfilling its mandate of providing an independent and objective risk assurance to the top management on the operations of the various business areas of the Reserve Bank (Box XI.3).

Major Developments

Inspection Manual

XI.56 A comprehensive inspection manual has been prepared and is scheduled to be released during 2023-24.

Compliance Audit

XI.57 In order to verify the quality and sustenance of compliance submitted in respect of the observations made in the RBIA, the concept of compliance audit was introduced during the year for select offices based on a set criterion[4]. Such audits conducted during the middle of the audit cycles tested not only the sustenance/non-sustenance of compliance, but also raised alerts for timely corrective measures, if warranted. A detailed framework has been devised for guidance of inspecting officials on the compliance audit. The Department conducted seven compliance audits till March 31, 2023.

Thematic Studies

XI.58 The Department decided to conduct 'Thematic Studies' on certain important functional areas, in consultation with the concerned Central Office department/s, to deep dive into and identify systemic issues to suggest and facilitate timely remedial measures. Accordingly, a standard operating procedure (SOP) for conducting thematic studies was prepared to assess the consistency in implementation of various policy aspects and their effectiveness across the CODs/ROs and also to identify the gaps in policy/standards with the motive to facilitate appropriate policy making by the concerned department/s. The Department shall carry out the thematic studies based on

Box XI.3
Zonal Inspectorates (ZIs)

As recommended by the "Internal Working Group (IWG) to revisit the current processes of Risk-Based Internal Audit (RBIA) and related issues", the zonal inspectorates (ZIs) have been set up in five centres (*viz.*, Ahmedabad, Bhubaneswar, Chennai, Mumbai, and New Delhi) for close monitoring of the quality of compliance to RBIA, control self-assessment audit (CSAA), concurrent audit (CA) and other types of audits, as also the adequacy of coverage of various audits.

While assisting the Inspection Department in fulfilling its mandate of providing an independent and objective risk assurance to the Board and the top management, the ZIs are envisaged to be the extended arm of Inspection Department and would primarily be the centres of expertise.

Further, the ZIs would be supporting the offices under their jurisdiction in reinforcing the five elements of internal control, *i.e.,* strengthening the control environment; improving risk assessment; facilitating unhindered flow of information and communication; enhancing the monitoring activities; and improving the effectiveness of control processes.

Source: RBI.

[4] The Compliance Audit is conducted for those auditee offices which were classified as 'High Risk' during the previous cycle of RBIA.

selection criteria as defined in the SOP for the thematic studies.

Agenda for 2023-24

XI.59 During the year, the Department will focus on the following goals:

- Make the RBIA more risk focused as per the measures initiated during 2022-23 (*Utkarsh* 2.0);
- Stabilisation of zonal inspectorates' functioning towards material contribution on risk assurance;
- Development of dashboard and visual analytics reports for MIS (*Utkarsh* 2.0);
- Establishing offsite reporting in AMRMS and framework for feedback loop (*Utkarsh* 2.0*);*
- Ready reckoner of high and medium risk paragraphs of RBIA (*Utkarsh* 2.0);
- Development of various modules for compliance audit and project audit (*Utkarsh* 2.0);
- Upgrading Statistical Analytics System (SAS) - Enterprise Governance Risk and Compliance (EGRC) 6.1 to SAS - Governance and Compliance Manager (GCM) 7.4 platform, for AMRMS with 2,000 user licenses; and
- Hosting an International Conference of the Central Banking Internal Auditors (CBIA) under the aegis of Bank for International Settlements (BIS).

6. CORPORATE STRATEGY AND BUDGET MANAGEMENT

XI.60 The Corporate Strategy and Budget Department (CSBD) coordinates and formulates the Reserve Bank's medium-term strategy framework (*Utkarsh*), prepares its annual budget, and monitors its expenditure with a view to ensuring budgetary discipline. The Department also formulates and executes the Reserve Bank's business continuity plan (BCP) for its critical operations and acts as the nodal Department for external institutions funded by the Reserve Bank.

XI.61 During the year, the medium-term strategy framework of the Reserve Bank for January 2023 to December 2025 was formulated and launched. Being the nodal Department for business continuity management (BCM) framework of the Reserve Bank, CSBD continued to play a key role during the year in ensuring the smooth working of critical systems and business processes in the Reserve Bank. On dismantling of the bio-bubble arrangement, it was ensured that the plans are in place to ensure preparedness for business continuity in case of future waves of the pandemic. The business continuity framework has been strengthened by reviewing the BCM policy and BCPs of all the business units, including updation of time sensitive critical activities (TSCAs).

XI.62 A compendium on business continuity measures undertaken by the Reserve Bank during the COVID-19 pandemic was released by Dr. Michael Debabrata Patra, Deputy Governor in the annual conference of CSBD held on February 17, 2023. It highlighted the unprecedented scale and speed with which the Reserve Bank mobilised to put in place more than one hundred measures, both conventional and unconventional, such as a cross-functional response to safeguard lives and livelihood of the people; ensuring uninterrupted conduct of its crucial functions and maintaining business continuity; and supporting its employees, service providers and other stakeholders. These efforts were proactive and innovative, while remaining on guard to preserve financial stability.

XI.63 As regards the oversight of external funded institutions (EFIs), the Department reinforced their governance by facilitating meetings of their governing boards and sub-committees, implementing the recommendations of their review committees and selection of directors when vacancies arose. During the year, a new director was appointed for Indira Gandhi Institute of Development Research (IGIDR) as per the rules and regulations of IGIDR and the University Grants Commission (UGC) at the end of the term of the incumbent.

XI.64 The Department maintains the various superannuation funds of the Reserve Bank. In exercise of the powers conferred under clause (j) of sub-section (2) of Section 58 of the Reserve Bank of India Act, 1934 with the prior approval of the Central Government and the Central Board, amendments were made in the Reserve Bank of India Employees' Gratuity and Superannuation Fund Regulations, 1975 on account of the change in the accounting year of the Reserve Bank effective 2020-21. To ensure proper budget discipline, a budget rating framework for all the budgeting units was put in place, including a system of 'incident reporting' for underutilisation of budget above a threshold.

Agenda for 2022-23

XI.65 For 2022-23, the Department had set out the following goals:

- Introducing a framework for rating budgeting units for promoting efficient and effective budget management (*Utkarsh*) [Paragraph XI.66];
- Preparing, finalising and launching '*Utkarsh* 2.0' the strategy framework for the period 2023-25 (Paragraph XI.67);
- Streamlining operations in the 'Unclaimed PF accounts' (Paragraph XI.68); and
- Reviewing of the Reserve Bank of India Expenditure Rules (Paragraph XI.69).

Implementation Status

XI.66 The framework for rating budgeting units for promoting efficient and effective budget management was implemented with effect from 2022-23.

XI.67 '*Utkarsh* 2.0', the medium-term strategy framework of the Reserve Bank for the period 2023-25 was launched on December 30, 2022 by the Governor, Reserve Bank of India (Box XI.4).

XI.68 In order to streamline the maintenance of 'Unclaimed PF Accounts' and bring uniformity in the practices followed across the Reserve Bank, revised instructions were issued in May 2022.

XI.69 The review of Reserve Bank of India Expenditure Rules, 2018 has commenced by seeking inputs from various budgeting units and the Department is in the process of consolidating the revisions to be carried out in the present Expenditure Rules, which is expected to be completed by March 2024.

Agenda for 2023-24

XI.70 The Department's agenda for the year includes the following:

- Revision of Reserve Bank of India Expenditure Rules (*Utkarsh* 2.0);
- Preparation of business continuity management (BCM) performance evaluation template for business units of the Reserve Bank; and
- Review of the Reserve Bank of India Employees' Provident Fund Regulations, 1935.

Box XI.4

***Utkarsh* 2.0: The Medium-Term Strategy Framework of the Reserve Bank**

The Reserve Bank had launched *Utkarsh* 2022, the medium-term strategy framework, in July 2019. It guided the Reserve Bank's progress towards realisation of delineated milestones by navigating turbulent tides created by the COVID-19 pandemic and geopolitical hostilities. As the term of *Utkarsh* 2022 ended in December 2022, a new strategy framework, *viz., Utkarsh* 2.0 was launched on December 30, 2022 for the period 2023-25.

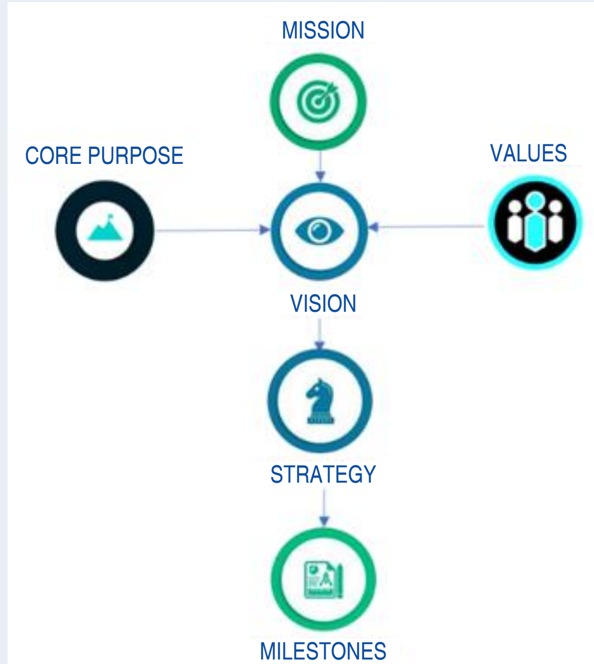
Utkarsh 2.0 harnesses the strengths of *Utkarsh* 2022 by retaining the six vision statements as well as core purposes, values, and the mission (Chart 1), which collectively create a strategic guiding path.

The milestones devised under *Utkarsh* 2.0 are framed through a bottom-up approach that covers the specific functional areas of each Department, integrating them into the institution's goals.

Utkarsh 2.0 seeks to enhance public trust and the credibility of the Reserve Bank by including new ways and touch points for outreach, ease of information dissemination through effective user interfaces, establishing significance at national and international fora, and strengthening transparency and accountability in internal governance. It also seeks to create an enabling digital and physical infrastructure and a dynamic and innovative human capital to attain the envisaged milestones.

Efficient monitoring with intermittent stock taking and course correction, where required, would be the hallmarks of *Utkarsh* 2.0 as the strategic path for the Reserve Bank to sustain its journey towards excellence.

Chart 1: *Utkarsh* 2.0



Source: RBI.

Source: RBI.

7. RAJBHASHA

XI.71 The Rajbhasha Department is entrusted with the responsibility of ensuring compliance with the Official Language Act, 1963; Rajbhasha Rules, 1976; the orders of the President of India and instructions of the Government of India; and the Committee of Parliament on Official Language. The Department has ensured compliance as per the requirements of bilingualisation through imparting Hindi trainings to the members of staff, organising lectures and webinars and numerous events to increase the use of Hindi in correspondence and internal work and also encouraging stakeholders to carry out their work in Hindi through various incentive schemes. For ensuring the bilingualisation of the Reserve Bank's website, the Department has a review committee and an internal sub-committee which regularly monitors and ensures the compliance of the Official Language Policy and the targets of the Annual Programme of Rajbhasha and other instructions issued by the Government of India. Apart from implementing the statutory requirements, the Department has published '*Kriti Anukriti*', '*Banking Chintan-Anuchintan*', compendium of circulars, and a booklet on inspections by the Committee of

Parliament on Official Language. The Department has, thus, made concerted efforts towards implementation of Rajbhasha provisions and also created a conducive environment for the usage of Hindi in all areas of the Reserve Bank's functioning.

Agenda for 2022-23

XI.72 The Department had set out the following goals for 2022-23:

- Publication of a new edition of 'Banking Glossary (Banking *Shabdawali)*' by December 2023 (*Utkarsh*) [Paragraph XI.73];
- Preparation of an Annual Work Plan of the Reserve Bank for the implementation of Official Language Policy in accordance with the Annual Programme and other instructions issued by the GoI (Paragraph XI.74);
- To organise region-wise review meetings with the Rajbhasha officers to assess the effectiveness of implementation regarding the use of Hindi (Paragraph XI.75); and
- To organise training programmes for Rajbhasha officers to upgrade their translation skills (Paragraph XI.76).

Implementation Status

XI.73 Concerted efforts are being made to publish a new edition of Banking Glossary by December 2023. An inter-institutional committee has been set up for this purpose. During the year, three meetings of the committee have been conducted and several new banking and financial terms have been finalised for the new edition of the glossary, after extensive deliberations during these meetings. This goal has been carried forward to 2023-24 as part of *Utkarsh* 2.0 (Paragraph XI.81).

XI.74 The Ministry of Home Affairs, Rajbhasha Department, GoI prepares an Annual Programme for transacting the official work where various targets for ensuring the implementation of Rajbhasha related provisions are given. Keeping in mind all the directives and implementation targets given in the Annual Programme issued by the GoI, an elaborate 'Annual Work Plan 2022-23' was prepared by the Department. This target-based comprehensive work plan was published on April 20, 2022 and circulated to all the ROs/ CODs

XI.75 To strengthen the monitoring system regarding use of Hindi, review meetings with the Rajbhasha officers posted in the ROs located in regions A, B and C were organised on June 26, 2022; September 12, 2022 and December 8, 2022. Similarly, a review meeting with the Rajbhasha officers posted in the CODs was conducted during August 22-23, 2022.

XI.76 A training programme for Rajbhasha officers on translation was organised in RBSC, Chennai during November 14-16, 2022, in which a total of 23 Rajbhasha officers participated.

Major Developments

XI.77 A Rajbhasha conference for Rajbhasha officers was organised at Vishakhapatnam during February 17-19, 2023, wherein papers were presented and extensive deliberations were held on the need for Hindi in Independent India in the backdrop of *Azadi Ka Amrit Mahotsav* year, importance of translation in progressive usage of Hindi and practical aspects of Hindi usage at workplace.

XI.78 On the occasion of *Hindi Diwas* 2022, *i.e.,* September 14, 2022; various competitions/seminars/lectures/other programmes were conducted for the staff members to promote the use of Hindi during Hindi week/fortnight/month organised by all CODs/ROs.

Visits by Hon'ble Committee of Parliament on Official Language

XI.79 The third Sub-committee of the Hon'ble Committee of Parliament on Official Language carried out inspection of Jammu Regional Office, the Central Office and Bhopal Regional Office on July 5, 2022, October 8, 2022 and January 17, 2023, respectively.

Publications

XI.80 The statutory publications of the Reserve Bank, *viz*., Annual Report, Monetary Policy Report, Report on Trend and Progress of Banking in India and other publications like the Financial Stability Report, Weekly Statistical Supplement and monthly Reserve Bank of India Bulletin were published in bilingual form and are available on the Reserve Bank's website. Aimed at encouraging creative writing in Hindi for the staff, a half yearly e-magazine *'Kriti-Anukriti'* (erstwhile *'Rajbhasha Samachar'*) was published. The new edition of Hindi Journal '*Banking Chintan Anuchintan*' was also published by the Department, covering articles on banking and finance related topics.

Agenda for 2023-24

XI.81 During the year, the Department plans to focus on the following goal:

- To publish a new edition of the 'Banking Glossary (Banking *Shabdawali)'* by December 2023 (*Utkarsh* 2.0).

8. PREMISES DEPARTMENT

XI.82 The vision of the Premises Department is to provide 'best in class' and environment-friendly physical infrastructure by integrating architectural excellence and aesthetic appeal with green ratings in the Reserve Bank's premises while ensuring the highest level of cleanliness.

Agenda for 2022-23

XI.83 The Department had set out the following goals for 2022-23:

- Achieve the targets set under *Utkarsh* 2022 (Paragraph XI.84);
- Complete the construction of CAFRAL[5] and Dehradun Office Projects (Paragraph XI.85);
- Complete the construction of boundary wall at Ranchi and Shillong office plots (Paragraph XI.86);
- Commence the construction of residential premises at Dehradun (Paragraph XI.87);
- Execute MoU with the Central Public Works Department (CPWD) and take up the enabling works for starting the office building project at Panaji (Paragraph XI.88);
- Complete the execution of MoU with CPWD and enabling works for residential premises at Chakala, Malad Phase I and Tapovan in Mumbai (Paragraph XI.89);
- Take forward the construction of office premises at Naya Raipur and residential-cum-ZTC project at Mumbai (Kharghar) [Paragraph XI.90];

[5] Centre for Advanced Financial Research and Learning.

- Strengthen and stabilise the implementation of enterprise project management software for monitoring major projects (Paragraph XI.91); and
- Strengthen and stabilise the GREEN data platform for online consolidation and analysis of *Utkarsh* data and information on other green initiatives, and energy/ water audit reports received from the ROs (Paragraph XI.91).

***Implementation* Status**

XI.84 The Department has not only achieved the goals under *Utkarsh* but, in fact, surpassed them. (i) As against the goal of obtaining relevant green rating from GRIHA/IGBC[6] for at least six office buildings and 26 residential buildings cumulatively by December 2022, green rating from IGBC has been received for a total of 11 office buildings and 24 residential buildings till December 2022; (ii) against the target of achieving 6.0 per cent of the June 2018 level of power consumption from renewable sources by all the Reserve Bank's premises, aggregate energy sourced from renewables was at 6.6 per cent on December 2022; (iii) the Reserve Bank achieved energy saving of 13.9 per cent till December 2022 as against the target of 5.0 per cent (base year June 2018); and (iv) water conservation/savings stood at 23.9 per cent by December 2022 as against the target of 10 per cent (base year June 2018).

XI.85 As on March 31, 2023, the physical progress of completion of the CAFRAL building project is at 63.0 per cent. With respect to the Dehradun office project, the physical progress is at 98.0 per cent and the project is expected to be completed in 2023-24.

XI.86 The boundary wall works at Ranchi office plot and Shillong office plot are in progress.

XI.87 For the residential premises at Dehradun, approval of building plans from the local authority has been obtained and the work of tender preparation is under progress.

XI.88 For the office building at Panaji, Memorandum of Understanding (MoU) has been executed with CPWD and all enabling works including appointment of architect for the project have been completed. Tendering process has been initiated.

XI.89 Project-specific MoUs have been executed with CPWD for residential premises at Chakala, Malad Phase I, Tapovan, Mahim and Sewri in Mumbai; works related to contour mapping and soil investigation have been completed for all these projects; and the process for appointment of project-specific architects is in progress.

XI.90 Construction of office premises at *Naya* Raipur has commenced and physical progress is at 53.0 per cent as at end-March 2023. For the residential-cum-ZTC project at Mumbai (Kharghar), CPWD has floated the tender for appointment of contractor and the construction began in April 2023.

XI.91 The enterprise project management software has stabilised and ROs are updating status of the projects regularly therein. The GREEN data platform is fully operational with new features being added from time-to-time and is being used for the intended purposes of consolidation and

6 Green Rating for Integrated Habitat Assessment (GRIHA)/Indian Green Building Council (IGBC).

analysis of *Utkarsh* data as also to consolidate and monitor energy/water conservation initiatives (other than *Utkarsh*) and compliance to action points emanating from various audit (*viz*., electrical safety, energy and water audit) observations.

Major Developments

Construction Activities

XI.92 The Nalanda officers' quarters project at Chembur, Mumbai has been completed and was inaugurated by the Governor on June 20, 2022. The Indian Green Building Council (IGBC) has awarded the highest green rating (Platinum) to the project.

XI.93 The residential project at Hauz Khas, New Delhi has been completed in January 2023. This project has also received the highest green rating (Platinum) from IGBC.

Green Initiatives (Other than New Construction Targeted under Utkarsh)

XI.94 The highest green rating (Platinum) has been received from IGBC for the Central Office building.

XI.95 The Reserve Bank has been generating renewable energy through solar power plants installed at various offices and residential colonies. During April 2022-March 2023, solar power plants were installed at six office buildings and seven residential premises. Consequently, 27 office premises and 56 residential premises had such solar power plants as at end-March 2023, with solar power generation capacity enhanced from 3,166 kWp (kilowatts peak) at end-March 2022 to 3,617 kWp at end-March 2023. Rainwater harvesting systems were installed at 20 offices and 46 residential buildings, and sewage treatment plants were set up at 6 offices and 15 residential buildings for conservation and efficient management of water resources during the same period. Organic waste converters were also installed at 15 offices and 51 residential premises.

Other Initiatives

XI.96 Additional office spaces were taken on lease in Mumbai and Panaji. Alternate premises were taken on lease for Aizawl, Shillong and Shimla and new premises were taken on lease for the Reserve Bank's new offices opened at Itanagar and Kohima.

XI.97 Adoption of RFID (Radio Frequency Identification) technology for tagging and reconciliation of fixed assets was completed at all the ROs and CODs, which has simplified and expedited data upgradation and the half yearly reconciliation process.

XI.98 Presently tenders beyond ₹5 lakh are generally being invited through e-tendering mode using the MSTC portal. During 2022-23, 810 e-tenders were floated by the CODs, ROs and TEs.

Agenda for 2023-24

XI.99 For the year 2023-24, the Department has set the following goals:

- Achieve the targets set under *Utkarsh* 2.0;
- Complete the construction of Dehradun office and Raipur office projects;
- Complete the acquisition of residual requirement of office/residential space;
- Take forward various construction projects currently in planning stage at various ROs;
- Complete the renovation of 25th floor, Central Office building; and
- Bring out a revised edition of the Premises Department Manual.

9. CONCLUSION

XI.100 Several strategic initiatives were undertaken by the Reserve Bank during 2022-23 in the areas of governance, human resources, risk monitoring and the corporate strategy of the Reserve Bank along with measures to strengthen the internal audit mechanism. On the human resources front, new recruitments, in-house and external trainings, and development of a new framework for training were dovetailed into the overall organisational objectives, as reflected in its endeavour to build a diverse and robust set of capabilities in sync with its wide canvas of operations. While the Rajbhasha Department ensured compliance with the statutory provisions of the Official Languages Act, the Premises Department continued with its efforts to provide an environment friendly physical infrastructure with aesthetic appeal. The departments have evaluated their performance relative to the goals set for the year and set out the agenda for 2023-24. Harnessing the strengths of *Utkarsh* 2022, a new medium-term corporate strategy framework for the period January 2023 to December 2025 (*Utkarsh* 2.0) was unveiled by the Reserve Bank, which aims at meeting the emerging and expected future challenges.

Annex

Table XI.1: Attendance in the Meeting of the Central Board of Directors during April 1, 2022 – March 31, 2023

Name of the Member	Appointed/Nominated under RBI Act, 1934	Number of Meetings Held	Number of Meetings Attended
1	2	3	4
Shaktikanta Das	8(1)(a)	7	7
Mahesh Kumar Jain	8(1)(a)	7	7
Michael Debabrata Patra	8(1)(a)	7	7
M. Rajeshwar Rao	8(1)(a)	7	7
T. Rabi Sankar	8(1)(a)	7	6
Revathy Iyer	8(1)(b)	7	6
Sachin Chaturvedi	8(1)(b)	7	7
Satish Kashinath Marathe	8(1)(c)	7	7
Swaminathan Gurumurthy	8(1)(c)	7	5
Anand Gopal Mahindra*	8(1)(c)	5	1
Venu Srinivasan*	8(1)(c)	5	4
Pankaj Ramanbhai Patel*	8(1)(c)	5	5
Ravindra H. Dholakia*	8(1)(c)	5	5
Ajay Seth	8(1)(d)	7	5
Sanjay Malhotra[#]	8(1)(d)	4	2
Vivek Joshi[$]	8(1)(d)	3	2

*: Director *w.e.f.* June 14, 2022. #: Director till November 14, 2022. $: Director *w.e.f.* November 15, 2022.

Table XI.2: Attendance in the Meeting of the Committees of the Central Board during April 1, 2022 – March 31, 2023

Name of the Member	Appointed /Nominated under RBI Act,1934	Number of Meetings Held	Number of Meetings Attended
1	2	3	4
I. Committee of the Central Board (CCB)			
Shaktikanta Das	8(1)(a)	46	41
Mahesh Kumar Jain	8(1)(a)	46	42
Michael Debabrata Patra	8(1)(a)	46	36
M. Rajeshwar Rao	8(1)(a)	46	42
T. Rabi Sankar	8(1)(a)	46	38
Revathy Iyer	8(1)(b)	19	19
Sachin Chaturvedi	8(1)(b)	16	8
Satish Kashinath Marathe	8(1)(c)	21	21
Swaminathan Gurumurthy	8(1)(c)	14	7
Anand Gopal Mahindra*	8(1)(c)	10	10
Venu Srinivasan*	8(1)(c)	10	4
Pankaj Ramanbhai Patel*	8(1)(c)	13	13
Ravindra H. Dholakia*	8(1)(c)	32	32
Ajay Seth	8(1)(d)	7	7

*: Director *w.e.f.* June 14, 2022.

II. Board for Financial Supervision (BFS)			
Shaktikanta Das	Chairman	12	12
Mahesh Kumar Jain	Vice-Chairman	12	12
Michael Debabrata Patra	Member	12	11
M. Rajeshwar Rao	Member	12	10
T. Rabi Sankar	Member	12	10
Satish Kashinath Marathe#	Member	12	10
Sachin Chaturvedi	Member	12	9
Ravindra H. Dholakia^	Member	7	7

#: Renominated as Member of BFS *w.e.f.* August 19, 2022.
^: Nominated as Member of BFS *w.e.f.* September 7, 2022.

III. Board for Regulation and Supervision of Payment and Settlement Systems (BPSS)			
Shaktikanta Das	Chairman	2	2
T. Rabi Sankar	Vice-Chairman	2	2
Mahesh Kumar Jain	Member	2	2
Michael Debabrata Patra	Member	2	1
M. Rajeshwar Rao	Member	2	2
Sachin Chaturvedi	Member	2	2
Venu Srinivasan$	Member	1	Nil

$: Nominated as Member of BPSS *w.e.f.* September 7, 2022.

Table XI.3: Attendance in the Meeting of the Sub-Committees of the Board
April 1, 2022 – March 31, 2023

Name of the Member	Appointed/Nominated under RBI Act, 1934	Number of Meetings Held	Number of Meetings Attended
1	2	3	4
I. Audit & Risk Management Sub-Committee (ARMS)			
Revathy Iyer	Chairperson	8	8
Satish Kashinath Marathe*	Member	3	3
Venu Srinivasan#	Member	5	3
Pankaj Ramanbhai Patel#	Member	5	4
M. Rajeshwar Rao	Member	8	8

*: Member till August 6, 2022. #: Nominated as Member of ARMS *w.e.f.* September 7, 2022.

II. Building Sub-Committee (BSC)			
Satish Kashinath Marathe*	Chairman	1	1
Pankaj Ramanbhai Patel#	Chairman	1	1
Anand Gopal Mahindra$	Member	1	1

*: Chairman till August 6, 2022. #: Nominated as Chairman of BSC *w.e.f.* September 7, 2022.
$: Nominated as Member of BSC *w.e.f.* September 7, 2022.

III. Human Resource Management Sub-Committee (HRM-SC)			
Anand Gopal Mahindra*	Chairman	1	1
Pankaj Ramanbhai Patel#	Member	1	1

*: Nominated as the Chairman of HRM-SC *w.e.f.* September 7, 2022.
#: Nominated as Member of HRM-SC *w.e.f.* September 7, 2022.

IV. Information Technology Sub-Committee (IT-SC)			
Sachin Chaturvedi	Chairman	2	2
Venu Srinivasan#	Member	2	1

#: Nominated as Member of IT-SC *w.e.f.* September 7, 2022.

V. Strategy Sub-Committee (S-SC)			
Revathy Iyer	Chairperson	1	1
Anand Gopal Mahindra*	Member	1	1
Michael Debabrata Patra	Member	1	1

*: Nominated as the Member for S-SC *w.e.f.* September 7, 2022.

Table XI.4: Attendance in the Meetings of Local Boards during April 1, 2022 to September 18, 2022			
Name of the Member	Appointed/Nominated under RBI Act, 1934	Number of Meetings Held	Number of Meetings Attended
1	2	3	4
Revathy Iyer, NALB	Section 9(1)	2	2
R. N. Dubey, NALB*	Section 9(1)	2	2

NALB: Northern Area Local Board. *: Member till September 18, 2022.

Table XI.5: Attendance in the Meeting of Standing Committee of the Central Board of Directors in *lieu* of Local Board/s during April 1, 2022 to March 31, 2023		
Name of the Member	Number of Meetings Held	Number of Meetings Attended
1	2	3
Revathy Iyer, Chairperson	7	7
Satish Kashinath Marathe, Member	7	7

Note: One meeting was held for Northern Area and two meetings each were held for Western, Eastern and Southern Areas.

XII THE RESERVE BANK'S ACCOUNTS FOR 2022-23

The size of the Reserve Bank's balance sheet increased by 2.50 per cent for the year ended March 31, 2023. While income for the year increased by 47.06 per cent, the expenditure increased by 14.05 per cent. The year ended with an overall surplus of ₹87,416.22 crore as against ₹30,307.45 crore in the previous year, resulting in its increase of 188.43 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.

XII.2 The key financial results of the Reserve Bank's operations during the year 2022-23 are set out in the following paragraphs.

XII.3 The size of the balance sheet increased by ₹1,54,453.97 crore, *i.e.,* 2.50 per cent from ₹61,90,302.27 crore as on March 31, 2022 to ₹63,44,756.24 crore as on March 31, 2023. The increase on the asset side was due to rise in foreign investments, gold, and loans and advances by 2.31 per cent, 15.30 per cent and 38.33 per cent, respectively. On the liability side, the expansion was due to increase in notes issued, revaluation accounts and other liabilities by 7.81 per cent, 20.50 per cent and 79.07 per cent, respectively. Domestic assets constituted 27.69 per cent while the foreign currency assets and gold (including gold deposit and gold held in India) constituted 72.31 per cent of total assets as on March 31, 2023 as against 28.22 per cent and 71.78 per cent, respectively, as on March 31, 2022.

XII.4 A provision of ₹1,30,875.75 crore was made and transferred to Contingency Fund (CF). No provision was made towards Asset Development Fund (ADF). Trends in income, expenditure, net income and surplus transferred to the Central Government are given in Table XII.1.

XII.5 The Independent Auditors' Report, the balance sheet and the Income Statement for the year 2022-23 along with schedules, statement of Significant Accounting Policies and supporting Notes to Accounts are as follows:

Table XII.1: Trends in Income, Expenditure and Net Income

(Amount in ₹ crore)

Item	2018-19	2019-20	2020-21	2021-22	2022-23
1	2	3	4	5	6
a) Income	1,93,035.88	1,49,672.46	1,33,272.75	1,60,112.13	2,35,457.26
b) Total Expenditure[1]	17,044.15[2]	92,540.93[3]	34,146.75[4]	1,29,800.68[5]	1,48,037.04[6]
c) Net Income (a-b)	1,75,991.73	57,131.53	99,126.00	30,311.45	87,420.22
d) Transfer to funds[7]	4.00	4.00	4.00	4.00	4.00
e) Surplus transferred to the Central Government (c-d)	1,75,987.73	57,127.53	99,122.00	30,307.45	87,416.22

Notes: 1. Include provisions towards CF and ADF.
2. Includes a provision of ₹63.60 crore towards transfer to ADF.
3. Includes a provision of ₹73,615 crore towards transfer to CF.
4. Includes a provision of ₹20,710.12 crore towards transfer to CF.
5. Include provisions of ₹1,14,567.01 crore and ₹100 crore towards transfer to CF and ADF, respectively.
6. Includes a provision of ₹1,30,875.75 crore towards transfer to CF.
7. An amount of ₹1 crore each has been transferred to the National Industrial Credit (Long Term Operations) Fund, the National Housing Credit (Long Term Operations) Fund, the National Rural Credit (Long Term Operations) Fund and the National Rural Credit (Stabilisation) Fund during each of the five years.

INDEPENDENT AUDITORS' REPORT

To,
The President of India

Report on Audit of Financial Statements of the Reserve Bank of India

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 March 31, 2023 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 accounts of the Bank, the Balance Sheet read with Schedules and 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 ("the RBI Act, 1934") and Regulations framed there under so as to exhibit true and correct view of the state of affairs of the Bank as on March 31, 2023 and its results of operations for the year ended on that date.

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 Bank 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 on the Financial Statements.

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 Accounts but does not include the Financial Statements and our 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

The Bank's Management and those Charged with Governance for the Financial Statements are responsible for the preparation of the 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 RBI Act, 1934 and Regulations framed thereunder and the accounting policies and practices followed by the Bank. This responsibility also includes maintenance of adequate accounting records and preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent and 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.

As per the RBI Act, 1934, the Bank can be liquidated only by the Central Government by order and in any other manner as it may direct. Also, while the fundamental basis of preparation of Financial Statements of the Bank are based on provisions of the RBI Act, 1934 and Regulations framed thereunder, the Management has adopted the accounting policies and practices which reflects its continuity as a Going concern.

Those charged with governance are also responsible for overseeing the Bank'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 Bank's internal financial control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the 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 Bank's ability to continue as a Going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' 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 auditors' report.
- Evaluate the overall presentation, structure and content of the Financial Statements, and whether the Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation.

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.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

Other Matters

The audit of the Financial Statements of the Bank for the year ended March 31, 2022, was carried out and reported jointly by M/s Chandabhoy & Jassoobhoy and M/s G. M. Kapadia & Co., Chartered Accountants, vide their unmodified audit report dated May 20, 2022, whose report has been furnished to us by the Management and which has been relied upon by us for the purpose of our audit of the financial information. Our opinion is not modified in respect of this matter.

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-five accounting units of the Bank which have been audited by Statutory Branch Auditors and we have relied on their report in this regard.

For Chandabhoy & Jassoobhoy
Chartered Accountants
(ICAI Firm Registration No. 101647W)

Ambesh Dave
Partner
Membership No. 049289
UDIN:23049289BGXCNV8282

For Ford Rhodes Parks & Co. LLP
Chartered Accountants
(ICAI Firm Registration No. 102860W/W100089)

Shrikant B Prabhu
Partner
Membership No. 035296
UDIN:23035296BGQMNU2230

Place: Mumbai
Date: May 19, 2023

RESERVE BANK OF INDIA
BALANCE SHEET AS ON MARCH 31, 2023

(Amount in ₹ crore)

Liabilities	Schedule	2021-22	2022-23	Assets	Schedule	2021-22	2022-23
Capital		5.00	5.00	**Assets of Banking Department (BD)**			
Reserve Fund		6,500.00	6,500.00	Notes, Rupee Coin, Small Coin	6	17.13	9.50
Other Reserves	1	236.00	238.00	Gold-BD	7	1,96,864.38	2,30,733.95
Deposits	2	17,33,787.56	13,54,217.22	Investments-Foreign-BD	8	11,41,127.75	10,08,993.26
Risk Provisions				Investments-Domestic-BD	9	14,88,815.96	14,06,422.89
Contingency Fund		3,10,986.94	3,51,205.69	Bills Purchased and Discounted		0.00	0.00
Asset Development Fund		22,974.68	22,974.68	Loans and Advances	10	2,08,792.85	2,88,813.53
Revaluation Accounts	3	9,34,544.00	11,26,088.12	Investment in Subsidiaries	11	2,063.60	2,063.60
Other Liabilities	4	75,547.53	1,35,282.86	Other Assets	12	46,900.04	59,474.84
Liabilities of Issue Department				**Assets of Issue Department (ID) (As backing for Notes Issued)**			
Notes Issued	5	31,05,720.56	33,48,244.67	Gold-ID	7	1,25,348.98	1,40,765.60
				Rupee Coin		508.29	277.29
				Investments-Foreign-ID	8	29,79,863.29	32,07,201.78
				Investments-Domestic-ID	9	0.00	0.00
				Domestic Bills of Exchange and other Commercial Papers		0.00	0.00
						31,05,720.56	**33,48,244.67**
	Total Liabilities	**61,90,302.27**	**63,44,756.24**		**Total Assets**	**61,90,302.27**	**63,44,756.24**

Charulatha S. Kar	T. Rabi Sankar	M. Rajeshwar Rao	M. D. Patra	M. K. Jain	Shaktikanta Das
Chief General Manager-In-Charge	Deputy Governor	Deputy Governor	Deputy Governor	Deputy Governor	Governor

RESERVE BANK OF INDIA
INCOME STATEMENT FOR THE YEAR ENDED MARCH 31, 2023

(Amount in ₹ crore)

INCOME	Schedule	2021-22	2022-23
Interest	13	95,088.76	1,43,073.11
Other Income	14	65,023.37	92,384.15
Total		**1,60,112.13**	**2,35,457.26**
EXPENDITURE			
Printing of Notes		4,984.80	4,682.80
Expenditure on Remittance of Currency		82.95	118.19
Agency Charges	15	4,400.62	4,068.62
Employee Cost		3,869.43	6,003.93
Interest		1.77	1.92
Postage and Telecommunication Charges		140.09	191.18
Printing and Stationery		22.58	26.97
Rent, Taxes, Insurance, Lighting, *etc.*		145.56	161.47
Repairs and Maintenance		109.17	126.21
Directors' and Local Board Members' Fees and Expenses		1.48	4.15
Auditors' Fees and Expenses		6.49	7.44
Law Charges		14.03	16.88
Depreciation		280.99	303.18
Miscellaneous Expenses		1,073.71	1,448.35
Provisions		1,14,667.01	1,30,875.75
Total		**1,29,800.68**	**1,48,037.04**
Available Balance		**30,311.45**	**87,420.22**
Less:			
(a) Contribution to:			
(i) National Industrial Credit (Long Term Operations) Fund		1.00	1.00
(ii) National Housing Credit (Long Term Operations) Fund		1.00	1.00
(b) Transferable to NABARD:			
(i) National Rural Credit (Long Term Operations) Fund[1]		1.00	1.00
(ii) National Rural Credit (Stabilisation) Fund[1]		1.00	1.00
(c) Others			
Surplus payable to the Central Government		**30,307.45**	**87,416.22**

1. These funds are maintained by the National Bank for Agriculture and Rural Development (NABARD).

Charulatha S. Kar	T. Rabi Sankar	M. Rajeshwar Rao	M. D. Patra	M. K. Jain	Shaktikanta Das
Chief General Manager-In-Charge	Deputy Governor	Deputy Governor	Deputy Governor	Deputy Governor	Governor

SCHEDULES FORMING PART OF BALANCE SHEET AND INCOME STATEMENT

(Amount in ₹ crore)

		2021-22	2022-23
Schedule 1:	**Other Reserves**		
	(i) National Industrial Credit (Long Term Operations) Fund	31.00	32.00
	(ii) National Housing Credit (Long Term Operations) Fund	205.00	206.00
	Total	**236.00**	**238.00**
Schedule 2:	**Deposits**		
	(a) Government		
	(i) Central Government	5,000.04	5,000.93
	(ii) State Governments	42.45	42.49
	Sub total	***5,042.49***	***5,043.42***
	(b) Banks		
	(i) Scheduled Commercial Banks	8,23,632.33	8,68,939.67
	(ii) Scheduled State Co-operative Banks	7,592.50	8,100.09
	(iii) Other Scheduled Co-operative Banks	10,871.51	11,530.78
	(iv) Non-Scheduled State Co-operative Banks	5,089.60	5,177.27
	(v) Other Banks	29,540.22	36,729.16
	Sub total	***8,76,726.16***	***9,30,476.97***
	(c) Financial Institutions outside India		
	(i) Repo Borrowing-Foreign	74,438.88	1,00,952.11
	(ii) Reverse Repo Margin-Foreign	1,289.10	1,255.08
	Sub total	***75,727.98***	***1,02,207.19***
	(d) Others		
	(i) Administrators of RBI Employee PF A/c	4,503.16	4,642.35
	(ii) Depositor Education and Awareness Fund	48,262.85	62,224.89
	(iii) Balances of Foreign Central Banks	491.28	1,059.02
	(iv) Balances of Indian Financial Institutions	1,007.61	6,796.52
	(v) Balances of International Financial Institutions	542.64	507.06
	(vi) Mutual Funds	1.34	1.34
	(vii) Others	7,21,482.05	2,41,258.46
	Sub total	***7,76,290.93***	***3,16,489.64***
	Total	**17,33,787.56**	**13,54,217.22**
Schedule 3:	**Revaluation accounts**		
	(i) Currency and Gold Revaluation Account (CGRA)	9,13,389.29	11,24,733.16
	(ii) Investment Revaluation Account-Foreign Securities (IRA-FS)	0.00	0.00
	(iii) Investment Revaluation Account-Rupee Securities (IRA-RS)	18,577.81	0.00
	(iv) Foreign Exchange Forward Contracts Valuation Account (FCVA)	2,576.90	1,354.96
	Total	**9,34,544.00**	**11,26,088.12**
Schedule 4:	**Other Liabilities**		
	(i) Provision for Forward Contracts Valuation Account (PFCVA)	0.00	0.00
	(ii) Provision for payables	3,281.08	3,665.97
	(iii) Gratuity and Superannuation Fund	28,872.79	30,892.24
	(iv) Surplus payable to the Central Government	30,307.45	87,416.22
	(v) Bills Payable	0.14	0.11
	(vi) Miscellaneous	13,086.07	13,308.32
	Total	**75,547.53**	**1,35,282.86**
Schedule 5:	**Notes Issued**		
	(i) Notes held in the Banking Department	17.07	9.43
	(ii) Notes in circulation	31,05,703.49	33,48,218.85
	(iii) CBDC-W	0.00	10.69
	(iv) CBDC-R	0.00	5.70
	Total	**31,05,720.56**	**33,48,244.67**

		2021-22	2022-23
Schedule 6:	**Notes, Rupee Coin, Small Coin**		
	(i) Notes	17.07	9.43
	(ii) Rupee Coin	0.05	0.06
	(iii) Small Coin	0.01	0.01
	Total	**17.13**	**9.50**
Schedule 7:	**Gold**		
	(a) Banking Department		
	(i) Gold	1,92,169.72	2,04,401.58
	(ii) Gold Deposit	4,694.66	26,332.37
	Sub Total	***1,96,864.38***	***2,30,733.95***
	(b) Issue Department	1,25,348.98	1,40,765.60
	Total	**3,22,213.36**	**3,71,499.55**
Schedule 8:	**Investments-Foreign**		
	(i) Investments-Foreign-BD	11,41,127.75	10,08,993.26
	(ii) Investments-Foreign-ID	29,79,863.29	32,07,201.78
	Total	**41,20,991.04**	**42,16,195.04**
Schedule 9:	**Investments-Domestic**		
	(i) Investments-Domestic-BD	14,88,815.96	14,06,422.89
	(ii) Investments-Domestic-ID	0.00	0.00
	Total	**14,88,815.96**	**14,06,422.89**
Schedule 10:	**Loans and Advances**		
	(a) Loans and Advances to:		
	(i) Central Government	0.00	48,677.00
	(ii) State Governments	1,666.56	791.72
	Sub total	***1,666.56***	***49,468.72***
	(b) Loans and Advances to:		
	(i) Scheduled Commercial Banks	94,365.75	1,12,731.34
	(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	23,010.10	0.00
	(vi) Others	14,506.94	24,485.36
	Sub total	***1,31,882.79***	***1,37,216.70***
	(c) Loans and Advances to Financial Institutions outside India		
	(i) Reverse Repo Lending-Foreign	75,190.78	1,01,968.98
	(ii) Repo Margin-Foreign	52.72	159.13
	Sub total	***75,243.50***	***1,02,128.11***
	Total	**2,08,792.85**	**2,88,813.53**
Schedule 11:	**Investment in Subsidiaries/Associates**		
	(i) Deposit Insurance and Credit Guarantee Corporation (DICGC)	50.00	50.00
	(ii) Bharatiya Reserve Bank Note Mudran (P) Ltd. (BRBNMPL)	1,800.00	1,800.00
	(iii) Reserve Bank Information Technology (P) Ltd. (ReBIT)	50.00	50.00
	(iv) National Centre for Financial Education (NCFE)	30.00	30.00
	(v) Indian Financial Technology & Allied Services (IFTAS)	33.60	33.60
	(vi) Reserve Bank Innovation Hub (RBIH)	100.00	100.00
	Total	**2,063.60**	**2,063.60**

		2021-22	2022-23
Schedule 12:	**Other Assets**		
	(i) Fixed Assets (net of accumulated depreciation)	882.46	981.57
	(ii) **Accrued income (a + b)**	**41,769.61**	**55,217.80**
	a. on loans to employees	*366.08*	*383.70*
	b. on other items	*41,403.53*	*54,834.10*
	(iii) Swap Amortisation Account (SAA)	0.00	0.00
	(iv) Revaluation of Forward Contracts Account (RFCA)	2,576.90	1,354.96
	(v) Miscellaneous	1,671.07	1,920.51
	Total	**46,900.04**	**59,474.84**
Schedule 13:	**Interest**		
	(a) Domestic Sources		
	(i) Interest on holding of Rupee Securities	96,396.42	96,516.05
	(ii) Net Interest on LAF Operations	-35,501.29	-9,068.41
	(iii) Interest on SDF	0.00	-7,444.71
	(iv) Interest on MSF Operations	37.63	361.02
	(v) Interest on Loans and Advances	1,501.82	2,411.98
	Sub total	***62,434.58***	***82,775.93***
	(b) Foreign Sources		
	(i) Interest Income from Foreign Securities	31,559.33	43,649.26
	(ii) Net Interest on Repo/Reverse Repo transactions	42.32	228.25
	(iii) Interest on Deposits	1,052.53	16,419.67
	Sub total	***32,654.18***	***60,297.18***
	Total	**95,088.76**	**1,43,073.11**
Schedule 14:	**Other Income**		
	(a) Domestic Sources		
	(i) Exchange	0.00	0.00
	(ii) Discount	403.76	0.00
	(iii) Commission	3,058.09	3,469.14
	(iv) Rent Realised	11.38	8.99
	(v) Profit/Loss on sale and redemption of Rupee Securities	6,028.19	-222.86
	(vi) Depreciation on Rupee Securities inter portfolio transfer	-20.07	-110.67
	(vii) Amortisation of premium/discount on Rupee Securities	-1,717.97	-2,264.19
	(viii) Profit/Loss on sale of Bank's property	6.72	2.45
	(ix) Provision no longer required and Miscellaneous Income	325.09	-330.07
	Sub total	***8,095.19***	***552.79***
	(b) Foreign Sources		
	(i) Amortisation of premium/discount on Foreign Securities	-15,286.09	-9,972.25
	(ii) Profit/Loss on sale and redemption of Foreign Securities	3,002.39	-1,740.59
	(iii) Exchange gain/loss from Foreign Exchange transactions	68,990.55	1,03,308.35
	(iv) Miscellaneous Income	221.33	235.85
	Sub total	***56,928.18***	***91,831.36***
	Total	**65,023.37**	**92,384.15**
Schedule 15:	**Agency Charges**		
	(i) Agency Commission on Government Transactions	3,858.95	3,873.06
	(ii) Underwriting Commission paid to the Primary Dealers	486.95	107.47
	(iii) Sundries (Handling charges and turnover commission paid to banks for Relief/ Savings Bonds subscriptions; SBLA *etc.*)	12.29	20.98
	(iv) Fees paid to the External Asset Managers, Custodians, Brokers, *etc.*	42.43	67.11
	Total	**4,400.62**	**4,068.62**

STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES FOR THE YEAR ENDED MARCH 31, 2023

(a) General

1.1 Among other things, the Reserve Bank of India was established under the Reserve Bank of India Act, 1934 (the RBI Act, 1934) "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 Reserve Bank are:

a) Issue of Bank notes and circulation of coins;

b) Acts as monetary authority and formulates, implements and monitors the monetary policy, including acting as the Lender of Last Resort;

c) Regulation and supervision of the financial system;

d) Regulation and supervision of the payment and settlement systems;

e) Acts as manager of foreign exchange;

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) Developmental functions to support national objectives.

1.3 The RBI Act, 1934 requires that the issue of Bank notes should be conducted by the Reserve Bank in an Issue Department which shall be separated 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 RBI Act, 1934 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 RBI Act, 1934 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 RBI 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 and/or amortisation. 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 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 Deposit Account-

Miscellaneous-BD, 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 day.

d) Exchange gains/losses on sale of foreign currencies and gold are accounted for using the weighted average cost method for arriving at the cost.

2.3 Gold & Foreign Currency Assets and Liabilities

Transactions in gold & foreign currency assets and liabilities are accounted for on settlement date basis.

a) Gold

Gold (including gold deposit) is revalued on a daily basis at ninety (90) per cent of the London Bullion Market Association (LBMA) gold price in US dollar and Rupee-US dollar market exchange rate. Unrealised valuation gains/losses are accounted for in the Currency and Gold Revaluation Account (CGRA).

b) Foreign Currency Assets and Liabilities

All foreign currency assets and liabilities (excluding foreign currency received under swaps that are in the nature of repos and contracts where the rates are fixed contractually) are translated on a daily basis at market exchange rates prevailing on the day. Unrealised gains/losses arising from such translation of foreign currency assets and liabilities are accounted for in the CGRA.

Foreign securities, other than Treasury Bills (T-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 on a daily basis. 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 (CF) and the same is reversed on the first working day of the following accounting year.

Foreign T-Bills and Commercial Papers are carried at cost as adjusted by daily amortisation of discount/premium. Premium or discount on foreign securities is amortised daily. Profit/loss on sale of foreign securities is recognised with respect to the amortised book value.

c) Forward/Swap Contracts

Forward contracts entered into by the Reserve Bank are revalued on a half yearly basis. While mark-to-market net 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 net 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 outstanding forward contracts.

Debit balance in FCVA, if any, on the balance sheet date, is charged to the CF and reversed on the first working day of the following year. The balance in RFCA and PFCVA represents net unrealised gains and losses, respectively, on valuation of forward contracts.

In 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, amounts received under these swaps are not subject to periodic revaluation.

While FCVA forms part of 'Revaluation Accounts', PFCVA forms part of 'Other Liabilities' and RFCA and SAA forms part of 'Other Assets'.

d) Repurchase Transactions

The Reserve Bank participates in foreign Repurchase transactions (Repo and Reverse Repo) as part of Reserve Management operations. Repo transactions are treated as borrowing of foreign currencies and are shown under 'Deposits', whereas Reverse Repo transactions are treated as lending of foreign currencies and are shown under 'Loans and Advances'.

e) Transactions in Derivatives

Transactions in derivatives like Interest Rate Futures, Currency Futures, Interest Rate Swaps and Overnight Indexed Swaps undertaken as part of Reserve Management operations are marked-to-market periodically and the resultant gain/loss is booked in income account.

f) Security Lending Transactions

The Reserve Bank participates in Security Lending transactions as part of Reserve Management operations. The securities lent remain a part of the Reserve Bank's Investments and continue to be amortised, accrue interest and are marked-to-market.

2.4 Transactions in Exchange Traded Currency Derivatives (ETCD)

The ETCD transactions undertaken by the Reserve Bank as part of its intervention operations are marked-to-market on a daily basis and the resultant gain/loss is booked in income account.

2.5 Domestic Investments

a) Rupee securities and oil bonds, except T-Bills and those mentioned in (d), are marked-to-market as on the last business day of each week ending Friday and the last business day of each month. The unrealised gains/losses on revaluation are accounted for 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 CF 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 amortisation.

b) T-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 Fund, Provident Fund, Leave Encashment Fund, Medical Assistance Fund (MAF)], Depositor Education and Awareness (DEA) Fund and Payments Infrastructure Development Fund (PIDF) 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, Marginal Standing Facility (MSF) and Standing Deposit Facility (SDF)

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 and SDF are being treated as deposits and shown under 'Deposits-Others'.

2.7 Fixed Assets

Fixed Assets are stated at cost less depreciation except art and paintings and freehold land which are held at cost.

2.7.1 Fixed Assets other than Land and Buildings

a) Fixed Assets, costing up to ₹1 lakh (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.

b) Individual items of computer software costing ₹1 lakh and above are capitalised and depreciation is calculated on monthly *pro-rata* basis at applicable rates.

c) Depreciation on fixed assets acquired and capitalised during the accounting year 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.

d) Depreciation on the following fixed assets 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, Fixtures, 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)

e) Depreciation is provided on half year-end balances of fixed assets on monthly *pro-rata* basis. In case of additions/deletions of assets, depreciation is calculated on monthly *pro-rata* basis including the month of addition/deletion of such assets.

f) 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 modernisation/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.

2.7.2 Land and Buildings: The accounting treatment in respect of land and buildings is as follows:

a) *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 amortisation.

ii. Land acquired on lease up to 99 years is amortised over the period of the lease.

iii. Land acquired on a freehold basis is not subject to any amortisation.

b) *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 thirty 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:

- *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.

- *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

a) The Reserve Bank contributes monthly at a determined rate to Provident Fund for the eligible employees and these contributions are charged to income in the year to which it relates.

b) Other 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.7 LIABILITIES OF THE RESERVE BANK

XII.7.1 Capital

The Reserve Bank was constituted as a private shareholders' bank in 1935 with an initial paid-up capital of ₹5 crore. The Reserve 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 ₹5 crore in terms of Section 4 of the RBI Act, 1934.

XII.7.2 Reserve Fund

The original Reserve Fund of ₹5 crore 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 ₹6,495 crore was credited to this fund from out of gains on periodic revaluation of gold up to October 1990, taking it to ₹6,500 crore. 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 the head 'Revaluation Accounts'.

XII.7.3 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 ₹10 crore. The fund witnessed annual contributions from the Reserve Bank for financial assistance to eligible financial institutions. Since 1992-93, a token amount of ₹1 crore is being contributed each year to the Fund. The balance in the fund stood at ₹32 crore as on March 31, 2023.

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 ₹50 crore has been enhanced by annual contributions from the Reserve Bank thereafter. From the year 1992-93, only a token amount of ₹1 crore is being contributed each year. The balance in the fund stood at ₹206 crore as on March 31, 2023.

   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 the National Bank for Agriculture and Rural Development (NABARD) for which a token amount of ₹1 crore each is set aside and transferred to NABARD every year.

XII.7.4 Deposits

These represent 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 Administrators of RBI Employee Provident Fund, DEA Fund, amount outstanding against Reverse Repo, SDF, MAF, PIDF, *etc.* Total deposits decreased by 21.89 per cent from ₹17,33,787.56 crore as on March 31, 2022 to ₹13,54,217.22 crore as on March 31, 2023.

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 State Governments by mutual agreement in terms of Section 21A of the RBI Act, 1934. Accordingly, the Central and State Governments maintain deposits with the Reserve Bank. The balances held by the Central and State Governments were ₹5,000.93 crore and ₹42.49 crore, respectively, as on March 31, 2023 as compared to ₹5,000.04 crore and ₹42.45 crore, respectively, as on March 31, 2022.

b. *Deposits-Banks*

Banks maintain balance 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 6.13 per cent from ₹8,76,726.16 crore as on March 31, 2022 to ₹9,30,476.97 crore as on March 31, 2023. The increase in this head was primarily on account of higher CRR requirement of 4.50 per cent of Net Demand and Time Liabilities (NDTL) as on March 31, 2023 as compared to CRR requirement of 4 per cent of NDTL as on March 31, 2022.

c. *Deposits-Financial Institutions Outside India*

The balance under the head increased from ₹75,727.98 crore as on March 31, 2022 to ₹1,02,207.19 crore as on March 31, 2023, due to increase in volume of repo transactions during the year.

d. *Deposits-Others*

'Deposits-Others' consist of balances of Administrators of RBI Employee Provident Fund, balance in DEA Fund, balances of Foreign Central Banks, Indian and International Financial Institutions, MAF, PIDF, amount outstanding under Reverse Repo, SDF, *etc*. The amount under 'Deposits-Others' decreased by 59.23 per cent from ₹7,76,290.93 crore as on March 31, 2022 to ₹3,16,489.64 crore as on March 31, 2023 primarily due to decrease in reverse repo deposits with the Reserve Bank.

XII.7.5 Risk Provisions

The Reserve Bank makes risk provisioning in terms of Section 47 of the RBI Act, 1934. The risk provisions maintained by the Reserve Bank comprise the Contingency Fund (CF) and Asset Development Fund (ADF). These risk provisions, along with Capital and Reserve Fund, are components of the Reserve Bank's Available Realised Equity (ARE) under the Economic Capital Framework[1] (ECF) adopted by the Reserve Bank. The details of Capital and Reserve Fund have been given in earlier paragraphs. The details of the two risk provisions are as under:

a. *Contingency Fund (CF)*

This is a 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 Reserve

[1] Based on the Report of the Expert Committee to Review the Extant Economic Capital Framework of the Reserve Bank of India, the ECF was adopted by the Central Board of the Reserve Bank in August 2019.

Bank. As on March 31, 2023, amounts of ₹1,65,488.93 crore and ₹19,417.61 crore were charged to CF on account of debit balances in Investment Revaluation Account-Foreign Securities (IRA-FS) and Investment Revaluation Account-Rupee Securities (IRA-RS), respectively. The charge to CF is reversed on the first working day of the following year. Further, an amount of ₹1,30,875.75 crore was also provided for towards CF to maintain the Available Realised Equity at the level of 6.00 per cent of the size of the balance sheet. Accordingly, the balance in CF as on March 31, 2023 was ₹3,51,205.69 crore as compared to ₹3,10,986.94 crore as on March 31, 2022.

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 to meet internal capital expenditure. No provision was made towards ADF in the year 2022-23. As on March 31, 2023, the balance in ADF at ₹22,974.68 crore remains the same as on March 31, 2022 (Table XII.2).

XII.7.6 Revaluation Accounts

The unrealised marked-to-market gains/losses are recorded in revaluation heads, *viz.*, Currency and Gold Revaluation Account (CGRA), Investment Revaluation Accounts (IRA) and Foreign Exchange Forward Contracts Valuation Account (FCVA). The details are as under:

a. *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 prices. Unrealised gains/losses on valuation of Foreign Currency Assets (FCA) and Gold are not taken to the income account but instead accounted for in the CGRA. Net balance

Table XII.2: Balances in Capital, Reserve Fund and Risk Provisions [Available Realised Equity (ARE)]

(₹ crore)

As on	Capital	Reserve Fund	Balance in CF	Balance in ADF	ARE	ARE as a per cent of balance sheet
1	2	3	4	5	6 = (2+3+4+5)	7
June 30, 2019	5.00	6,500.00	1,96,344.35	22,874.68	2,25,724.03	5.50
June 30, 2020	5.00	6,500.00	2,64,033.94@	22,874.68	2,93,413.62	5.50
March 31, 2021	5.00	6,500.00	2,84,542.12$	22,874.68	3,13,921.80	5.50
March 31, 2022	5.00	6,500.00	3,10,986.94*	22,974.68**	3,40,466.62	5.50
March 31, 2023	5.00	6,500.00	3,51,205.69^	22,974.68	3,80,685.37	6.00

@: Increase in CF is the net impact of provision of ₹73,615 crore and charging of the debit balance in the FCVA amounting to ₹5,925.41 crore as on June 30, 2020.

$: Increase in CF is the net impact of provision of ₹20,710.12 crore and charging of the debit balance in the FCVA amounting to ₹6,127.35 crore as on March 31, 2021.

* : Increase in CF is the net impact of provision of ₹1,14,567.01 crore and charging of the debit balance in the IRA-FS amounting to ₹94,249.54 crore as on March 31, 2022.

^ : Increase in CF is the net impact of provision of ₹1,30,875.75 crore and charging of debit balances in IRA-FS and IRA-RS amounting to ₹1,65,488.93 crore and ₹19,417.61 crore, respectively, as on March 31, 2023.

**: Increase in ADF is due to provision of ₹100 crore on account of investment in RBIH.

in CGRA, therefore, varies with the size of the asset base, its valuation and movement in the exchange rate and the 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 CF. During 2022-23, the balance in CGRA increased from ₹9,13,389.29 crore as on March 31, 2022 to ₹11,24,733.16 crore as on March 31, 2023 mainly due to depreciation of rupee and increase in the price of gold.

b. *Investment Revaluation Account-Foreign Securities (IRA-FS)*

The foreign dated securities are marked-to-market on a daily basis and the unrealised gains/losses arising therefrom are transferred to IRA-FS. The balance in IRA-FS decreased from ₹(-)94,249.54 crore as on March 31, 2022 to ₹(-)1,65,488.93 crore as on March 31, 2023 because of increase in yields across the maturities for almost all major markets. As per the extant policy, the debit balance of ₹1,65,488.93 crore in IRA-FS was adjusted against the CF on March 31, 2023 which was reversed on the first working day of the following year. Accordingly, the balance in IRA-FS as on March 31, 2023 was Nil.

c. *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 week ending Friday and the last business day of each month and the unrealised gains/losses arising therefrom are booked in IRA-RS. The balance in IRA-RS decreased from ₹18,577.81 crore as on March 31, 2022 to ₹(-)19,417.61 crore as on March 31, 2023 due to hardening of yields across the yield curve leading to mark-to-market losses.

d. *Foreign Exchange Forward Contracts Valuation Account (FCVA)*

Marking to market of outstanding forward contracts as on March 31, 2023 resulted in a net unrealised gain of ₹1,354.96 crore, which was credited to FCVA with contra debit to Revaluation of Forward Contracts Account (RFCA) as compared to net unrealised gain of ₹2,576.90 crore as on March 31, 2022.

XII.7.7 Other Liabilities

'Other Liabilities' increased by 79.07 per cent from ₹75,547.53 crore as on March 31, 2022 to ₹1,35,282.86 crore as on March 31, 2023, primarily due to increase in surplus payable to the Central Government.

i. Provision for Forward Contracts Valuation Account (PFCVA)

The balance was Nil in this account as on March 31, 2023 as well as on March 31, 2022.

Balances in Revaluation Accounts and PFCVA for the last five years are given in Table XII.3.

ii. Provision for Payables

This represents year end provisions made for expenditure incurred but not defrayed and income received in advance/payable, if any. The balance under this head increased by 11.73 per cent from ₹3,281.08 crore as on March 31, 2022 to ₹3,665.97 crore as on March 31, 2023.

Table XII.3: Balances in Currency and Gold Revaluation Account (CGRA), Investment Revaluation Account-Foreign Securities (IRA-FS), Investment Revaluation Account-Rupee Securities (IRA-RS), Foreign Exchange Forward Contracts Valuation Account (FCVA) and Provision for Forward Contracts Valuation Account (PFCVA)

(₹ crore)

As on	CGRA	IRA-FS	IRA-RS	FCVA	PFCVA
1	2	3	4	5	6
June 30, 2019	6,64,479.74	15,734.96	49,476.26	1,303.96	0.00
June 30, 2020	9,77,141.23	53,833.99	93,415.50	0.00	5,925.41
March 31, 2021	8,58,877.53	8,853.67	56,723.79	0.00	6,127.35
March 31, 2022	9,13,389.29	0.00	18,577.81	2,576.90	0.00
March 31, 2023	11,24,733.16	0.00	0.00	1,354.96	0.00

iii. *Surplus payable to the Central Government*

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 Reserve 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 including provision for CF and contribution of ₹4 crore to four statutory funds, the surplus payable to the Central Government for the year 2022-23 amounted to ₹87,416.22 crore (including ₹424.07 crore as against ₹493.92 crore in the previous year payable towards the difference in interest expenditure borne by the Government, consequent on conversion of special securities into marketable securities).

iv. *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 decreased from ₹0.14 crore as on March 31, 2022 to ₹0.11 crore as on March 31, 2023.

v. *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 ₹13,086.07 crore as on March 31, 2022 to ₹13,308.32 crore as on March 31, 2023.

XII.7.8 Liabilities of Issue Department-Notes Issued

The liabilities of Issue Department reflect the quantum of currency notes in circulation. Section 34(1) of the RBI Act, 1934 requires that all banknotes 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 7.81 per cent from ₹31,05,720.56 crore as on March 31, 2022 to

₹33,48,244.67 crore[2] as on March 31, 2023. During the year, banknotes in digital form as e₹-Wholesale (e₹-W) and e₹-Retail (e₹-R) were launched. The value of e₹-W and e₹-R in circulation stood at ₹10.69 crore and ₹5.70 crore, respectively, as on March 31, 2023.

Earlier, an amount of ₹10,719.37 crore, representing the value of Specified Bank Notes (SBNs) not paid was transferred to 'Other Liabilities' as on June 30, 2018. The Reserve Bank has made payments to the extent of ₹4.60 crore towards exchange value of SBNs to eligible tenderers during the year ended March 31, 2023 and the cumulative payment made against the head stands at ₹30.20 crore.

XII.8 ASSETS OF THE RESERVE BANK

XII.8.1 ASSETS OF BANKING DEPARTMENT

i) Notes, Rupee Coin, Small Coin

This head represents the balances of Bank notes, one-rupee notes, rupee coins of ₹1, 2, 5, 10 and 20 and small coins kept to meet the day to day requirements of banking functions conducted by the Reserve Bank. The balance as on March 31, 2023 was ₹9.50 crore as against ₹17.13 crore as on March 31, 2022.

ii) Gold-Banking Department (BD)

As on March 31, 2023, total gold held by the Reserve Bank was 794.63 metric tonnes as compared to 760.42 metric tonnes as on March 31, 2022. The increase is on account of addition of 34.21 metric tonnes of gold during the year.

Of 794.63 metric tonnes as on March 31, 2023, 301.09 metric tonnes of gold is held as backing for Notes Issued as compared to 295.82 metric tonnes as on March 31, 2022 and is shown separately as an asset of Issue Department. The balance 493.54 metric tonnes as on March 31, 2023 as compared to 464.60 metric tonnes on March 31, 2022 is treated as an asset of Banking Department (Table XII.4).

Table XII.4: Physical holding of Gold

	As on March 31, 2022	As on March 31, 2023
	Volume in metric tonnes	Volume in metric tonnes
1	2	3
Gold held as backing for Notes Issued (held in India)	295.82	301.09
Gold (including Gold Deposit) held as asset of Banking Department (held abroad)	464.60	493.54
Total	**760.42**	**794.63**

The value of gold (including gold deposit) held as asset of Banking Department increased by 17.20 per cent from ₹1,96,864.38 crore as on March 31, 2022 to ₹2,30,733.95 crore as on March 31, 2023. This increase is on account of addition of 28.94 metric tonnes of gold and also due to increase in the price of gold and depreciation of INR *vis-à-vis* USD.

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 2022-23. Consequently, there was no such asset in the books of the Reserve Bank as on March 31, 2023.

[2] Includes banknotes in physical and digital form.

iv) Investments-Foreign-Banking Department (BD)

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 T-Bills and securities; and (v) Special Drawing Rights (SDR) acquired from the Government of India (GoI).

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 FCA, eligible as per Section 33(6) of the RBI Act, 1934, used for backing of Notes Issued. The remaining of FCA constitutes 'Investments-Foreign-BD'.

The position of FCA for the last two years is given in Table XII.5.

v) Investments-Domestic-Banking Department (BD)

Investments comprise dated Government Rupee Securities, State Government Securities and Special Oil Bonds. The Reserve Bank's holding of domestic securities decreased by 5.53 per cent, from ₹14,88,815.96 crore as on March 31, 2022 to ₹14,06,422.89 crore as on March 31, 2023.

Table XII.5: Details of Foreign Currency Assets (FCA)

(₹ crore)

Particulars	As on March 31	
	2022	2023
1	2	3
I Investments-Foreign-BD*	11,41,127.75	10,08,993.26
II Investments-Foreign-ID	29,79,863.29	32,07,201.78
Total	**41,20,991.04**	**42,16,195.04**

*: includes shares in BIS and Society for Worldwide Interbank Financial Telecommunications (SWIFT) and SDR transferred from GoI valued at ₹12,096.82 crore as on March 31, 2023 compared to ₹11,286.57 crore as on March 31, 2022.

Note:

1. The Reserve Bank has agreed to make resources available under the IMF's New Arrangements to Borrow (NAB). Effective January 1, 2021, India's commitment under NAB stands at SDR 8.88 billion (₹98,235.15 crore/US$11.95 billion). As on March 31, 2023, investments amounting to SDR 0.03 billion (₹307.40 crore/US$0.04 billion) have been made under NAB.
2. The Reserve Bank has agreed to invest up to an amount, the aggregate of which shall not exceed US$5 billion (₹41,094.80 crore), in the bonds issued by India Infrastructure Finance Company (UK) Limited. As on March 31, 2023, the Reserve Bank has invested US$1.16 billion (₹9,558.65 crore) in such bonds.
3. During the year 2013-14, the Reserve Bank and GoI entered into a MoU for transfer of SDR holdings from GoI to RBI in a phased manner. As on March 31, 2023, SDR 1.06 billion (₹11,767.83 crore/US$1.43 billion) were held by the Reserve Bank.
4. With a view to strengthening regional financial and economic cooperation, the Reserve Bank 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 March 31, 2023, Swap with Bhutan, Maldives and Sri Lanka, amounting to US$0.20 billion (₹1,626.71 crore), US$0.10 billion (₹821.90 crore) and US$0.40 billion (₹3,287.56 crore) respectively, is outstanding.
5. The nominal value of foreign securities posted as collateral and margin in repurchase and IRF transactions was ₹1,04,432.73 crore/US$12.71 billion and the nominal value of those received under reverse repurchase transactions was ₹1,15,230.75 crore/US$14.02 billion as on March 31, 2023.
6. The nominal value of foreign securities lent under Security Lending Arrangement was ₹75,898.27 crore/US$9.23 billion as on March 31, 2023.

The decrease was mainly on account of liquidity management operations conducted by way of net sale of government securities, redemption of securities in the portfolio and hardening of yields across the yield curve leading to lower valuation.

A part of Investments-Domestic-BD is also earmarked for various staff funds, DEA Fund and PIDF as explained in para 2.5(d). As on March 31, 2023, ₹1,01,046 crore (face value) was earmarked for the said funds.

vi) Loans and Advances

a) *Central and State Governments*

These loans are extended in the form of Ways and Means Advances (WMA) and Overdraft (OD) to the Central Government and in the form of WMA, OD and Special Drawing Facility (SDF) to State Governments in terms of Section 17(5) of the RBI Act, 1934. The WMA limit, in case of the Central Government, is fixed from time to time in consultation with the Government of India and in case of State Governments, the limit for individual State/Union Territory is fixed based on the recommendations of Advisory Committee/Group constituted for this purpose. Loans and advances to the Central Government was ₹48,677.00 crore as on March 31, 2023 as against Nil as on March 31, 2022. Loans and advances to State Governments decreased by 52.49 per cent from ₹1,666.56 crore as on March 31, 2022 to ₹791.72 crore as on March 31, 2023.

b) *Loans and advances to Commercial, Co-operative Banks, NABARD and others*

- *Loans and advances to Commercial and Co-operative Banks:* These include amounts outstanding against Repo under Liquidity Adjustment Facility (LAF), Marginal Standing Facility (MSF) and special liquidity facility to banks. The amount outstanding increased from ₹94,365.75 crore as on March 31, 2022 to ₹1,12,731.34 crore as on March 31, 2023 due to increase in funds availed by banks under MSF due to lower surplus liquidity in the banking system during the year.

- *Loans and advances to NABARD:*

  The Reserve Bank can extend loans to NABARD under Section 17(4E) of the RBI Act, 1934. The balance under this head decreased from ₹23,010.10 crore as on March 31, 2022 to Nil on March 31, 2023.

- *Loans and advances to others:*

  The balance under this head represents loans and advances to National Housing Bank (NHB), Small Industries Development Bank of India (SIDBI) and liquidity support provided to Primary Dealers (PDs). The balance under this head increased by 68.78 per cent from ₹14,506.94 crore as on March 31, 2022 to ₹24,485.36 crore as on March 31, 2023, primarily due to increase in liquidity support provided to Primary Dealers on March 31, 2023.

c) *Loans and advances to Financial Institutions outside India*

Balances under the head increased from ₹75,243.50 crore as on March 31, 2022 to ₹1,02,128.11 crore as on March 31, 2023 due to increase in volume of reverse repo transactions during the year.

vii) Investment in Subsidiaries/Associates

The comparative position of investment in subsidiaries/associate institutions as on March 31, 2022 and March 31, 2023 is given in Table XII.6. The total holding as on March 31, 2023 was ₹2,063.60 crore, same as on March 31, 2022.

viii) Other Assets

'Other Assets' comprise fixed assets (net of depreciation), accrued income, Swap Amortisation Account (SAA), 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, *etc.* The amount outstanding under 'Other Assets' increased by 26.81 per cent from ₹46,900.04 crore as on March 31, 2022 as compared to ₹59,474.84 crore as on March 31, 2023.

a. *Swap Amortisation Account (SAA)*

As on March 31, 2023 as well as on March 31, 2022, the balance in SAA was Nil as there were no outstanding contracts of swaps which were in nature of repo at off market rate.

b. *Revaluation of Forward Contracts Account (RFCA)*

The balance in RFCA was ₹1,354.96 crore as on March 31, 2023 representing net marked-to-market gain on outstanding forward contracts as against ₹2,576.90 crore on March 31, 2022.

XII.8.2 Assets of Issue Department

The eligible assets of the Issue Department held as backing for Notes Issued consist of gold coins, gold bullion, foreign securities, rupee coins, rupee securities and Domestic Bills of Exchange. The Reserve Bank holds 794.63 metric tonnes of gold, of which 301.09 metric tonnes are held as backing for Notes Issued as on March 31, 2023 (Table XII.4). The value of gold held as asset of Issue Department increased by 12.30 per cent from ₹1,25,348.98 crore as on March 31, 2022 to ₹1,40,765.60 crore as on March 31, 2023.

Table XII.6: Holdings in Subsidiaries/Associates

(₹ crore)

	2021-22	2022-23	Per cent holding as on March 31, 2023
1	2	3	4
a) Deposit Insurance and Credit Guarantee Corporation (DICGC)	50.00	50.00	100
b) Bharatiya Reserve Bank Note Mudran (P) Ltd. (BRBNMPL)	1,800.00	1,800.00	100
c) Reserve Bank Information Technology (P) Ltd. (ReBIT)	50.00	50.00	100
d) National Centre for Financial Education (NCFE)	30.00	30.00	30
e) Indian Financial Technology & Allied Services (IFTAS)	33.60	33.60	100
f) Reserve Bank Innovation Hub (RBIH)	100.00	100.00	100
Total	**2,063.60**	**2,063.60**	

This increase in the value of gold during the year is on account of addition of 5.27 metric tonnes of gold and, also due to increase in the price of gold and depreciation of INR *vis-à-vis* USD.

Consequent upon the increase in Notes Issued, Investments-Foreign-ID held as its backing increased by 7.63 per cent from ₹29,79,863.29 crore as on March 31, 2022 to ₹32,07,201.78 crore as on March 31, 2023.

The balance of Rupee Coins held by the Issue Department decreased by 45.45 per cent from ₹508.29 crore as on March 31, 2022 to ₹277.29 crore as on March 31, 2023.

FOREIGN EXCHANGE RESERVES

XII.9 Foreign Exchange Reserves (FER) comprise Foreign Currency Assets (FCA), Gold (including gold deposit), Special Drawing Rights (SDR) holdings and Reserve Tranche Position (RTP). The SDR holdings acquired from GoI form part of the Reserve Bank's balance sheet and are included under 'Investments-Foreign-BD'. The SDR holdings remaining with GoI and the RTP, which represent India's quota contribution to IMF in foreign currency, are not a part of the Reserve Bank's balance sheet. The position of FER as on March 31, 2022 and March 31, 2023 in Indian Rupees and the US dollar, which is the numéraire currency for the FER, is furnished in Tables XII.7 (a) and (b).

Table XII.7(a): Foreign Exchange Reserves (Rupee)

(₹ crore)

Components	As on		Variation	
	March 31, 2022	March 31, 2023	Absolute	Per cent
1	2	3	4	5
Foreign Currency Assets (FCA)	40,94,564.98^	41,89,132.39#	94,567.41	2.31
Gold (including gold deposit)	3,22,213.36@	3,71,499.55*	49,286.19	15.30
Special Drawing Rights (SDR)	1,43,051.88	1,51,164.10	8,112.22	5.67
Reserve Tranche Position (RTP) in IMF	38,988.28	42,468.49	3,480.21	8.93
Foreign Exchange Reserves (FER)	**45,98,818.50**	**47,54,264.53**	**1,55,446.03**	**3.38**

^: Excludes (a) SDR Holdings of the Reserve Bank amounting to ₹10,975 crore, which is included under the SDR holdings; (b) Investment of ₹10,904.23 crore in bonds issued by IIFC (UK); and (c) ₹1,517.87 crore lent to Bhutan and ₹3,028.96 crore lent to Sri Lanka under the Currency Swap arrangement made available for SAARC countries.

#: Excludes (a) SDR Holdings of the Reserve Bank amounting to ₹11,767.83 crore, which is included under the SDR holdings; (b) Investment of ₹9,558.65 crore in bonds issued by IIFC (UK); and (c) ₹1,626.71 crore lent to Bhutan, ₹821.90 crore lent to Maldives and ₹3,287.56 crore lent to Sri Lanka under the Currency Swap arrangement made available for SAARC countries.

@: Of this, Gold valued at ₹1,25,348.98 crore is held as an asset of Issue Department and Gold (including gold deposit) valued at ₹1,96,864.38 crore is held as an asset of Banking Department.

*: Of this, Gold valued at ₹1,40,765.60 crore is held as an asset of Issue Department and Gold (including gold deposit) valued at ₹2,30,733.95 crore is held as an asset of Banking Department.

Table XII.7(b): Foreign Exchange Reserves (USD)

(US$ billion)

Components	As on		Variation	
	March 31, 2022	March 31, 2023	Absolute	Per cent
1	2	3	4	5
Foreign Currency Assets (FCA)	540.72*	509.69**	-31.03	-5.74
Gold (including gold deposit)	42.55	45.20	2.65	6.23
Special Drawing Rights (SDR)	18.89	18.39	-0.50	-2.65
Reserve Tranche Position (RTP) in IMF	5.14	5.17	0.03	0.58
Foreign Exchange Reserves (FER)	**607.30**	**578.45**	**-28.85**	**-4.75**

*: Excludes (a) SDR Holdings of the Reserve Bank amounting to US$1.45 billion, which is included under the SDR holdings; (b) US$1.44 billion invested in bonds of IIFC (UK); and (c) BTN equivalent to US$0.20 billion equivalent of INR currency lent to Bhutan and US$0.40 billion lent to Sri Lanka under the Currency Swap arrangement made available for SAARC countries.

**: Excludes (a) SDR Holdings of the Reserve Bank amounting to US$1.43 billion, which is included under the SDR holdings; (b) US$1.16 billion invested in bonds of IIFC (UK); and (c) BTN equivalent to US$0.20 billion equivalent of INR currency lent to Bhutan, US$0.10 billion lent to Maldives and US$0.40 billion lent to Sri Lanka under the Currency Swap arrangement made available for SAARC countries.

ANALYSIS OF INCOME AND EXPENDITURE

INCOME

XII.10 The components of Reserve Bank's income are 'Interest' and 'Other Income' including (i) Discount (ii) Exchange (iii) Commission (iv) Amortisation 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/ Loss on sale of Bank's property and (ix) Provision no longer required and Miscellaneous Income. 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.11 The income from foreign sources increased by 69.82 per cent from ₹89,582.36 crore in 2021-22 to ₹1,52,128.54 crore in 2022-23. The rate of earnings on foreign currency assets was 3.73 per cent in 2022-23 as compared to 2.11 per cent in 2021-22 (Table XII.8).

Earnings from Domestic Sources

XII.12 The net income from domestic sources increased by 18.15 per cent from ₹70,529.77 crore in 2021-22 to ₹83,328.72 crore in 2022-23 mainly on account of decrease in net outgo of interest under LAF/MSF/SDF due to lower surplus liquidity in the banking system (Table XII.9).

Table XII.8: Earnings from Foreign Sources

(₹ crore)

Item	2021-22	2022-23	Variation	
			Absolute	Per cent
1	2	3	4	5
Foreign Currency Assets (FCA)	41,20,991.04	42,16,195.04	95,204.00	2.31
Average FCA	42,42,514.17	40,81,053.94	-1,61,460.23	-3.81
Earnings from FCA (interest, discount, exchange gain/loss, capital gain/loss on securities)	89,582.36	1,52,128.54	62,546.18	69.82
Earnings from FCA as per cent of average FCA	2.11	3.73	1.62	76.78

Table XII.9: Earnings from Domestic Sources

(₹ crore)

Item	2021-22	2022-23	Variation	
			Absolute	Per cent
1	2	3	4	5
Earnings (I+II+III+IV)	**70,529.77**	**83,328.72**	**12,798.95**	**18.15**
I. Earnings from Rupee Securities and discounted instruments				
i) Interest on holding of Rupee Securities (including Oil Bonds)	96,396.42	96,516.05	119.63	0.12
ii) Profit/Loss on sale and redemption of Rupee Securities	6,028.19	-222.86	-6,251.05	-103.70
iii) Depreciation on Rupee securities inter portfolio transfer	-20.07	-110.67	-90.60	451.42
iv) Amortisation of premium/discount on Rupee securities (including Oil Bonds)	-1,717.97	-2,264.19	-546.22	31.79
v) Discount	403.76	0.00	-403.76	-100.00
Sub total (i+ii+iii+iv+v)	***1,01,090.33***	***93,918.33***	***-7,172.00***	***-7.09***
II. Interest on LAF/MSF/SDF				
i) Net Interest on LAF Operations	-35,501.29	-9,068.41	26,432.88	74.46
ii) Interest on SDF	0.00	-7,444.71	-7,444.71	-100.00
iii) Interest on MSF operations	37.63	361.02	323.39	859.39
Sub total (i+ii+iii)	***-35,463.66***	***-16,152.10***	***19,311.56***	***-54.45***
III. Interest on other loans and advances				
i) Government (Central & States)	296.34	556.49	260.15	87.79
ii) Banks & Financial Institutions	1,149.57	1,791.55	641.98	55.85
iii) Employees	55.91	63.94	8.03	14.36
Sub total (i+ii+iii)	***1,501.82***	***2,411.98***	***910.16***	***60.60***
IV. Other Earnings				
i) Exchange	0.00	0.00	0.00	0.00
ii) Commission	3,058.09	3,469.14	411.05	13.44
iii) Rent Realised, Profit or Loss on sale of Bank's Property, Provision no longer required and Miscellaneous Income	343.19	-318.64	-661.83	-192.85
Sub total (i+ii+iii)	***3,401.28***	***3,150.50***	***-250.78***	***-7.37***

XII.13 *Interest on holding of Rupee Securities (including Oil Bonds)* increased marginally from ₹96,396.42 crore in 2021-22 to ₹96,516.05 crore in 2022-23.

XII.14 The *Net Interest Income from Liquidity Adjustment Facility (LAF)/Marginal Standing Facility (MSF)/Standing Deposit Facility (SDF)* operations increased from ₹(-)35,463.66 crore in 2021-22 to ₹(-)16,152.10 crore in 2022-23 due to lower surplus liquidity in the banking system in the current year as compared to previous year.

XII.15 *Profit on sale and redemption of Rupee Securities* decreased from ₹6,028.19 crore in 2021-22 to ₹(-)222.86 crore in 2022-23 primarily on account of hardening of yields across the yield curve in the current year which led to lower realisation on the sale/conversion of securities. In 2022-23, sale operations amounted to ₹35,030 crore (Face Value) and conversion of securities by the GoI with the Reserve Bank amounted to ₹22,610 crore.

XII.16 *Amortisation of premium/discount on Rupee Securities (including Oil Bonds):* The premium/discount on Rupee Securities and Oil Bonds held by the Reserve Bank, are amortised on a daily basis during the period of residual maturity. The net income from premium/discount on amortisation of Rupee Securities decreased from ₹(-)1,717.97 crore in 2021-22 to ₹(-)2,264.19 crore in 2022-23.

XII.17 *Discount:* The income from holding of discounted instruments (T-Bills) decreased from ₹403.76 crore in 2021-22 to Nil in 2022-23.

XII.18 *Interest on loans and advances*

a. *Central and State Governments:*

Interest income on loans and advances extended to Central and State Governments increased by 87.79 per cent from ₹296.34 crore in 2021-22 to ₹556.49 crore in 2022-23. Of the total, interest income received from the Central Government on account of WMA/OD increased from Nil in 2021-22 to ₹32.52 crore in 2022-23 and interest income received from State Governments on account of WMA/OD/ Special Drawing Facility (SDF) increased by 76.81 per cent from ₹296.34 crore in 2021-22 to ₹523.97 crore in 2022-23. The increase in interest earnings was on account of i) higher availment of funds from the Reserve Bank by the Central and State Governments and ii) increase in the applicable interest rate due to increase in Repo Rate by the Reserve Bank.

b. *Banks & Financial institutions*:

Interest on loans and advances to banks and financial institutions increased by 55.85 per cent from ₹1,149.57 crore in 2021-22 to ₹1,791.55 crore in 2022-23 due to higher availment of funds by Financial Institutions under Special Liquidity Facility and increase in Repo Rate by the Reserve Bank.

c. *Employees*:

Interest on loans and advances to employees increased by 14.36 per cent from ₹55.91 crore in 2021-22 to ₹63.94 crore in 2022-23.

XII.19 *Commission:* The commission income increased by 13.44 per cent from ₹3,058.09 crore in 2021-22 to ₹3,469.14 crore in 2022-23, primarily on account of a) increase in management commission received for servicing outstanding Central and State governments loans including Savings Bonds, Government Securities, T-Bills and b) increase in the floatation charges recovered from the Central and State Governments for loans issued during the year.

XII.20 *Rent Realised, Profit/Loss on sale of Bank's property, Provision no longer required and Miscellaneous Income*: Earnings from these income heads decreased from ₹343.19 crore in 2021-22 to ₹(-)318.64 crore in 2022-23.

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, besides employee related and other expenses. The total expenditure of the Reserve Bank increased by 14.05 per cent from ₹1,29,800.68 crore in 2021-22 to ₹1,48,037.04 crore in 2022-23 (Table XII.10).

Table XII.10: Expenditure

(₹ crore)

Item		2018-19	2019-20	2020-21	2021-22	2022-23
1		2	3	4	5	6
i.	Interest	1.16	1.34	1.10	1.77	1.92
ii.	Employee Cost	6,851.07	8,928.06	4,788.03	3,869.43	6,003.93
iii.	Agency Charges/Commission	3,910.21	3,876.08	3,280.06	4,400.62	4,068.62
iv.	Printing of Notes	4,810.67	4,377.84	4,012.09	4,984.80	4,682.80
v.	Provisions	63.60	73,615.00	20,710.12	1,14,667.01	1,30,875.75
vi.	Others	1,407.44	1,742.61	1,355.35	1,877.05	2,404.02
Total (i+ii+iii+iv+v+vi)		**17,044.15**	**92,540.93**	**34,146.75**	**1,29,800.68**	**1,48,037.04**

i) Interest

During 2022-23, an amount of ₹1.92 crore was paid as interest to Dr. B. R. Ambedkar Fund (set up for giving scholarship to wards of staff) and Employees Benevolent Fund as compared to ₹1.77 crore in 2021-22.

ii) Employee Cost

The total employee cost increased by 55.16 per cent from ₹3,869.43 crore in 2021-22 to ₹6,003.93 crore in 2022-23. The increase was due to increase in Reserve Bank's expenditure towards accrued liabilities of various superannuation funds in 2022-23.

iii) Agency Charges/Commission

a. Agency Commission on Government Transactions

The Reserve Bank discharges the function of banker to governments through a large network of agency bank branches that serve as retail outlets for governments' receipts and payments. The Reserve Bank pays commission to these agency banks at prescribed rates. The net agency commission paid on account of government business increased marginally by 0.37 per cent from ₹3,858.95 crore in 2021-22 to ₹3,873.06 crore in 2022-23.

b. Underwriting Commission paid to Primary Dealers

The expenditure on account of underwriting commission paid to Primary Dealers decreased from ₹486.95 crore in 2021-22 to ₹107.47 crore in 2022-23. Post pandemic recovery and lower expectation of devolvement by PDs contributed to significant lowering of the underwriting commission in the current year.

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 increased from ₹12.29 crore in 2021-22 to ₹20.98 crore in 2022-23.

d. Fees paid to the External Asset Managers, Custodians, Brokers, etc.

The expenditure under the head increased from ₹42.43 crore in 2021-22 to ₹67.11 crore in 2022-23.

iv) Printing of Notes

The supply of notes during the year 2022-23 at 2,26,002 lakh pieces was 1.57 per cent higher than that of the year 2021-22 (2,22,505 lakh pieces). The expenditure incurred on printing of banknotes decreased from ₹4,984.80 crore in 2021-22 to ₹4,682.80 crore in 2022-23.

v) Provisions

The ECF requires the Contingent Risk Buffer (CRB) to be maintained in the range of 5.50 per cent to 6.50 per cent of the size of the balance sheet. The Central Board approved that CRB may be maintained at 6.00 per cent of the size of the balance sheet of the Reserve Bank for the year 2022-23. Accordingly, a provision of ₹1,30,875.75 crore was made and transferred to CF during the year (Table XII.2).

vi) Others

Other expenses comprise expenditure on remittance of currency, printing and stationery, audit fees and related expenses, miscellaneous expenses, *etc.* which increased by 28.07 per cent from ₹1,877.05 crore in 2021-22 to ₹2,404.02 crore in 2022-23.

Contingent Liabilities

XII.22 Total contingent liabilities of the Reserve Bank amounted to ₹1,005.74 crore. The main component of it being partly paid shares, denominated in SDR, of Bank for International Settlements (BIS) held by the Reserve Bank. The uncalled liability on partly paid shares of the BIS as on March 31, 2023 was ₹986.92 crore. 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 ₹1 lakh and above only have been considered. The prior period transactions under expenditure and income amounted to ₹0.60 crore and ₹28.38 crore, respectively.

Payment to Micro and Small Enterprises under the Micro, Small & Medium Enterprises Development Act, 2006

XII.24 The following table sets forth the cases of delayed payments of the principal amount or interest due thereon to Micro and Small Enterprises:

(₹ crore)

Particulars	2021-22		2022-23	
	Principal	Interest	Principal	Interest
1	2	3	4	5
i. the principal amount and the interest due thereon remaining unpaid to any supplier as at March 31, 2023	-	-	-	-
ii. the amount of interest paid by the buyer in terms of section 16, along with the amount of the payment made to the supplier beyond the appointed day during the accounting year;	0.04	0.001	-	-
iii. the amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the year) but without adding the interest specified under the Act;	-	-	-	-
iv. the amount of interest accrued and remaining unpaid at the end of the accounting year;	-	-	-	-
v. the amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise, for the purpose of disallowance as a deductible expenditure under section 23.	NA	NA	NA	NA

-: Nil. NA: Not Applicable.

Previous year's figures

XII.25 Figures for the previous year have been rearranged, wherever necessary to make them comparable with the current year.

Auditors

XII.26 The statutory auditors of the Reserve 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 2022-23 were audited by M/s Chandabhoy & Jassoobhoy, Mumbai and M/s Ford Rhodes Parks & Co. LLP, Mumbai, as the Statutory Central Auditors and M/s S. Ghose & Co., Kolkata, M/s N. C. Rajagopal & Co., Chennai and M/s J. C. Bhalla & Co., New Delhi as Statutory Branch Auditors.

ANNEX I

CHRONOLOGY OF MAJOR POLICY ANNOUNCEMENTS: APRIL 2022 TO MARCH 2023[1]

Date of Announcement	Policy Initiative
Monetary Policy Department	
April 8, 2022	• The monetary policy committee (MPC) decided to keep the policy repo rate unchanged at 4.0 per cent. The MPC decided to remain accommodative, while focusing on withdrawal of accommodation to ensure that inflation remains within the target going forward, while supporting growth. • Standing Deposit Facility (SDF) was introduced at 40 basis points (bps) above the fixed reverse repo rate (FRRR) and replaced the FRRR as floor of the liquidity adjustment facility (LAF) corridor. The SDF rate was placed 25 basis points (bps) below the repo rate, *i.e.,* 3.75 per cent.
May 4, 2022	• The MPC decided to raise the policy repo rate by 40 bps to 4.40 per cent. Consequently, the SDF rate was adjusted to 4.15 per cent and marginal standing facility (MSF) rate and Bank rate to 4.65 per cent. The MPC decided to remain accommodative, while focusing on withdrawal of accommodation to ensure that inflation remains within the target going forward, while supporting growth. • Cash reserve ratio (CRR) was increased by 50 bps to 4.5 per cent effective from the fortnight beginning May 21, 2022.
June 8, 2022	The MPC decided to raise the policy repo rate by 50 bps to 4.90 per cent. Consequently, the SDF rate was adjusted to 4.65 per cent and MSF rate and Bank rate to 5.15 per cent. The MPC decided to remain focused on withdrawal of accommodation to ensure that inflation remains within the target going forward, while supporting growth.
August 5, 2022	The MPC decided to raise the policy repo rate by 50 bps to 5.40 per cent. Consequently, the SDF rate was adjusted to 5.15 per cent and MSF rate and Bank rate to 5.65 per cent. The MPC decided to remain focused on withdrawal of accommodation to ensure that inflation remains within the target going forward, while supporting growth.
September 30, 2022	The MPC decided to raise the policy repo rate by 50 bps to 5.90 per cent. Consequently, the SDF rate was adjusted to 5.65 per cent and MSF rate and Bank rate to 6.15 per cent. The MPC decided to remain focused on withdrawal of accommodation to ensure that inflation remains within the target going forward, while supporting growth.
December 7, 2022	The MPC decided to raise the policy repo rate by 35 bps to 6.25 per cent. Consequently, the SDF rate was adjusted to 6.0 per cent and the MSF rate and the Bank rate to 6.5 per cent. The MPC decided to remain focused on withdrawal of accommodation to ensure that inflation remains within the target going forward, while supporting growth.
February 8, 2023	The MPC decided to raise the policy repo rate by 25 bps to 6.50 per cent. Consequently, the SDF rate was adjusted to 6.25 per cent and the MSF rate and the Bank rate to 6.75 per cent. The MPC decided to remain focused on withdrawal of accommodation to ensure that inflation remains within the target going forward, while supporting growth.

[1] The list is indicative in nature and details are available on the Reserve Bank's website.

Date of Announcement	Policy Initiative
Financial Inclusion and Development Department	
April 28, 2022	Modified interest subvention scheme for short-term loans for agriculture and allied activities availed through *Kisan* Credit Card (KCC) was extended to farmers during the financial year 2021-22 with the applicable lending rate of 7 per cent and rate of interest subvention of 2 per cent. The scheme has been extended to small finance banks (SFBs) and computerised primary agriculture cooperative societies (PACs) which have been ceded with scheduled commercial banks (SCBs), in addition to public sector banks (PSBs) and private sector banks (in respect of loans given by their rural and semi-urban branches only), on use of their own resources.
May 13, 2022	To ensure continuation of the synergies between banks and non-banking financial companies (NBFCs) in delivering credit to the specified priority sectors, it was decided to permit the following as priority sector lending (PSL) on an on-going basis: (a) lending by SCBs to NBFCs for the purpose of on-lending to 'agriculture' and 'micro and small enterprises'; and (b) lending by small finance banks (SFBs) to NBFC-Microfinance Institutions (MFIs) and other MFIs, which have a 'gross loan portfolio' (GLP) of up to ₹500 crore as on March 31 of the previous financial year, for the purpose of on-lending to individuals.
May 18, 2022	The licensing/authorisation related requirements pertaining to fishing/aquaculture in inland water bodies vary across states. In order to broad base the eligibility of fishermen to avail the KCC facility, the eligibility criteria for inland fisheries and aquaculture under KCC scheme has been modified by replacing the requirement of possessing necessary license for fisheries related activities with that of possessing necessary authorisation/certification for such activities, as applicable in each state.
May 19, 2022	The validity of the existing Entrepreneurs Memorandum (EM), *Udyog Aadhaar* Memorandum (UAMs) and the documents obtained in terms of circulars dated March 8, 2017 and July 13, 2017, for classification of micro, small, medium enterprises (MSMEs) up to June 30, 2020, was extended up to June 30, 2022.
July 20, 2022	Modified guidelines on *Deendayal Antyodaya Yojana* - National Rural Livelihood Mission (DAY-NRLM) were issued.
November 23, 2022	Modified interest subvention scheme for short-term loans for agriculture and allied activities availed through KCC was extended to farmers during the financial years 2022-23 and 2023-24, with the applicable lending rate of 7 per cent and rate of interest subvention of 1.5 per cent.
Financial Markets Regulation Department	
April 19, 2022	Investment limit for foreign portfolio investors (FPIs) in government securities and corporate debt under the medium-term framework (MTF) and limit for the notional amount of credit default swaps (CDS) that can be sold by FPIs, for the financial year 2022-23 were notified.
June 1, 2022	The Master Direction - Reserve Bank of India (Variation Margin) Directions, 2022 were issued, mandating covered entities to exchange variation margin for non-centrally cleared derivative (foreign exchange, interest rate and credit) transactions.
July 7, 2022	• All new issuances of central government securities (G-secs) of 7-year and 14-year tenors (including the current issuances) were designated as 'specified securities' under the fully accessible route (FAR). • Investments by FPIs in government securities and corporate debt under the MTF were exempted from the requirements of short-term investment limit and minimum residual maturity till October 31, 2022.

Date of Announcement	Policy Initiative
	• Authorised dealer category-I banks were permitted to utilise overseas foreign currency borrowing (OFCB) for lending in foreign currency to entities for a wider set of end-use purposes, subject to the negative list set out for external commercial borrowings (ECBs). The dispensation for raising such borrowings was available till October 31, 2022.
August 8, 2022	Standalone primary dealers, authorised to deal in foreign exchange, were permitted to undertake foreign currency settled overnight indexed swap (FCS-OIS) transactions with non-residents and other eligible market-makers.
September 7, 2022	"Alert List" of entities which are neither authorised to deal in forex under the Foreign Exchange Management Act, 1999 (FEMA) nor authorised to operate electronic trading platforms for forex transactions was published. It also includes names of entities/platforms/websites which appear to be promoting unauthorised entities/electronic trading platforms (ETPs), including through advertisements of such unauthorised entities or claiming to be providing training/advisory services. The "Alert List" was updated on February 10, 2023.
December 1, 2022	In terms of provisions of the Financial Benchmark Administrators (Reserve Bank) Directions, 2019, Modified Mumbai Interbank Forward Outright Rate (MMIFOR) was notified as a 'significant benchmark'.
December 12, 2022	Resident entities were permitted to hedge their gold price risk on recognised exchanges in the International Financial Services Centre (IFSC) recognised by the International Financial Services Centres Authority (IFSCA).
January 23, 2023	All Sovereign Green Bonds issued by the government in the fiscal year 2022-23 were designated as 'specified securities' under the FAR.
Financial Markets Operations Department	
April 8, 2022	• It was decided to fully restore the liquidity management framework instituted in February 2020, *albeit* with some refinements to enhance its effectiveness. • Standing Deposit Facility (SDF) was introduced as the floor of the liquidity adjustment facility (LAF) corridor. The overnight SDF rate was decided to be 25 bps below the policy rate. Thus, the width of the LAF corridor was restored to the pre-pandemic configuration of 50 bps, symmetrically around the policy repo rate, which was at the centre of the corridor.
April 18, 2022	Restoration of regulated market opening time to the pre-pandemic level of 9:00 AM.
September 30, 2022	The 28-day variable rate reverse repo (VRRR) auction was merged with the fortnightly 14-day main auction.
December 7, 2022	Extension of market timings to 5:00 PM for call/notice/term money, commercial paper, certificates of deposit, repo in corporate bond and rupee interest rate derivatives from 3:30 PM.
February 8, 2023	• Extension of market timings to 5:00 PM for government securities (central government securities, state government securities[2] and treasury bills) from 3:30 PM. • To aid efficient price discovery and work towards a smooth completion of the market borrowing programme of the centre and states governments, the Reserve Bank proposed to permit lending and borrowing of government securities.

2 Refer to footnote 31 of Chapter II of this Report.

Date of Announcement	Policy Initiative
Foreign Exchange Department	
May 19, 2022	In view of the difficulties being experienced by exporters in receipt of export proceeds from Sri Lanka and based on the State Bank of India's credit facility agreement dated March 17, 2022, with the Government of Sri Lanka for sanction of Government of India guaranteed USD 1,000 million term loan to the latter for financing purchase of essential goods by Sri Lanka from India, *vide* circular dated May 19, 2022, it was decided that such trade transactions with Sri Lanka, falling under the said arrangement, may be settled in Indian Rupee (INR) outside the Asian Clearing Union (ACU) mechanism.
May 25, 2022	Qualified jewellers [as notified by International Financial Services Centres Authority (IFSCA)] were permitted to import gold under specific ITC (HS)[3] codes through India International Bullion Exchange IFSC Limited (IIBX), in addition to the nominated agencies [as notified by Directorate General of Foreign Trade (DGFT)] and nominated banks (as notified by the Reserve Bank for import of gold). Consequently, Authorised Dealer (AD) banks were permitted, *vide* circular dated May 25, 2022, to allow qualified jewellers (as notified by IFSCA) to remit advance payment to enable them to import gold through IIBX in IFSC, subject to specified conditions.
June 9, 2022	In view of the recommendations by Regulations Review Authority 2.0 (RRA 2.0) related to discontinuation/merger or conversion of extant 65 regulatory paper-based returns into online returns, to ease regulatory compliance for the regulated entities while improving the accuracy, speed, and quality of data submission, it was notified on February 18, 2022, that 21 physical returns would be switched to online submission, while one return, 'quarterly return on guarantee availed and invoked from non-resident entities', would be discontinued/merged. Subsequently, AD banks were advised about the discontinuation of the said return with effect from the quarter ending June 2022, *vide* circular dated June 9, 2022.
July 8, 2022	AD category-I banks were advised that all eligible current account transactions including trade transactions with Sri Lanka shall be settled in any permitted currency outside the ACU mechanism until further notice.
July 11, 2022	To facilitate global trade with emphasis on promoting exports from India and to support the increasing interest of the global trading community in INR, an additional arrangement for invoicing, payment, and settlement of exports/imports in INR was provided. Under this arrangement, settlement of trade transactions with any country can be done in INR through Special Rupee Vostro Accounts of correspondent bank/s of the partner trading country maintained with AD banks.
August 1, 2022	In order to further diversify and expand the sources of forex funding, the Reserve Bank *vide* press release dated July 6, 2022, on "Liberalisation of Forex Flows" had announced temporary increase of the External Commercial Borrowing (ECB) limit under the automatic route from USD 750 million or its equivalent per financial year to USD 1.5 billion and the all-in-cost ceiling by 100 bps for borrowers of investment-grade rating. These temporary measures were available for the ECBs raised up to December 31, 2022. Accordingly, after making necessary amendments in FEMA 3R [Foreign Exchange Management (Borrowing and Lending) Regulations, 2018], all category-I AD banks were notified about the same on August 1, 2022.

[3] Indian Trade Classification based on Harmonised System (ITC-HS).

Date of Announcement	Policy Initiative
August 22, 2022	In keeping with the spirit of liberalisation and to promote ease of doing business, the Foreign Exchange Management (Overseas Investment) Regulations, 2022, have been notified in supersession of Foreign Exchange Management (Transfer or Issue of any Foreign Security) (Amendment) Regulations, 2004, and Foreign Exchange Management (Acquisition and Transfer of Immovable Property Outside India) Regulations, 2015. The Foreign Exchange Management [Overseas Investment (OI)] Directions, 2022 issued on August 22, 2022, superseded Master Direction No.15/2015-16 dated January 1, 2016, as amended from time to time.
September 15, 2022	With a view to enabling Bharat Bill Payment System (BBPS), an interoperable platform for standardised bill payment to process cross-border inbound bill payments, it was decided, *vide* circular dated September 15, 2022, to allow foreign inward remittances received under the Rupee Drawing Arrangement (RDA), to be transferred to the know your customer (KYC) compliant bank account of the biller (beneficiary) through BBPS, subject to certain conditions. This shall facilitate Non-Resident Indians (NRIs) to undertake utility, education, and other bill payments on behalf of their families in India.
September 30, 2022	The concept of late submission fee (LSF) for reporting delays under the Foreign Exchange Management Act, 1999 (FEMA), was introduced for Foreign Investment (FI), ECBs, and Overseas Investment (OI) related transactions with effect from November 7, 2017, January 16, 2019, and August 22, 2022, respectively. Accordingly, in order to bring uniformity in the imposition of LSF across functions, a uniform matrix in line with the one for OI-related transactions, for calculation of LSF, wherever applicable under FEMA, was introduced on September 30, 2022.
Department of Regulation	
April 7, 2022	Guidelines on establishment of Digital Banking Units (DBUs) were issued to all domestic scheduled commercial banks (excluding regional rural banks, payments banks and local area banks). The guidelines define digital banking, DBU, digital banking products and digital banking segment, and cover the infrastructure and resources required by DBUs, and the products and services that could be offered by them. The DBUs shall facilitate customers in adopting digital modes/channels and create awareness on digital banking.
April 8, 2022	• As a countercyclical measure, in October 2020, risk weights for individual housing loans were linked only to loan to value (LTV) ratios, irrespective of the amount, for all new housing loans sanctioned up to March 31, 2022. On a review, the above dispensation was extended to cover all new individual housing loans sanctioned up to March 31, 2023. • To mitigate the adverse impact of COVID-19 pandemic, banks were earlier allowed to exceed the ceiling for statutory liquidity ratio (SLR) securities that could be under held to maturity (HTM) category from 19.5 per cent of net demand and time liabilities (NDTL) up to an overall limit of 22 per cent of NDTL (in respect of SLR securities acquired between September 1, 2020 and March 31, 2022). On April 8, 2022, the limit was further enhanced to 23 per cent of NDTL, while including the SLR securities acquired between April 1, 2022 and March 31, 2023. The enhanced HTM limit of 23 per cent was to be restored to 19.5 per cent in a phased manner, beginning from the quarter ending June 2023. Subsequently, on December 8, 2022, the dispensation was further extended to include SLR securities acquired up to March 31, 2024, while the HTM limits would be restored to 19.5 per cent in a phased manner by March 31, 2025, starting from the quarter ending June 30, 2024.

Date of Announcement	Policy Initiative
	• In 2018, the amended Section 17 of the Reserve Bank of India Act, 1934 empowered the Reserve Bank to introduce the Standing Deposit Facility (SDF) – an additional tool for absorbing liquidity without any collateral. The SDF will replace the fixed rate reverse repo (FRRR) as the floor of the LAF corridor. Further, it was decided that the balances held by banks with the Reserve Bank under the SDF shall be an eligible SLR asset. Accordingly, in partial modification of the existing instructions, it was specified that balances under SDF will form part of "Cash" for the purpose of SLR maintenance. The balances held by banks with the Reserve Bank under the SDF shall, however, not be eligible for cash reserve ratio (CRR) maintenance.
April 18, 2022	It was decided to permit banks to reckon government securities as Level 1 HQLA[4] under the FALLCR[5] within the mandatory SLR requirement up to 16 per cent of their NDTL. Accordingly, total HQLA carve out from the mandatory SLR, for meeting LCR requirement, stands at 18 per cent of NDTL (2 per cent MSF *plus* 16 per cent FALLCR).
April 19, 2022	• The instructions applicable for rural co-operative banks (RCBs) on issue and regulation of capital funds were reviewed to ensure congruity with the provisions of the Banking Regulation (Amendment) Act, 2020. The revised guidelines prescribe terms for issuance of capital instruments as well as conditions for withdrawal of share capital, and also permit them to raise capital by issuance of preference shares. • In terms of scale based regulatory framework for NBFCs, the upper layer NBFCs (NBFC-UL) are required to, *inter alia,* maintain common equity Tier 1 (CET-1) capital of at least 9 per cent of risk weighted assets. As a follow-up to the framework provisions, detailed instructions on components of, as well as regulatory adjustments from CET-1 capital, applicable to all NBFC-UL (except core investment companies) were issued. • Detailed guidelines on large exposure framework for NBFCs in upper layer (NBFCs-UL) and certain regulatory restrictions on lending for NBFCs placed in different layers were issued. • In order to enforce credit discipline amongst the borrowers as well as to facilitate better monitoring by the lenders, instructions on the manner of opening of cash credit/overdraft (CC/OD) and current/collection accounts by banks were issued in August 2020, and revised in October 2021. To provide clarity on the instructions, a self-contained circular on the subject, consolidating all the extant instructions, was issued. • Certain additional disclosure requirements for NBFCs in accordance with the scale based regulation (SBR) framework were issued. • To improve governance in NBFCs and avoid conflicts of interest in lending decisions, restrictions were placed on NBFCs in respect of loans to their directors, senior officers, their relatives as also associated entities. In respect of loans to real estate sector, it has been mandated that NBFCs must ensure that the borrowers have obtained necessary prior permission from government/local government/other statutory authorities for the project.

4 HQLA: High Quality Liquid Assets.

5 FALLCR: Facility to Avail Liquidity for Liquidity Coverage Ratio.

Date of Announcement	Policy Initiative
April 21, 2022	• With a view to prevent any conflict of interest and parallel/shadow authority, urban co-operative banks (UCBs) were directed not to create any honorary positions/titles or confer any such titles, such as chairman emeritus, group chairman, *etc.*, that are non-statutory in nature. UCBs have been provided time of one year to comply with these instructions. • In November 2017, legal entity identifier (LEI) was mandated for all entities having total exposure of ₹50 crore and above. On a review, it was decided to extend LEI requirement to all non-individual borrowers of SCBs, UCBs, All India Financial Institutions (AIFIs), SFBs and NBFCs with a total fund and non-fund based exposure of ₹5 crore and above, to be obtained in a phased manner. • The instructions contained in Master Circular (July 2015) on credit card, debit card and rupee denominated co-branded pre-paid card operations of banks and credit card issuing NBFCs, were updated and issued in the form of Master Direction (MD) - Credit Card and Debit Card - Issuance and Conduct. Aspects such as closure of a credit card account, issuance of credit card for business purpose, billing issues, adjustment of credit transactions, new form factors, issues relating to co-branded arrangement, mis-selling, *etc.*, have been strengthened. Subsequently, on June 21, 2022, timelines for implementation of a few provisions were extended.
April 29, 2022	A set of principles were issued for fixing compensation of key managerial personnel (KMP) and senior management of NBFCs. As per the guidelines, NBFCs are required to constitute a nomination and remuneration committee (NRC), which will be responsible for framing, reviewing and implementing the compensation policy. The guidelines, *inter alia,* prescribe that the compensation package comprising fixed and variable pay may be adjusted for all types of risks. A certain portion of variable pay may have a deferral arrangement and the deferral pay may be subjected to malus/clawback arrangement.
May 2, 2022	As per extant guidelines, deposit taking NBFCs/housing finance companies (HFCs) are not permitted to accept public deposit unless they have obtained minimum investment grade credit rating (MIGR) for fixed deposits from any one of the approved credit rating agencies (CRAs). In this regard, a circular was issued stating that the MIGR for deposits of NBFCs/HFCs shall not be below 'BBB–' from any of the SEBI-registered CRAs.
May 19, 2022	In order to bring more clarity on the presentation of reverse repo on the balance sheet, revised guidelines were issued to commercial banks.
May 24, 2022	The ceiling on loans extended by UCBs to individuals for carrying out repairs/additions/alterations to their dwelling units was aligned with the limits prescribed under the extant priority sector guidelines.
May 31, 2022	The validity of the interest equalisation scheme (IES) for pre and post shipment rupee export credit, a Government of India (GoI) scheme to provide interest subvention to exporters, was extended by GoI, with modified scope and coverage, up to March 31, 2024, *vide* circular dated March 8, 2022. Subsequently, it was clarified that the extended scheme would also be available to such beneficiaries for segments other than for which they have availed of production-linked incentive (PLI) benefits, subject to submission of a self-declaration by the exporters in the prescribed format.
June 6, 2022	In line with the revised regulatory framework for NBFCs, differential standard asset provisioning was prescribed for NBFCs-UL (including HFCs).

Date of Announcement	Policy Initiative
June 7, 2022	The Reserve Bank laid down regulatory framework for participation of Indian banks' branches in GIFT-IFSC[6] to provide clearing and settlement services on India International Bullion Exchange IFSC Limited (IIBX). The instructions were issued to domestic scheduled commercial banks (including foreign banks operating through a wholly owned subsidiary incorporated in India), which are authorised to deal in foreign exchange and have a branch in GIFT-IFSC.
June 8, 2022	The ceiling on the amount of housing loans that can be extended by tier-I and tier-II UCBs was increased from ₹30 lakh and ₹70 lakh to ₹60 lakh and ₹140 lakh, respectively. Subsequently, on implementation of the four-tier structure for UCBs, the limit of ₹60 lakh and ₹140 lakh was made applicable to UCBs in tier-1 and tier- 2 to 4, respectively, *vide* circular dated December 30, 2022. The limits on the amount of housing loans that can be sanctioned by rural co-operative banks (RCBs), *i.e.*, state co-operative banks (StCBs) and central co-operative banks (CCBs), were increased from ₹20 lakh and ₹30 lakh to ₹50 lakh and ₹75 lakh for RCBs having asset net worth less than ₹100 crore and those having net worth of ₹100 crore and more, respectively. It was decided to allow RCBs to extend finance to commercial real estate – residential housing (CRE-RH) within the aggregate limit of 5 per cent of total assets for housing sector. Guidelines have been issued in terms of Section 23 of Banking Regulation Act, 1949 [as applicable to co-operative societies (AACS)] to UCBs for offering doorstep banking services to the customers, on a voluntary basis, at par with SCBs. Financially sound and well managed (FSWM) UCBs can offer the service under automatic route, whereas non-FSWM UCBs would require prior approval of the Reserve Bank. UCBs have been also advised to review the scheme by their boards on a half-yearly basis, during the first year of its operation and subsequently on an annual basis.
June 10, 2022	As per the Punjab and Maharashtra Co-operative Bank Limited (Amalgamation with Unity Small Finance Bank Limited) Scheme, 2022, 80 per cent of uninsured deposits of institutional depositors with erstwhile PMC bank will be converted into perpetual non-cumulative preference shares (PNCPS) and remaining 20 per cent will be converted into equity warrants. The circular clarified that UCBs shall make full provisions for their investment in PNCPS, and no provisions are required for investment in equity warrants. The resulting provisions may be spread equally over two financial years such that the entire loss is fully provided for by March 31, 2024. Further, investment in PNCPS and equity warrants shall be classified as non-SLR investments and shall be exempt from the prudential limits applicable on investment in non-SLR securities.
June 14, 2022	• Banks were found to be violating the instructions contained in Master Circular on 'Loans and Advances – Statutory and Other Restrictions' which require, *inter alia*, that in case of projects undertaken by government owned entities, term loans should be sanctioned only for corporate bodies; due diligence should be carried out on viability and bankability of the projects to ensure that revenue stream from the project is sufficient to take care of the debt servicing obligations; and that the repayment/servicing of debt is not from budgetary resources. • In view of the violations observed, the extant instructions have been reiterated for strict compliance by banks. Banks were advised to carry out a review and place before their Boards, a comprehensive report on the status of compliance with the instructions within three months.

6 Gujarat International Finance Tech-city (GIFT) - International Financial Services Centre (IFSC).

Date of Announcement	Policy Initiative
June 28, 2022	• When investment by a SCB in security receipts (SRs) backed by stressed loans transferred by it is more than 10 per cent of all SRs linked to the transferred loans, the valuation of the SRs on the books of the transferor shall be the lower of: a) the redemption value of SRs based on the Net Asset Value (NAV) declared by the asset reconstruction company (ARC); b) Net Book Value (NBV) of the transferred stressed loan at the time of transfer; and c) face value of the SRs reduced by the notional provisioning rate applicable if the loans had continued on the books of the transferor. These instructions were made applicable to lenders other than SCBs with the issue of the 'Master Direction on Transfer of Loan Exposures (MD-TLE)' on September 24, 2021, which led to large provisioning requirement for some of the lenders on outstanding SRs held by them as on the date of the Master Direction. To ensure smooth implementation, regulated entities (REs) other than SCBs were advised that the additional provisions as above, required to be held towards valuation of outstanding SRs, can be spread over a five-year period starting with the financial year ending March 31, 2022, *i.e.*, from 2021-22 till 2025-26. It has also been advised that provisions created every financial year as above shall not be less than one fifth of the required provisioning on this count.
July 6, 2022	• Banks were advised that with effect from the reporting fortnight beginning July 30, 2022, incremental foreign currency non-resident (Bank) [FCNR (B)] deposits as also non-resident external (NRE) term deposits with reference to base date of July 1, 2022, mobilised by banks will be exempt from maintenance of CRR and SLR. These exemptions were valid for deposits raised till November 4, 2022. • The interest rate ceiling applicable to FCNR (B) deposits, was temporarily withdrawn for incremental FCNR (B) deposits mobilised by banks. The extant restriction with respect to interest rates offered on incremental NRE deposits mobilised by banks was also temporarily withdrawn. The above concessions were granted with effect from July 7, 2022 until October 31, 2022. • Unity Small Finance Bank Limited was included in the second schedule to the Reserve Bank of India Act, 1934.
July 26, 2022	UCBs were advised that the loan policy of the bank shall be reviewed by the board at least once in a financial year to ensure that it remains in alignment with the extant regulations.
July 27, 2022	The results of a survey undertaken in January 2022 on climate risk and sustainable finance were released. The survey covered 12 public sector banks, 16 private sector banks and 6 foreign banks in India. The objective of the survey was to assess the approach, level of preparedness and progress made by leading SCBs in managing climate-related financial risks. In addition, along with the survey, a discussion paper on climate risk and sustainable finance was also placed on the Reserve Bank's website to prepare a strategy based on global best practices for mitigating the adverse impacts of climate change for public comments and feedback.
August 4, 2022	A new sub-para titled 'Guidelines for Renewal/Redemption of Medium and Long-Term Government Deposit (MLTGD)' was added to the Master Direction - Gold Monetisation Scheme (MD-GMS), 2015, which specifies the modalities for redemption upon maturity in gold or INR, along with instructions for renewal and partial redemption of the deposit.

Date of Announcement	Policy Initiative
August 8, 2022	With the objective of giving more flexibility to small finance banks (SFBs) to meet their customers' foreign exchange business requirement, it was decided that all scheduled SFBs, after completion of at least two years of operations as authorised dealer (AD) category-II, will be eligible for AD category-I license, subject to compliance with the eligibility norms specified therein.
August 10, 2022	A Press Release was issued specifying the Reserve Bank's regulatory stance on the recommendations of the Working Group on Digital Lending (WGDL)[7]. The Press Release divided the recommendations into three parts – i) accepted for immediate implementation, ii) accepted for deferred implementation, and iii) recommendations for the consideration of the Government of India.
August 11, 2022	• Regulated entities (REs) have been allowed to compute their counterparty credit risk on net basis under the bilateral netting framework for qualified financial contracts [over the counter (OTC) derivatives and repo contracts]. Consequently, based on references received, it was clarified that (a) the exemption for foreign exchange (except gold) contracts which have an original maturity of 14 calendar days or less shall henceforth be applicable only to RRBs, LABs and co-operative banks, where the bank has not adopted the bilateral netting framework; (b) sold options can be exempted provided they are outside the netting set; and (c) the exposure of a credit default swap (CDS) seller to its buyer may be capped at the amount of premium unpaid provided the CDS are outside the legal netting set. • Pursuant to the amendment to the Banking Regulation Act dated September 29, 2020, central co-operative banks (CCBs) were permitted to open new place of business/install automated teller machines (ATMs) or shift the location of such offices only after obtaining prior approval of the Reserve Bank of India (RBI). Accordingly, guidelines were issued with details of criteria and procedure for submission of application by district CCBs for opening new place of business/ installation of ATMs.
August 12, 2022	Considering growing incidences of unacceptable practices followed by recovery agents (RAs), certain additional instructions to REs were issued by extending the scope of extant guidelines and limiting the hours for calling borrowers on phone for recovery of overdue loans.
August 22, 2022	Under branch authorisation guidelines (issued in May 2017), a special incentive is given to banks for opening banking outlets in tier 3 to 6 centres of 'Left Wing Extremism (LWE)' affected districts, as notified by the Government of India (GoI), by bringing them at par with 'Unbanked Rural Centres'. As GoI had revised the list of LWE affected districts, a circular was issued conveying the revised list to the banks for their consideration to open banking outlets in LWE affected districts.
September 2, 2022	• Pursuant to the press release of August 2022 specifying the Reserve Bank's regulatory stance on the recommendations of the Working Group on Digital Lending (WGDL), a circular was issued covering WGDL's recommendations accepted for immediate implementation. • The guidelines were issued regarding customer-centric aspects with an aim of addressing concerns arising out of unbridled engagement of outsourced agents (lending service providers) to carry out various lending activities, mis-selling, breach of data privacy, customer grievance redressal, unfair business conduct, and unethical recovery practices.

[7] Report of the Working Group on digital lending, including lending through online platforms and mobile Apps (Chair: Shri J.K. Dash, Executive Director, RBI), was released on November 18, 2021 on the Reserve Bank's website.

Date of Announcement	Policy Initiative
September 7, 2022	In terms of extant regulations on capital adequacy, bank loans guaranteed under various credit guarantee schemes attract a zero per cent risk weight to the extent of guarantee cover. It was observed that some of the schemes launched by the aforesaid trust funds have certain features which essentially restrict the effective guarantee coverage and stand counter to the requisite prudential requirements to permit concessional capital treatment. In order to have a consistent approach, a circular was issued clarifying the broad principles for applying zero per cent risk weight for exposures guaranteed under any existing or future schemes launched by the relevant trust funds. Further, the zero per cent risk weight relaxation till now was confined only to SCBs. To have a harmonised regulatory approach, the above relaxation was also extended to other member lending institutions (MLIs), including NBFCs and UCBs, to the extent these entities are recognised as eligible MLIs under the respective schemes.
September 16, 2022	In terms of the guidance provided by the Reserve Bank, the reference rates for arriving at the interest rates on FCNR (B) deposits are being quoted/displayed by Financial Benchmarks India Pvt. Ltd. (FBIL) instead of Foreign Exchange Dealers Association of India (FEDAI) with effect from January 31, 2022. In this regard, the relevant Sections of the Master Directions on interest rate on deposits were suitably modified. Further, certain instructions regarding eligibility for opening of savings account were also modified to make them more explicit.
September 30, 2022	A list of sixteen NBFCs in the Upper Layer, identified as per the methodology specified under scale-based regulation for NBFCs, was released on September 30, 2022.
October 10, 2022	Credit rating agencies (CRAs) are required to disclose the name of the banks and the corresponding credit facilities rated by them in the press releases (PRs) issued on rating actions, after obtaining requisite consent from the borrowers. To disincentivise non-cooperation from borrowers in this regard, banks were advised that a bank loan rating without the above disclosure by the CRA shall not be eligible for being reckoned for capital computation by banks.
October 11, 2022	• To strengthen the role of standalone primary dealers (SPDs) as market makers, at par with banks operating primary dealer business, SPDs were allowed to offer all foreign exchange market-making facilities as currently permitted to category-I authorised dealers, subject to prudential guidelines. • To strengthen compliance with income recognition, asset classification and provisioning norms, the thresholds for disclosure of divergences have been revised downwards and disclosure requirements have also been introduced for primary (urban) co-operative banks (UCBs). • A circular was issued providing for consolidation of total assets of all the NBFCs in a 'Group' to arrive at the threshold for classification of NBFCs in the Middle Layer under the scale based regulatory framework. • To review and consolidate the extant guidelines on unhedged foreign currency exposure (UFCE) with a view to providing clarity to and reducing the compliance burden of banks, UFCE directions were issued, which came into effect from January 1, 2023. The key changes, *inter alia,* include: (a) exemption of factoring transactions from UFCE guidelines; and (b) increase in threshold limit for smaller entities. • To address some of the structural issues in the Asset Reconstruction Companies (ARCs) sector and to enable the ARCs to play a more meaningful role in the resolution of stressed assets, guidelines were issued to the ARCs which, *inter alia*, include a comprehensive corporate governance framework and the guidelines on one-time settlement with the borrowers, management fee, minimum Net Owned Fund (NOF) requirement, deployment of surplus funds, investment in the Security Receipts (SRs) issued by the ARCs, permission to act as a resolution applicant under Insolvency and Bankruptcy Code (IBC), transfer of stressed loans by lenders.

Date of Announcement	Policy Initiative
October 13, 2022	It was decided that the amounts received by a bank from the National Credit Guarantee Trustee Company Ltd. (NCGTC) towards claims in respect of guarantees invoked and held by them pending adjustment of the same towards the relative advances need not be treated as outside liabilities for the purpose of computation of NDTL for CRR and SLR.
November 1, 2022	To promote the spread of digital banking in rural areas, the revised eligibility criteria for RRBs for offering internet banking facility were issued.
November 23, 2022	• It was clarified that the overnight balances held by banks with the Reserve Bank under SDF shall be eligible as 'Level 1 HQLA' for computation of LCR. • With a view to facilitating cash flow-based lending to MSMEs, goods and service tax network (GSTN) was included as a financial information provider under the account aggregator framework. Department of Revenue, GoI, shall be the regulator of GSTN for this specific purpose and two GST Returns, *viz.,* Form GSTR-1 and Form GSTR-3B, have been included as financial information.
December 1, 2022	• On July 19, 2022, the Reserve Bank issued a revised regulatory framework for UCBs under which a simple four-tiered approach was adopted with differentiated regulatory prescriptions aimed at strengthening their financial soundness. Accordingly, regulations were realigned as under: (i) a circular containing the new definition of tier 1, tier 2, tier 3 and tier 4 UCBs was issued, which will be adopted for all regulatory purposes, in supersession of the earlier instructions (May 6, 2009); (ii) Financially Sound and Well Managed (FSWM) criteria was revised to make them more objective and can be adopted by UCBs on self-assessment basis based on the assessed financials and findings of the Reserve Bank inspection report or audited financial statements whichever is latest; and (iii) minimum capital adequacy and net worth requirements as also permission to include revaluation reserves in tier-I capital, subject to conditions, were stipulated for all tiers of UCBs. UCBs which do not meet the requirements have been provided with a glide path to facilitate smooth transition. • A framework has been put in place for Indian banks/AIFIs dealing in financial products, including structured financial products, through their branches/subsidiaries operating in foreign jurisdictions and in International Financial Services Centers (IFSCs), including GIFT City. Accordingly, branches/subsidiaries of Indian banks/AIFIs operating in foreign jurisdictions or IFSCs can deal in financial products, including structured financial products, which are not available or are not permitted by the Reserve Bank in the domestic market without prior approval of the Reserve Bank, subject to compliance with certain conditions.
December 5, 2022	Amendments were carried out in the Master Direction on 'Transfer of Loan Exposures' and 'Securitisation of Standard Assets' clarifying/modifying the provisions relating to *inter alia* scope of transactions permitted for overseas branches of Indian banks; making explicit the restriction on securitisation of short-term exposures; MHP for securitisation of under-construction projects.
December 13, 2022	• The circular "Data Format for Furnishing of Credit Information to Credit Information Companies and other Regulatory Measures" clarified that cases admitted with National Company Law Tribunal (NCLT)/National Company Law Appellate Tribunal (NCLAT) under the Insolvency and Bankruptcy Code (IBC), 2016 are also required to be reported by credit institutions (CIs) to credit information companies (CICs) under suit-filed cases. CIs shall ensure implementation of the circular latest by February 28, 2023. • To ensure greater transparency in the financial statements, banks were advised to disclose the particulars of all such items in the notes to accounts wherever any item under the Schedule 5(IV) - Other Liabilities and Provisions - "Others (including provisions)" or Schedule 11(VI) - Other Assets - "Others" exceeds one per cent of the total assets.

Date of Announcement	Policy Initiative
January 2, 2023	A press release was issued communicating that State Bank of India, ICICI Bank, and HDFC Bank continue to be identified as domestic systemically important banks (D-SIBs) under the same bucketing structure.
January 9, 2023	A revised list of domestic credit rating agencies accredited for risk weighting the claims of banks for capital adequacy purposes was issued.
January 16, 2023	A press release was published on November 26, 2021, communicating the acceptance of 21 of (some with partial modifications, where considered necessary) 33 recommendations made by an Internal Working Group (IWG) to review the extant guidelines on ownership and corporate structure for Indian private sector banks along with notification that the consequential amendments in instructions/circulars/ master directions/licensing guidelines will follow in due course. Accordingly, on January 16, 2023 an MD and Guidelines for major shareholders (Acquisition and Holding of Shares or Voting Rights in Banking Companies) were issued consolidating three Master Directions (MDs) pertaining to shareholding and voting rights in banking companies. The major changes made in the MD/Guidelines, *inter alia*, include updates in the limits on permissible shareholding by different categories of shareholders, introduction of reporting requirements for encumbrance of shares by promoter, and strengthening of arrangements for continuous monitoring of the 'fit & proper' status of major shareholder of a banking company.
February 14, 2023	A set of Frequently Asked Questions (FAQs) was released clarifying certain important aspects of the 'Guidelines on Digital Lending' issued on September 2, 2022.
February 17, 2023	Guidelines on Governance, measurement and management of Interest Rate Risk in Banking Book (IRBBB) were issued to commercial banks (other than Regional Rural Banks, Small Finance Banks, Payments Banks and Local Area Banks) requiring them to measure, monitor, and disclose their exposure to IRRBB so that excessive IRRBB cannot pose a significant risk to their current capital base and/or future earnings. The guidelines were in alignment with the revised framework issued by the Basel Committee on Banking Supervision (BCBS).
February 20, 2023	• Reserve Bank of India (Financial Statements - Presentation and Disclosures) Directions, 2021, ('Master Direction') issued on August 30, 2021, which was initially applied to all commercial banks and Urban Co-operative Banks (UCBs), was made applicable to State Cooperative Banks and Central Cooperative Banks (together referred to as 'Rural Co-operative Banks' or 'RCBs'). The Master Direction dated August 30, 2021, provides comprehensive guidance on various aspects related to financial reporting by banks such as instructions on the preparation of financial statements, regulatory clarification on compliance with accounting standards, prudential guidelines on certain accounting practices, and disclosures in notes to accounts. The Master Direction now has been extended to Rural Co-operative Banks (RCBs) and, therefore, ensures comparability in the accounting and disclosure practices followed across the banking sector. Some disclosure requirements outlined in the Master Directions have been made mandatory from the financial year ending March 31, 2024, as these entail changes to existing systems of RCBs. • To address the prudential concerns on unrealised management fees, instructions were issued to ARCs preparing their financial statements as per Ind AS which are required to reduce stipulated amounts from their net owned funds while calculating the Capital Adequacy Ratio and the amount available for payment of dividend.

Date of Announcement	Policy Initiative
March 27, 2023	Abu Dhabi Commercial Bank PJSC ceased to be a banking company within the meaning of the Banking Regulation Act, 1949 and was excluded from the Second Schedule to the Reserve Bank of India Act, 1934.
March 28, 2023	The instructions on 'Revised Regulatory Framework for Urban Co-operative Banks (UCBs) – Net Worth and Capital Adequacy' issued to all Primary (Urban) Co-operative Banks was made effective from March 31, 2023.
FinTech Department	
September 2, 2022	Digitalisation of rural finance in India - pilot for *kisan* credit card (KCC) lending developed by the Reserve Bank Innovation Hub.
October 7, 2022	Issuance of concept note on central bank digital currency (CBDC).
October 12, 2022	Standard operating procedure for inter-operable regulatory sandbox was issued.
October 31, 2022	Operationalisation of CBDC Wholesale (e₹-W) pilot.
November 29, 2022	Operationalisation of CBDC Retail (e₹-R) pilot.
Department of Supervision	
April 11, 2022	Certain principles, standards and procedures for compliance function in NBFC-Upper Layer (NBFC-UL) and NBFC-Middle Layer (NBFC-ML), keeping in view the principles of proportionality, were introduced which included, *inter alia,* to have an independent compliance function, a board approved compliance policy and a chief compliance officer (CCO). NBFC-UL and NBFC-ML were given time till April 1, 2023 and October 1, 2023, respectively, to comply with the provisions of the circular.
September 19, 2022	Certain principles, standards and procedures for compliance function in tier 3 and tier 4 UCBs[8], keeping in view the principles of proportionality, were introduced which included, *inter alia,* to have an independent compliance function, a board approved compliance policy and a chief compliance officer (CCO). Tier 4 and tier 3 UCBs were given time till April 1, 2023 and October 1, 2023, respectively, to comply with the provisions of the circular.
Consumer Education and Protection Department	
May 23, 2022	A Committee (Chairman: Shri B. P. Kanungo) for Review of Customer Service Standards in RBI Regulated Entities (REs) was constituted for examining and reviewing the customer service standards in the REs and adequacy of customer service regulations and suggest measures to improve customer protection.
August 5, 2022	To provide an avenue for expeditious and cost-free alternate grievance redress to the customers of REs covered under the RB-IOS, 2021 for grievances relating to credit information, the CICs have been brought under the ambit of RB-IOS, 2021 with effect from September 1, 2022.

[8] Refer to the Reserve Bank's press release dated July 19, 2022 on the revised regulatory framework for urban co-operative banks (UCBs) in terms of which UCBs have been categorised into following four tiers for regulatory purposes: **Tier 1** - All unit UCBs and salary earner's UCBs (irrespective of deposit size), and all other UCBs having deposits up to ₹100 crore; **Tier 2** - UCBs with deposits more than ₹100 crore and up to ₹1,000 crore; **Tier 3** - UCBs with deposits more than ₹1,000 crore and up to ₹10,000 crore; and **Tier 4** - UCBs with deposits more than ₹10,000 crore.

Date of Announcement	Policy Initiative
October 6, 2022	To strengthen and improve the efficiency of the internal grievance redressal mechanism of CICs, all CICs have to comply with the Reserve Bank of India (Credit Information Companies - Internal Ombudsman) Directions, 2022 by April 1, 2023. The IO is an independent authority at the apex of the CIC's internal grievance redress mechanism and reviews consumer complaints rejected wholly or partly by the CIC.
November 2, 2022	The Reserve Bank, in collaboration with REs, initiated a nation-wide consumer financial awareness programme with deeper outreach covering all segments of population, especially those in rural and semi-urban areas. The campaign was customised regionally for a better connect. While emphasising information on customer rights, customer protection and grievance redress framework under RB-IOS, 2021, the campaign also endeavoured to deepen percolation of awareness on protection against digital and electronic financial transaction frauds covering dos and don'ts, safeguards and prevention.
January 23, 2023	In order to alleviate the difficulties faced by customers in renewing then locker agreement with banks, the deadline for banks to complete the process of renewal of existing agreements for the safe deposit lockers was extended by a year to December 31, 2023, with intermediate milestones of 50 per cent by June 30, 2023, and 75 per cent by September 30, 2023. Banks were advised to facilitate execution of the fresh/supplementary stamped agreements with their customers by taking measures such as arranging stamp papers, franking, electronic execution of agreement, e-stamping, *etc*. and provide a copy of the executed agreement to the customer. Where operations in lockers had been frozen for non-execution of agreement by January 1, 2023, the same were advised to be unfrozen with immediate effect.
Internal Debt Management Department	
March 31, 2022	The ways and means advances (WMA) limit for the GoI for H1:2022-23 (April 2022 to September 2022) was fixed at ₹1,50,000 crore.
April 1, 2022	The WMA limits and timelines for Overdraft (OD) for state governments/union territories (UTs) were fixed as per the recommendation of the advisory committee on 'Ways and Means Advances to State Governments' (Chairman: Shri Sudhir Shrivastava), effective April 1, 2022. Accordingly, the WMA limit for state governments/UTs was fixed at ₹47,010 crore. State governments/UTs can avail overdraft on 14 consecutive days and can be in OD for a maximum number of 36 days in a quarter.
September 29, 2022	The WMA limit for the GoI for H2:2022-23 (October 2022 to March 2023) was fixed at ₹50,000 crore.
January 6, 2023	The Reserve Bank of India, in consultation with the Government of India, notified the indicative calendar for the maiden issuance of Sovereign Green Bonds for the fiscal year 2022-23 for an aggregate amount of ₹16,000 crore.
Department of Currency Management	
July 1, 2022	In the backdrop of introduction of Mahatma Gandhi (New) Series, 2016, authentication and fitness sorting parameters applicable to note sorting machines were reviewed and a revised set of guidelines was issued to all the banks.
September 21, 2022	The Mobile Aided Note Identifier (MANI) App launched in 2020 for aiding visually impaired persons to identify the denomination of Indian Banknotes through audio notification in Hindi and English, is now capable of notifying the banknote denomination in 11 other languages (*viz.,* Assamese, Bengali, Gujarati, Kannada, Malayalam, Marathi, Odia, Punjabi, Tamil, Telugu and Urdu).

Date of Announcement	Policy Initiative
Department of Payment and Settlement Systems	
April 8, 2022	The Reserve Bank announced the introduction of cyber resilience and payment security controls for payment system operators covering robust governance mechanism for identification, assessment, monitoring and management of cybersecurity risks.
May 19, 2022	Guidelines were issued permitting Interoperable Card-less Cash Withdrawal (ICCW) at ATMs with customer authentication using Unified Payments Interface (UPI).
May 26, 2022	Guidelines on Bharat Bill Payment System (BBPS) were amended and minimum net-worth requirement for non-bank Bharat Bill Payment Operating Units (BBPOUs) was reduced to ₹25 crore.
June 8, 2022	The Reserve Bank announced enhancement to UPI by facilitating linking of *RuPay* credit cards.
June 9, 2022	The Reserve Bank reviewed Payments Infrastructure Development Fund (PIDF) scheme to enhance the subsidy amount, simplify the subsidy claim process, *etc.*
June 16, 2022	The e-mandate framework for recurring transactions was revised enhancing the limit for subsequent transactions without additional factor of authentication (AFA) from ₹5,000 to ₹15,000.
June 17, 2022	Payments Vision 2025 was released outlining the roadmap for payment ecosystem in India over the period till December 2025.
July 1, 2022	Report on follow-on exercise for benchmarking India's payment systems was published covering India's standing in the payments landscape *vis-à-vis* twenty other countries, as well as progress since the last exercise, under various indicators.
July 4, 2022	Guidelines were issued mandating prior approval in case of takeover/acquisition of control of non-bank payment system operators (PSOs) and sale/transfer of payment system activity of non-bank PSOs.
July 28, 2022	• Another window was provided for online Payment Aggregators (PAs) [existing as on March 17, 2020] to apply to the Reserve Bank for authorisation. • For transactions wherein the cardholder would manually enter card details, merchants or their PAs were permitted to store card data till settlement or T+4 days (whichever is earlier) and acquiring banks were permitted to store card data till January 31, 2023.
August 5, 2022	The Reserve Bank announced enabling of BBPS to facilitate processing cross-border inbound bill payments.
August 17, 2022	A discussion paper on "Charges in Payment Systems" was published for public feedback.
September 30, 2022	The Reserve Bank announced extending the current regulations applicable to online PAs to cover offline PAs.
November 30, 2022	The Reserve Bank of India exchanged letter of co-operation in the field of Central Counterparties (CCPs) with Financial Services Agency, Japan.
December 7, 2022	• The Reserve Bank announced enhancements to UPI to facilitate processing mandates with single-block-and-multiple-debits. • The Reserve Bank announced expanding the scope of BBPS to include all payments and collections.

Date of Announcement	Policy Initiative
December 26, 2022	Directions were issued mandating migration of payment fraud reporting to the *DAKSH* [9] platform from January 1, 2023.
February 8, 2023	The Reserve Bank announced enhancements in the scope of activities pertaining to Trade Receivables Discounting System (TReDS), *viz.,* insurance facility, secondary market operations, *etc.*
February 10, 2023	The Reserve Bank permitted access to UPI by NRIs and foreign nationals (from G20 countries) for their merchant payments [peer-to-merchant (P2M)] in India.
February 16, 2023	The Reserve Bank enhanced RTGS/NEFT messages to capture foreign contribution donor details and advised member banks to provide the necessary donor details while routing donations received from outside jurisdictions through NEFT and RTGS systems to the designated FCRA account at State Bank of India.
February 21, 2023	The UPI-PayNow linkage between fast payment systems of India and Singapore was operationalised.
March 6, 2023	The Reserve Bank launched the mission '*Har* Payment Digital' on the occasion of the Digital Payments Awareness Week (DPAW) 2023, observed during March 6 - 12, 2023, with theme "Digital Payment *Apnao, Auron Ko Bhi Sikhao*" (Adopt digital payments and also teach others).

[9] The Reserve Bank's advanced supervisory monitoring system.

ANNEX II

CHRONOLOGY OF MAJOR POLICY ANNOUNCEMENTS TO MITIGATE THE IMPACT OF COVID-19: APRIL 2022 TO MARCH 2023[1]

Date of Announcement	Policy Initiative
A. Government of India (GoI)	
May 30, 2022	• Scholarship for Prime Minister's Citizen Assistance and Relief in Emergency Situations (PM CARES) was announced by the Ministry of Social Justice & Empowerment as a new central sector scheme under which an allowance of ₹20,000/- per child per annum is disbursed for children from Class 1 to 12, to cover the entire school fees, cost of the books and uniform, shoes and other educational equipment. • The scheme builds on the PM CARES scheme to support children who have lost both the parents or legal guardian or adoptive parents or surviving parent to COVID-19 pandemic. • 3,945 children have been benefited under the scheme with an amount of ₹7.89 crore during 2022-23.
June 30, 2022	• Government launched 'Raising and Accelerating MSME Performance (RAMP)' scheme with a total outlay of ₹ 6,062.45 crore. • RAMP scheme is a World Bank assisted central sector scheme, supporting various Corona virus disease 2019 (COVID-19) resilience and recovery interventions of the Ministry of Micro, Small and Medium Enterprises, Government of India. RAMP scheme aims at improving access to market and credit, strengthening institutions and governance at the centre and state, improving centre-state linkages and partnerships, addressing issues of delayed payments and greening of MSMEs. • Government launched the 'Capacity Building of First-Time MSME Exporters (CBFTE)' scheme to boost the quality of MSME products and services to match international standards for the global market.
August 17, 2022	The government approved the enhancement in the limit of Emergency Credit Line Guarantee Scheme (ECLGS) by ₹ 50,000 crore from ₹ 4.5 lakh crore to ₹ 5.0 lakh crore, with the additional amount being earmarked exclusively for enterprises in hospitality and related sectors. The increase has been done on account of the severe disruptions caused by the COVID-19 pandemic on hospitality and related enterprises.
September 28, 2022	Centre extended *Pradhan Mantri Garib Kalyan Anna Yojana* (PMGKAY- Phase VII) for another three months from October 2022 to December 2022.
October 5, 2022	The Ministry of Finance, Government of India, modified the ECLGS to enhance the maximum loan amount eligibility for airlines under ECLGS 3.0 to 100 per cent of their fund based or non-fund-based loan outstanding as on the reference dates or ₹ 1,500 crore, whichever is lower; and of the above, ₹ 500 crore shall be considered, based on equity contribution by the owners.
January 11, 2023	Centre started new integrated *Pradhan Mantri Garib Kalyan Anna Yojana,* under which free food grains were provisioned to all priority households and *Antyodaya Anna Yojana* beneficiaries for the year 2023, as per the entitlement under the National Food Security Act, 2013.
B. Reserve Bank of India	
Department of Payment and Settlement Systems	
July 28, 2022	Another window was provided for online Payment Aggregators (existing as on March 17, 2020) to apply to the Reserve Bank for authorisation.

[1] The list is indicative in nature and details for government related measures and those of the Reserve Bank are available on their respective websites. Further, the list of chronology of major policy announcements in this regard during March 2020 to March 2021 was covered in Annex II of the Annual Report 2020-21, while those of during April 2021 to March 2022 was covered in Annex II of the Annual Report 2021-22.

APPENDIX TABLE 1: MACROECONOMIC AND FINANCIAL INDICATORS

Item	Average 2003-04 to 2007-08 (5 years)	Average 2009-10 to 2013-14 (5 years)	Average 2014-15 to 2018-19 (5 years)	2020-21	2021-22	2022-23
1	2	3	4	5	6	7
I. Real Economy						
I.1 Real GDP at Market Prices (% change)*	7.9	6.7	7.4	-5.8	9.1	7.0
I.2 Real GVA at Basic Prices (% change)*	7.7	6.3	7.0	-4.2	8.8	6.6
I.3 Foodgrains Production (Million Tonne)**	213.6	248.8	269.8	310.7	315.6	330.5
I.4 a) Food Stocks (Million Tonne)&	18.6	50.1	44.6	77.9	74.4	51.7
b) Procurement (Million Tonne)	39.3	61.3	66.5	99.1	107.2	77.2
c) Off-take (Million Tonne)&&	41.5	57.0	61.5	93.1	102.3	63.5
I.5 Index of Industrial Production (% change)#	11.2	4.6	4.0	-8.4	11.4	5.1
I.6 Index of Eight Core Industries (% change)#	5.9	4.9	4.3	-6.4	10.4	7.6
I.7 Gross Domestic Saving Rate (% of GNDI at Current Prices)*	33.6	33.9	31.2	28.4	30.0	-
I.8 Gross Domestic Investment Rate (% of GDP at Current Prices)*	35.2	38.0	33.1	27.9	31.4	-
II. Prices						
II.1 Consumer Price Index (CPI) Combined (average % change)	-	-	4.5	6.2	5.5	6.7
II.2 CPI-Industrial Workers (average % change)	5.0	10.3	4.9	5.0	5.1	6.1
II.3 Wholesale Price Index (average % change)	5.5	7.1	1.3	1.3	13.0	9.4
III. Money and Credit##						
III.1 Reserve Money (% change)	20.4	12.1	10.7	18.8	13.0	10.0
III.2 Broad Money (M_3) (% change)	18.6	14.7	9.5	12.2	8.8	9.0
III.3 a) Aggregate Deposits of Scheduled Commercial Banks (% change)	20.2	15.0	9.5	11.4	8.9	9.6
b) Bank Credit of Scheduled Commercial Banks (% change)	26.7	16.7	9.6	5.6	9.6	15.0
IV. Financial Markets						
IV.1 Interest rates (%)						
a) Call/Notice Money rate	5.6	7.2	6.7	3.4	3.3	5.4
b) 10-year G-sec yield	7.0	8.0	7.6	6.0	6.3	7.3
c) 91-Days T-bill yield	5.8	7.1	7.0	3.3	3.5	5.6
d) Weighted Average cost of Central Government Borrowings	7.2	8.1	7.7	5.8	6.3	7.3
e) Commercial Paper	7.7	8.4	7.8	4.2	4.3	6.3
f) Certificate of Deposits	8.9	8.2	7.5	4.3	4.1	6.4
IV.2 Liquidity (₹ lakh crore)						
a) LAF Outstanding~	-	-	-	4.1	5.9	1.3
b) MSS Outstanding~~	-	-	-	-	-	-
c) Average Daily Call Money Market Turnover	0.2	0.3	0.3	0.2	0.2	0.2
d) Average Daily G-sec Market Turnover	0.1	0.2	0.6	0.4	0.4	0.4
e) Variable Rate Repo~	-	-	-	0.005	0.0	0.0
f) Variable Rate Reverse Repo~	-	-	-	0.0	2.8	0.0
g) MSF~	-	-	-	0.001	0.0005	0.3
V. Government Finances						
V.1 Central Government Finances (% of GDP)$						
a) Revenue Receipts	10.0	9.2	8.6	8.2	9.2	8.6
b) Capital Outlay	1.6	1.6	1.5	1.6	2.3	2.3
c) Total Expenditure	14.9	15.0	12.8	17.7	16.2	15.4
d) Gross Fiscal Deficit	3.7	5.4	3.7	9.2	6.8	6.5
V.2 State Government Finances$$						
a) Revenue Deficit (% of GDP)	0.3	-0.1	0.1	1.9	0.4	0.6
b) Gross Fiscal Deficit (% of GDP)	2.7	2.3	2.8	4.1	2.7	3.5
c) Primary Deficit (% of GDP)	0.3	0.6	1.2	2.1	0.5	1.4

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)	Average 2014-15 to 2018-19 (5 years)	2020-21	2021-22	2022-23
1	2	3	4	5	6	7
VI. External Sector@						
VI.1 Balance of Payments						
a) Merchandise Exports (% change)	25.3	12.2	1.6	-7.5	44.8	9.4
b) Merchandise Imports (% change)	32.3	9.7	2.7	-16.6	55.3	24.3
c) Trade Balance/GDP (%)	-5.5	-9.1	-6.2	-3.8	-6.0	-8.5
d) Invisible Balance/GDP (%)	5.2	5.8	4.8	4.7	4.8	5.8
e) Current Account Balance/GDP (%)	-0.3	-3.3	-1.4	0.9	-1.2	-2.7
f) Net Capital Flows/GDP (%)	4.7	3.8	2.7	2.4	2.7	2.1
g) Reserve Changes [(BoP basis) (US $ billion)] [(Increase (-)/Decrease (+)]	-40.3	-6.6	-28.2	-87.3	-47.5	14.7
VI.2 External Debt Indicators@@						
a) External Debt Stock (US$ billion)	156.5	359.0	500.6	573.7	619.1	613.1
b) Debt-GDP Ratio (%)	17.8	20.9	21.4	21.2	20.0	19.1
c) Import Cover of Reserves (in Months)	14.0	8.5	10.3	17.4	11.8	9.3
d) Short-term Debt to Total Debt (%)	13.6	21.3	18.6	17.6	19.7	21.1
e) Debt Service Ratio (%)	8.3	5.6	7.7	8.2	5.2	5.3
f) Reserves to Debt (%)	113.7	84.8	76.2	100.6	98.1	91.8
VI.3 Openness Indicators (%)						
a) Export plus Imports of Goods/GDP	30.7	41.0	32.0	26.0	33.3	35.6
b) Export plus Imports of Goods & Services/GDP	41.3	53.2	43.7	38.1	46.0	50.5
c) Current Receipts plus Current Payments/GDP	47.1	59.4	49.4	44.3	51.9	57.0
d) Gross Capital Inflows plus Outflows/GDP	37.3	50.4	45.2	42.5	45.6	39.2
e) Current Receipts & Payments plus Capital Receipts & Payments/ GDP	84.4	109.8	94.6	86.7	97.6	96.2
VI.4 Exchange Rate Indicators						
a) Exchange Rate (Rupee/US Dollar)						
End of Period	43.1	51.1	65.6	73.5	75.8	82.2
Average	44.1	51.2	65.6	74.2	74.5	80.4
b) 40-Currency REER (% change)	3.1^	0.8	1.8	0.3	1.1	-1.8
c) 40-Currency NEER (% change)	1.7^	-4.9	0.2	-4.2	-0.8	-2.0
d) 6-Currency REER (% change)	5.7^	2.3	2.0	-1.7	0.4	-0.2
e) 6-Currency NEER (% change)	2.6^	-5.1	-1.1	-6.8	-1.6	-1.2

- : Not Available/Not Applicable.
* : Data are at 2011-12 base year series.
** : Data for 2022-23 are third advance estimates for agriculture production.
& : Data for 2022-23 are as on March 31, 2023, unless indicated otherwise.
&& : Data for 2022-23 pertain to end-December 2022 and excludes the data for June 2022.
# : Data for 2022-23 pertain to April 2022 - March 2023, unless indicated otherwise.
: Data for 2022-23 are as on March 24, 2023.
~ : Outstanding as on March 31.
~~ : Outstanding as on last Friday of the financial year.
$: Data for 2022-23 are revised estimates. Ratios may vary from those published in the Union Budget due to revision in GDP numbers.
$$: Data till 2020-21 pertains to all states and union territories (UT) with legislatures. Data for 2021-22 and 2022-23 are accounts and revised estimates, respectively, for 26 states/UTs.
@ : Data for 2022-23 pertain to April-December 2022, unless indicated otherwise.
@@ : Data for 2022-23 pertain to end-December 2022.
^ : Data in column 2 is average of period 2005-06 to 2007-08.

Note : 1. Data for 2022-23 are provisional.
2. For Index of Industrial Production and Eight Core Industries, data in columns 2, 3 and 4 are at 2011-12 base year.
3. Base year for WPI is 2011-12=100 for annual data and 2004-05=100 for average of 5 years inflation. Base for CPI-IW is 2001=100 till August 2020 and 2016=100 from September 2020 onwards.
4. For Average Daily G-sec Market Turnover, outright trading turnover is in central government dated securities (based on calendar days).
5. LAF negative value means injection.
6. Base year for 6- and 40-currency NEER/REER indices is 2015-16=100. REER figures are based on Consumer Price Index.

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 2015-16 to 2022-23	2020-21	2021-22	2022-23*	2020-21	2021-22	2022-23*
1	2	3	4	5	6	7	8
Expenditure Side GDP							
1. Private Final Consumption Expenditure	6.0	-5.2	11.2	7.3	57.2	58.3	58.5
2. Government Final Consumption Expenditure	5.4	-0.9	6.6	1.2	10.8	10.6	10.0
3. Gross Fixed Capital Formation	6.7	-7.3	14.6	11.2	31.1	32.7	34.0
4. Change in Stocks	72.4	-85.5	687.8	1.9	0.1	0.8	0.8
5. Valuables	5.3	26.4	34.0	-14.8	1.5	1.9	1.5
6. Net Exports	-40.1	38.8	39.6	-148.2	-2.3	-1.3	-2.9
a) Exports	5.5	-9.1	29.3	11.5	18.7	22.1	23.1
b) Less Imports	6.4	-13.7	21.8	18.8	21.0	23.4	26.0
7. Discrepancies	-47.7	-49.7	-307.4	-35.0	1.6	-3.0	-1.8
8. GDP	**5.4**	**-5.8**	**9.1**	**7.0**	**100.0**	**100.0**	**100.0**
GVA at Basic Prices (Supply Side)							
1. Agriculture, Forestry and Fishing	**4.2**	**4.1**	**3.5**	**3.3**	**16.4**	**15.6**	**15.1**
2. Industry	**5.2**	**0.9**	**10.5**	**1.7**	**22.9**	**23.3**	**22.2**
of which:							
a) Mining and Quarrying	1.6	-8.6	7.1	3.4	2.3	2.2	2.2
b) Manufacturing	5.7	2.9	11.1	0.6	18.3	18.7	17.7
c) Electricity, Gas, Water Supply and Other Utility Services	6.3	-4.3	9.9	9.2	2.3	2.3	2.3
3. Services	**5.9**	**-7.9**	**9.6**	**9.3**	**60.7**	**61.2**	**62.7**
of which:							
a) Construction	5.1	-5.7	14.8	9.1	7.8	8.2	8.4
b) Trade, Hotels, Transport, Communication and Services Related to Broadcasting	6.2	-19.7	13.8	14.2	17.0	17.8	19.1
c) Financial, Real Estate and Professional Services	6.1	2.1	4.7	6.9	23.3	22.5	22.5
d) Public Administration, Defence and Other Services	5.9	-7.6	9.7	7.1	12.6	12.7	12.8
4. GVA at Basic Prices	**5.4**	**-4.2**	**8.8**	**6.6**	**100.0**	**100.0**	**100.0**

*: Second advance estimates of national income for 2022-23.
Source: National Statistical Office (NSO).

APPENDIX TABLE 3: GROSS SAVINGS

(Per cent of GNDI)

Item	2018-19	2019-20	2020-21	2021-22
1	2	3	4	5
I. Gross Savings	**31.3**	**29.1**	**28.4**	**30.0**
I.1 Non-financial Corporations	**10.7**	**10.4**	**10.4**	**10.6**
I.1.1 Public Non-financial Corporations	1.3	1.4	1.2	1.3
I.1.2 Private Non-financial Corporations	9.4	9.0	9.2	9.3
I.2 Financial Corporations	**1.8**	**2.6**	**2.6**	**2.5**
I.2.1 Public Financial Corporations	0.9	1.5	1.4	1.5
I.2.2 Private Financial Corporations	0.9	1.0	1.2	1.0
I.3 General Government	**-1.4**	**-2.7**	**-6.6**	**-2.7**
I.4 Household sector	**20.0**	**18.8**	**22.0**	**19.6**
I.4.1 Net Financial Saving	7.8	7.6	11.3	7.6
Memo: Gross Financial Saving	11.8	11.4	15.2	11.0
I.4.2 Saving in Physical Assets	12.0	11.0	10.5	11.7
I.4.3 Saving in the Form of Valuables	0.2	0.2	0.2	0.3

GNDI**:** Gross national disposable income.
Note: Net financial saving of the household sector is obtained as the difference between gross financial savings and financial liabilities during the year.
Source: NSO.

APPENDIX TABLE 4: INFLATION, MONEY AND CREDIT

(Per cent)

Inflation									
Consumer Price Index (All India)	**Rural**			**Urban**			**Combined**		
	2020-21	**2021-22**	**2022-23**	**2020-21**	**2021-22**	**2022-23**	**2020-21**	**2021-22**	**2022-23**
1	2	3	4	5	6	7	8	9	10
General Index (All Groups)	**5.9**	**5.4**	**6.8**	**6.5**	**5.6**	**6.4**	**6.2**	**5.5**	**6.7**
Food and Beverages	7.1	3.9	6.8	7.7	4.7	6.5	7.3	4.2	6.7
Housing	…	…	…	3.3	3.7	4.3	3.3	3.7	4.3
Fuel and Light	0.3	10.0	9.6	7.1	13.4	11.6	2.7	11.3	10.3
Miscellaneous	5.7	6.6	5.9	7.5	6.8	6.6	6.6	6.7	6.3
Excluding Food and Fuel	5.5	6.7	6.3	5.6	5.4	5.9	5.5	6.0	6.1
Other Price Indices	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
1. Wholesale Price Index (2011-12=100)									
All Commodities	**1.3**	**-3.7**	**1.7**	**2.9**	**4.3**	**1.7**	**1.3**	**13.0**	**9.4**
Primary Articles	2.2	-0.4	3.4	1.4	2.7	6.8	1.7	10.2	10.0
of which : Food Articles	5.6	2.6	4.0	2.1	0.3	8.4	3.2	4.1	7.3
Fuel and Power	-6.1	-19.7	-0.3	8.2	11.5	-1.8	-8.0	32.5	28.1
Manufactured Products	2.6	-1.8	1.3	2.7	3.7	0.3	2.8	11.1	5.6
Non-food Manufactured Products	2.7	-1.8	-0.1	3.0	4.2	-0.4	2.2	11.0	5.8
2. CPI- Industrial Workers (IW) (2001=100)	**6.3**	**5.6**	**4.1**	**3.1**	**5.4**	**7.5**	**5.0**	**5.1**	**6.1**
of which : CPI- IW Food	6.5	6.1	4.4	1.5	0.6	7.4	5.8	4.7	6.1
3. CPI- Agricultural Labourers (1986-87=100)	**6.6**	**4.4**	**4.2**	**2.2**	**2.1**	**8.0**	**5.5**	**4.0**	**6.8**
4. CPI- Rural Labourers (1986-87=100)	**6.9**	**4.6**	**4.2**	**2.3**	**2.2**	**7.7**	**5.5**	**4.2**	**7.0**
Money and Credit									
	2014-15	**2015-16**	**2016-17^**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23^^**
Reserve Money (RM)	**11.3**	**13.1**	**-12.9**	**27.3**	**14.5**	**9.4**	**18.8**	**13.0**	**10.0**
Currency in Circulation	11.3	14.9	-19.7	37.0	16.8	14.5	16.6	9.8	7.8
Bankers' Deposits with RBI	8.3	7.8	8.4	3.9	6.4	-9.6	28.5	25.4	18.5
Currency-GDP Ratio$	11.6	12.1	8.7	10.7	11.3	12.2	14.4	13.4	12.7
Narrow Money (M_1)	**11.3**	**13.5**	**-3.9**	**21.8**	**13.6**	**11.2**	**16.2**	**10.7**	**6.8**
Broad Money (M_3)	**10.9**	**10.1**	**6.9**	**9.2**	**10.5**	**8.9**	**12.2**	**8.8**	**9.0**
Currency-Deposit Ratio	15.2	16.0	11.0	14.4	15.4	16.3	17.2	17.4	17.3
Money Multiplier*	5.5	5.3	6.7	5.8	5.6	5.5	5.2	5.0	5.2
GDP-M_3 Ratio$ *	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.2
Scheduled Commercial Banks									
Aggregate Deposits	10.7	9.3	11.3	6.2	10.0	7.9	11.4	8.9	9.6
Bank Credit	9.0	10.9	4.5	10.0	13.3	6.1	5.6	9.6	15.0
Non-food Credit	9.3	10.9	5.2	10.2	13.4	6.1	5.5	9.7	15.4
Credit-Deposit Ratio	76.6	77.7	72.9	75.5	77.7	76.4	72.4	72.2	75.8
Credit-GDP Ratio$	52.4	52.6	50.9	50.5	51.7	51.6	55.2	50.7	51.5

… : CPI Rural for Housing is not compiled.
^ : March 31, 2017, over April 1, 2016, barring RM and its components.
^^ : Data pertain to March 24, 2023 for column 10.
$: GDP data from 2011-12 onwards are based on new series *i.e.*, base: 2011-12. GDP refers to GDP at Current Market Prices.
* : Not expressed in per cent.

Note: 1. Data refers to y-o-y change in per cent unless specified otherwise.
2. Base year for Consumer Price Index (All India) is 2012=100 whereas base year for CPI-IW is 2001=100 till August 2020 and 2016=100 from September 2020 onwards.

Source: RBI, NSO, Labour Bureau and Ministry of Commerce and Industry.

APPENDIX TABLE 5: CAPITAL MARKET - PRIMARY AND SECONDARY

(Amount in ₹ crore)

Item	2021-22		2022-23 (P)	
	Number	Amount	Number	Amount
1	2	3	4	5
I. PRIMARY MARKET				
A. Public and Rights Issues				
1. Private Sector (a+b)	**192**	**1,50,483.6**	**271**	**54,486.7**
a) Financial	36	24,477.4	45	13,631.5
b) Non-financial	156	1,26,006.3	226	40,855.2
2. Public Sector (a+b+c)	**…**	**…**	**1**	**20,557.2**
a) Public Sector Undertakings	…	…	1	20,557.2
b) Government Companies	…	…	…	…
c) Banks/Financial Institutions	…	…	…	…
3. Total (1+2, i+ii, a+b)	**192**	**1,50,483.6**	**272**	**75,043.9**
Instrument Type				
(i) Equity	164	1,38,894.2	238	65,823.3
(ii) Debt	28	11,589.4	34	9,220.6
Issuer Type				
(a) IPOs	120	1,12,552.5	164	54,772.4
(b) Listed / NCDs	72	37,931.2	108	20,271.5
B. Euro Issues (ADRs and GDRs)	…	…	…	…
C. Private Placement				
1. Private Sector (a+b)	**1,323**	**4,09,475.1**	**1,404**	**4,74,443.2**
a) Financial	1,055	3,01,948.8	1,140	3,72,798.9
b) Non-financial	268	1,07,526.3	264	1,01,644.3
2. Public Sector (a+b)	**170**	**2,22,751.6**	**250**	**4,08,383.0**
a) Financial	110	1,63,336.2	174	3,39,494.2
b) Non-financial	60	59,415.4	76	68,888.8
3. Total (1+2, i+ii)	**1,493**	**6,32,226.7**	**1,654**	**8,82,826.2**
(i) Equity^	29	31,438.5	11	8,212.3
(ii) Debt	1,464	6,00,788.2	1,643	8,74,613.9
D. Qualified Institutional Placement	**29**	**31,438.5**	**11**	**8,212.3**
E. Mutual Funds Mobilisation (Net)#				
1. Private Sector		1,48,286.9		15,983.0
2. Public Sector		98,442.7		60,242.5
II. SECONDARY MARKET				
BSE				
Sensex: End-Period	58,568.5		58,991.5	
Period Average	55,774.6		58,307.5	
Price Earnings Ratio@	25.8		22.4	
Market Capitalisation to GDP ratio (%)*	112.5		94.9	
Turnover Cash Segment		13,38,225.3		10,28,864.8
Turnover Equity Derivatives Segment		6,60,78,327.8		3,43,15,313.1
NSE				
Nifty 50: End-Period	17,464.8		17,359.8	
Period Average	16,662.7		17,335.9	
Price Earnings Ratio@	22.9		20.4	
Market Capitalisation to GDP ratio (%)*	111.5		94.2	
Turnover Cash Segment		1,65,66,257.4		1,33,05,073.4
Turnover Equity Derivatives Segment		1,69,52,33,134.5		3,82,23,26,468.1

…: Nil P : Provisional (for 2022-23). #: Net of redemptions. @: As at the end of the period.
^ : Does not include preferential allotments.
* : GDP for 2022-23 are as per second advance estimates.
Note: Figures in the columns might not add up to the total due to rounding of numbers.
Source: SEBI, NSE, BSE, various merchant bankers and RBI staff calculations.

APPENDIX TABLE 6: KEY FISCAL INDICATORS

(As per cent of 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	49.5
2017-18	0.4	2.6	-0.5	3.5	48.3	49.5
2018-19	0.4	2.4	-0.7	3.4	48.5	49.6
2019-20	1.6	3.3	0.3	4.6	51.4	52.6
2020-21	5.7	7.3	3.9	9.2	61.6	62.8
2021-22	3.3	4.4	1.0	6.8	58.4	60.1
2022-23 (RE)#	3.0	4.1	0.6	6.5	56.6	58.0
2023-24 (BE)	2.3	2.9	-0.7	5.9	56.6	57.8
States*						
1990-91	1.8	0.9	-0.6	3.3	22.2	22.2
1995-96	0.8	0.7	-1.1	2.6	20.8	20.8
2000-01	1.8	2.5	0.1	4.2	28.1	28.1
2009-10	1.2	0.4	-1.4	3.0	26.4	26.4
2010-11	0.4	-0.2	-1.8	2.1	24.4	24.4
2011-12	0.4	-0.3	-1.9	2.0	23.2	23.2
2012-13	0.4	-0.3	-1.8	2.0	22.6	22.6
2013-14	0.7	0.0	-1.5	2.2	22.3	22.3
2014-15	1.1	0.3	-1.2	2.6	22.0	22.0
2015-16	1.5	0.0	-1.6	3.0	23.7	23.7
2016-17	1.8	0.2	-1.4	3.5	25.1	25.1
2017-18	0.7	0.1	-1.6	2.4	25.1	25.1
2018-19	0.8	0.1	-1.6	2.4	25.3	25.3
2019-20	0.9	0.6	-1.1	2.6	26.7	26.7
2020-21	2.1	1.9	-0.1	4.1	31.1	31.1
2021-22	0.5	0.4	-1.7	2.7	…	…
2022-23 (RE)	1.4	0.6	-1.5	3.5	…	…
2023-24 (BE)	1.1	0.2	-1.9	3.2	…	…

... : Not Available. RE: Revised Estimates. 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.

: Going by the principle of using latest GDP data for any year, GDP used for 2022-23 (RE) is the latest available second advance estimates. 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.

* : Data till 2020-21 pertains to all states and union territories (UT) with legislatures. Data for 2021-22, 2022-23 and 2023-24 are accounts, revised estimates and budget estimates, respectively, for 26 states/UTs.

Note: 1. Negative sign (-) indicates surplus in deficit indicators.
2. GDP figures used in this table are on 2011-12 base, which are the latest available estimates.
3. Columns 6 and 7 are outstanding figures as at end-March of respective years.

Source: Budget documents of central and state governments, Status paper on government debt and Quarterly report on public debt management.

APPENDIX TABLE 7: COMBINED RECEIPTS AND DISBURSEMENTS OF THE CENTRAL AND STATE GOVERNMENTS

(Amount in ₹ thousand crore)

Item	2017-18	2018-19	2019-20	2020-21	2021-22 RE	2022-23 BE
1	2	3	4	5	6	7
1 Total Disbursements	**4,516**	**5,041**	**5,411**	**6,353**	**7,453**	**8,009**
1.1 Developmental	2,635	2,883	3,074	3,823	4,489	4,762
1.1.1 Revenue	2,029	2,224	2,447	3,150	3,445	3,537
1.1.2 Capital	519	597	588	550	964	1,145
1.1.3 Loans	87	62	40	123	81	80
1.2 Non-Developmental	1,812	2,078	2,253	2,443	2,864	3,140
1.2.1 Revenue	1,741	1,966	2,110	2,272	2,654	2,928
1.2.1.1 Interest Payments	815	895	956	1,061	1,244	1,409
1.2.2 Capital	69	111	141	169	178	210
1.2.3 Loans	2	1	2	2	32	2
1.3 Others	68	80	83	87	100	107
2 Total Receipts	**4,528**	**5,023**	**5,734**	**6,397**	**7,193**	**7,945**
2.1 Revenue Receipts	3,376	3,798	3,852	3,688	4,894	5,497
2.1.1 Tax Receipts	2,978	3,279	3,232	3,193	4,026	4,551
2.1.1.1 Taxes on Commodities and Services	1,854	2,030	2,013	2,076	2,609	2,904
2.1.1.2 Taxes on Income and Property	1,121	1,246	1,216	1,115	1,414	1,643
2.1.1.3 Taxes of Union Territories (Without Legislature)	3	3	3	3	4	4
2.1.2 Non-tax Receipts	398	519	620	495	868	946
2.1.2.1 Interest Receipts	34	36	31	33	40	47
2.2 Non-debt Capital Receipts	142	140	110	65	118	91
2.2.1 Recovery of Loans & Advances	42	45	60	17	33	20
2.2.2 Disinvestment Proceeds	100	96	51	48	85	71
3 Gross Fiscal Deficit [1 - (2.1 + 2.2)]	**997**	**1,103**	**1,449**	**2,600**	**2,441**	**2,421**
3A Sources of Financing: Institution-wise						
3A.1 Domestic Financing	989	1,097	1,441	2,530	2,422	2,401
3A.1.1 Net Bank Credit to Government	145	387	572	890	627	….
3A.1.1.1 Net RBI Credit to Government	-145	326	190	107	351	….
3A.1.2 Non-Bank Credit to Government	844	710	869	1,640	1,794	2,401
3A.2 External Financing	8	6	9	70	20	19
3B Sources of Financing: Instrument-wise						
3B.1 Domestic Financing	989	1,097	1,441	2,530	2,422	2,401
3B.1.1 Market Borrowings (net)	795	796	971	1,696	1,377	1,808
3B.1.2 Small Savings (net)	71	89	209	459	566	399
3B.1.3 State Provident Funds (net)	42	51	38	41	45	45
3B.1.4 Reserve Funds	18	-18	10	5	-2	6
3B.1.5 Deposits and Advances	25	66	-14	26	33	34
3B.1.6 Cash Balances	-12	17	-323	-44	260	64
3B.1.7 Others	50	96	549	348	142	46
3B.2 External Financing	8	6	9	70	20	19
4 Total Disbursements as per cent of GDP	*26.4*	*26.7*	*26.9*	*32.0*	*31.8*	*31.0*
5 Total Receipts as per cent of GDP	*26.5*	*26.6*	*28.5*	*32.3*	*30.6*	*30.8*
6 Revenue Receipts as per cent of GDP	*19.8*	*20.1*	*19.2*	*18.6*	*20.9*	*21.3*
7 Tax Receipts as per cent of GDP	*17.4*	*17.3*	*16.1*	*16.1*	*17.2*	*17.6*
8 Gross Fiscal Deficit as per cent of GDP	*5.8*	*5.8*	*7.2*	*13.1*	*10.4*	*9.4*

…: Not Available. RE: Revised Estimates. BE: Budget Estimates.

Note: 1. GDP data is based on 2011-12 base.

2. The revision of general government fiscal data will be undertaken after all states present their final budget and they are tabulated, consolidated and disseminated by the Reserve Bank through its annual publication - 'State Finances: A Study of Budgets'.

Source: Budget Documents of the central and state governments.

APPENDIX TABLE 8: INDIA'S OVERALL BALANCE OF PAYMENTS

(US$ million)

		2018-19	2019-20	2020-21	2021-22	2022-23 (P)
1		2	3	4	5	6
A.	**CURRENT ACCOUNT**					
	1 Exports, f.o.b.	3,37,237	3,20,431	2,96,300	4,29,164	3,40,322
	2 Imports, c.i.f.	5,17,519	4,77,937	3,98,452	6,18,623	5,54,341
	3 Trade Balance	-1,80,283	-1,57,506	-1,02,152	-1,89,459	-2,14,018
	4 Invisibles, Net	1,23,026	1,32,850	1,26,065	1,50,694	1,46,937
	a) 'Non-factor' Services *of which* :	81,941	84,922	88,565	1,07,516	1,04,218
	Software Services	77,654	84,643	89,741	1,09,540	96,914
	b) Income	-28,861	-27,281	-35,960	-37,269	-33,395
	c) Private Transfers	70,601	76,217	74,439	81,230	76,696
	5 Current Account Balance	-57,256	-24,656	23,912	-38,766	-67,081
B.	**CAPITAL ACCOUNT**					
	1 Foreign Investment, Net (a+b)	30,094	44,417	80,092	21,809	18,190
	a) Direct Investment	30,712	43,013	43,955	38,587	21,678
	b) Portfolio Investment	-618	1,403	36,137	-16,777	-3,488
	2 External Assistance, Net	3,413	3,751	11,167	5,366	3,803
	3 Commercial Borrowings, Net	10,416	22,960	-134	8,135	-5,584
	4 Short Term Credit, Net	2,021	-1,026	-4,130	20,105	8,123
	5 Banking Capital, of which:	7,433	-5,315	-21,067	6,669	25,030
	NRI Deposits, Net	10,387	8,627	7,364	3,234	5,408
	6 Rupee Debt Service	-31	-69	-64	-71	-61
	7 Other Capital, Net&	1,057	18,462	-2,143	23,794	3,994
	8 Total Capital Account	54,403	83,180	63,721	85,807	53,495
C.	**Errors & Omissions**	-486	974	-347	459	-1,129
D.	**Overall Balance [A(5)+B(8)+C]**	-3,339	59,498	87,286	47,501	-14,715
E.	**Monetary Movements (F+G)**	3,339	-59,498	-87,286	-47,501	14,715
F.	**IMF, Net**	0	0	0	0	0
G.	**Reserves and Monetary Gold (Increase -, Decrease +)**	3,339	-59,498	-87,286	-47,501	14,715
	***of which* : SDR Allocation**	0	0	0	-17,862	0
	Memo: As a ratio to GDP					
	1 Trade Balance	-6.7	-5.6	-3.8	-6.0	-8.5
	2 Net Services	3.0	3.0	3.3	3.4	4.1
	3 Net Income	-1.1	-1.0	-1.3	-1.2	-1.3
	4 Current Account Balance	-2.1	-0.9	0.9	-1.2	-2.7
	5 Capital Account, Net	2.0	2.9	2.4	2.7	2.1
	6 Foreign Investment, Net	1.1	1.6	3.0	0.7	0.7

P : Data are provisional and pertain to April-December 2022.

& : 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$ billion)

Source/Industry	2018-19	2019-20	2020-21	2021-22	2022-23 (P)
1	2	3	4	5	6
Total FDI	44.4	50.0	59.6	58.8	46.0
Country-wise Inflows					
Singapore	16.2	14.7	17.4	15.9	17.2
Mauritius	8.1	8.2	5.6	9.4	6.1
US	3.1	4.1	13.8	10.5	6.0
UAE	0.9	0.3	4.2	1.0	3.4
Netherlands	3.9	6.5	2.8	4.6	2.5
Japan	3.0	3.2	1.9	1.5	1.8
UK	1.4	1.3	2.0	1.6	1.7
Cyprus	0.3	0.9	0.4	0.2	1.3
Canada	0.6	0.2	0.0	0.5	0.8
Cayman Islands	1.0	3.7	2.8	3.8	0.8
Germany	0.9	0.5	0.7	0.7	0.5
Luxembourg	0.3	0.3	0.3	0.5	0.5
Switzerland	0.3	0.2	0.2	4.3	0.4
France	0.4	1.9	1.3	0.3	0.4
South Korea	1.0	0.8	0.4	0.3	0.3
Others	3.1	3.2	5.7	3.4	2.3
Sector-wise Inflows					
Manufacturing	9.6	9.6	9.3	16.3	11.3
Financial Services	7.2	5.7	3.5	4.7	6.8
Computer Services	3.7	5.1	23.8	9.0	5.6
Retail & Wholesale Trade	4.9	5.1	3.9	5.1	5.3
Communication Services	6.5	7.8	2.9	6.4	4.5
Electricity and Other Energy Generation, Distribution & Transmission	2.6	2.8	1.3	2.2	3.3
Business Services	2.8	3.8	1.8	2.5	2.0
Education, Research & Development	0.9	0.8	1.3	3.6	1.9
Transport	1.2	2.4	7.9	3.3	1.7
Construction	2.3	2.0	1.8	3.2	1.4
Miscellaneous Services	1.4	1.1	0.9	1.0	1.2
Restaurants and Hotels	0.8	2.7	0.3	0.7	0.2
Mining	0.3	0.3	0.2	0.4	0.2
Real Estate Activities	0.2	0.6	0.4	0.1	0.1
Trading	0.0	0.0	0.0	0.0	0.0
Others	0.1	0.2	0.2	0.4	0.5

P: Data are provisional.
Note: Includes FDI through approval, automatic and acquisition of existing shares routes.
Source: RBI.

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