Report of the Central Board of Directors on the working of the Reserve Bank of India for the year ended June 30, 2012 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 2011-12

भारतीय रिज़र्व बैंक
RESERVE BANK OF INDIA
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गवर्नर
GOVERNOR

LETTER OF TRANSMITTAL

Ref. No. SYD. 703 / 02.16.001 /2012-13

August 23, 2012
Bhadra 1, 1934 (Saka)

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

Dear Sir:

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 the June 30, 2012 signed by me, the Deputy Governors and the Chief General Manager, and certified by the Bank's Auditors; and

(ii) Two copies of the Annual Report of the Central Board on the working of the Bank during the year ended June 30, 2012.

Yours faithfully,

[D. Subbarao]

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CENTRAL BOARD / LOCAL BOARDS

GOVERNOR

D. Subbarao

DEPUTY GOVERNORS

K. C. Chakrabarty

Subir Gokarn

Anand Sinha

H. R. Khan

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

Anil Kakodkar

Kiran Karnik

M. V. Rajeev Gowda

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

Y. H. Malegam

Azim Premji

Kumar Mangalam Birla

Dipankar Gupta

Najeeb Jung

G. M. Rao

Ela Bhatt

Indira Rajaraman

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

D. K. Mittal

Arvind Mayaram

MEMBERS OF LOCAL BOARDS

WESTERN AREA

Kiran Karnik

K. Venkatesan

Dattaraj V. Salgaocar

Jayantilal B. Patel

EASTERN AREA

Anila Kumari

Sharif Uz-zaman Laskar

NORTHERN AREA

Anil Kakodkar

Ram Nath

Kamal Kishore Gupta

Mihir Kumar Moitra

A. Naveen Bhandary

SOUTHERN AREA

M.V.Rajeev Gowda

M. Govinda Rao

K. Selvaraj

Kiran Pandurang

Position for the year 2011-12[1]
as on August 14, 2012

[1] Please refer to Annex 1 for details of changes in Directors/Members of the Central Board/Local Boards during 2011-12.

PRINCIPAL OFFICERS

(As on August 14, 2012)

EXECUTIVE DIRECTORS	V.K. Sharma
	G. Gopalakrishna
	Deepak Mohanty
	S. Karuppasamy
	R. Gandhi
	P. Vijaya Bhaskar
	B. Mahapatra
	G. Padmanabhan
	Jasbir Singh
CENTRAL OFFICE	
Central Vigilance Cell	Kaza Sudhakar, Chief Vigilance Officer
Customer Service Department	Suma Varma, Chief General Manager
Department of Banking Operations and Development	Deepak Singhal, Chief General Manager-in-Charge
Department of Banking Supervision	G. Jaganmohan Rao, Chief General Manager-in-Charge
Department of Communication	Alpana Killawala, Press Relations Officer (Gr. F)
Department of Currency Management	B.P. Vijayendra, Chief General Manager
Department of Economic and Policy Research	B.M. Misra, Officer-in-Charge
Department of Expenditure and Budgetary Control	B. Srinivas, Chief General Manager
Department of External Investments and Operations	M. S. Deb, Chief General Manager
Department of Government and Bank Accounts	A.K. Bera, Chief General Manager-in-Charge
Department of Information Technology	A.S. Ramasastri, Chief General Manager-in-Charge
Department of Non-Banking Supervision	Uma Subramaniam, Chief General Manager-in-Charge
Department of Payment and Settlement Systems	Vijay Chugh, Chief General Manager
Department of Statistics and Information Management	A.B. Chakraborty, Officer-in-Charge
Financial Markets Department	G. Mahalingam, Chief General Manager
Financial Stability Unit	R.G. Warriar, Chief General Manager
Foreign Exchange Department	Sujata E. Prasad, Chief General Manager
Human Resource Management Department	Sandip Ghose, Chief General Manager-in-Charge
Inspection Department	U.S. Paliwal, Chief General Manager
Internal Debt Management Department	K.K. Vohra, Chief General Manager
Legal Department	G.S. Hegde, Principal Legal Adviser
Monetary Policy Department	M.D. Patra, Adviser-in-Charge
Premises Department	K.R. Ananda, Chief General Manager
Rajbhasha Department	Ramakant Gupta, Deputy General Manager
Risk Management Department	N. Krishna Mohan, Chief General Manager
Rural Planning and Credit Department	C.D. Srinivasan, Chief General Manager
Secretary's Department	Grace E. Koshie, Chief General Manager & Secretary
Urban Banks Department	A. Udgata, Chief General Manager-in-Charge
COLLEGES	**PRINCIPALS**
College of Agricultural Banking, Pune	Meena Hemchandra
Reserve Bank Staff College, Chennai	J. Sadakkadulla
OFFICES	**REGIONAL DIRECTORS**
Chennai	N.S. Vishwanathan
Kolkata	B.P. Kanungo
Mumbai	J.B. Bhoria
New Delhi	Chandan Sinha
BRANCHES	
Ahmedabad	Sudarshan Sen
Bangalore	Uma Shankar
Bhopal	P.R. Ravi Mohan
Bhubaneswar	V. Ramchandra Rao
Chandigarh	M. K. Singh
Guwahati	Pradyumna K. Jena
Hyderabad	A.S. Rao
Jaipur	Deepali Pant Joshi
Jammu	K.K. Saraf
Kanpur	K.R. Das
Lucknow	Rabi N. Mishra
Nagpur	Phulan Kumar
Patna	
Thiruvananthapuram	Salim Gangadharan
	OFFICERS-IN-CHARGE
Agartala	A.K. Pandey, General Manager
Belapur	S. Bhatnagar, General Manager
Dehradun	R.L. Das, General Manager
Gangtok	E.E. Karthak, General Manager
Kochi	C.V. George, General Manager
Panaji	Jaikish, General Manager
Raipur	Nirmal Chand, General Manager
Ranchi	H.N. Panda, General Manager
Shillong	P. Shyam Sunder, General Manager
Shimla	R. Gurumurthy, General Manager
Srinagar	B.S. Katoch, Deputy General Manager

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LIST OF ABBREVIATIONS

AD	-	Authorised Dealer
ADF	-	Automated Data Flow
ADR	-	American Depository Receipt
AE	-	Advanced Economy
AEPS	-	*Aadhar* Enabled Payment Systems
AIC	-	Akaike Information Criterion
AML/CFT	-	Anti-Money Laundering/Combating Financing of Terrorism
ANBC	-	Adjusted Net Bank Credit
AP	-	Andhra Pradesh
APMC	-	Agricultural Produce Marketing Committees
ARMS	-	Audit and Risk Management Sub-committee
ATBs	-	Auction Treasury Bills
ATM	-	Automated Teller Machine
BC	-	Business Correspondent
BCBS	-	Basel Committee on Banking Supervision
BCM	-	Business Continuity Management
BCP	-	Business Continuity Plan
BCPs	-	Basel Core Principles
BCSBI	-	Banking Codes and Standards Board of India
BE	-	Budget Estimates
BFS	-	Board for Financial Supervision
BoP	-	Balance of Payments
BPM	-	Balance of Payments Manual
BPO	-	Business Process Outsourcing
BPR	-	Business Process Reengineering
bps	-	basis points
BSE	-	Bombay Stock Exchange
CAB	-	College of Agricultural Banking
CAD	-	Current Account Deficit
CAPIOS	-	Central Assistant Public Information Officers
CBLO	-	Collateralised Borrowing and Lending Obligation
CBS	-	Core Banking Solution
CBSE	-	Central Board of Secondary Education
CCB	-	Capital Conservation Buffer
CCB (Ch X)	-	Committee of Central Board
CCIL	-	Clearing Corporation of India Ltd.
CCP	-	Central Counter Parties
CD	-	Certificate of Deposit
CDS	-	Credit Default Swaps
CFTC	-	Commodity Futures Trading Commission
CGTMSE	-	Credit Guarantee Fund Trust for Micro and Small Enterprises
CIC	-	Central Information Commission
CIL	-	Coal India Limited
CNP	-	Card Not Present
COD	-	Commercial Operations Date
CoR	-	Certificate of Registration
CP	-	Commercial Paper
CP	-	Card Present
CPI	-	Consumer Price Index
CPS	-	Centralised Payment System
CPSS	-	Committee on Payments and Settlement System
CRAR	-	Capital to Risk Weighted Assets Ratio
CRCS	-	Central Registrar of Cooperative Societies
CRE	-	Commercial Real Estate
CRR	-	Cash Reserve Ratio
CSF	-	Consolidated Sinking Fund
CSO	-	Central Statistics Office
CSP	-	Customer Service Point
CTS	-	Cheque Truncation System
CU	-	Capacity Utilisation
CWC	-	Central Water Commission
DCCB	-	District Central Cooperative Bank
DDA	-	Diamond Dollar Account
DICGC	-	Deposit Insurance Credit Guarantee Corporation
DIF	-	Deposit Insurance Fund
DMT	-	Direct Money Transfer
DP	-	Dynamic Provisioning
DR	-	Disaster Recovery
DRI	-	Differential Rate of Interest
DTC	-	Direct Tax code
D*v*P	-	Delivery *versus* Payment
EBT	-	Electronic Benefit Transfer
ECB	-	European Central Bank
ECBs	-	External Commercial Borrowings
ECCS	-	Express Cheque Clearing System

LIST OF ABBREVIATIONS

ECS	-	Electronic Clearing Services
EDEs	-	Emerging and Developing Economies
EEFC	-	Exchange Earner's Foreign Currency
EFSF	-	European Financial Stability Facility
EFSM	-	European Financial Stability Mechanism
EFT	-	Electronic Fund Transfer
EKP	-	Enterprise Knowledge Portal
EL	-	Expected Loss
EMEs	-	Emerging Market Economies
ERPT	-	Exchange Rate Pass-through
ESM	-	European Stability Mechanism
ETF	-	Exchange Traded Fund
EU	-	European Union
FC	-	Financial Conglomerate
FCCB	-	Foreign Currency Convertible Bond
FCI	-	Financial Conditions Index
FDI	-	Foreign Direct Investment
FEMA	-	Foreign Exchange Management Act
FIIs	-	Foreign Institutional Investors
FIMMDA	-	Fixed Income Money Market and Derivatives Association
FIP	-	Financial Inclusion Plan
FIR	-	First Information Report
FIs	-	Financial Institutions
FLC	-	Financial Literacy Centre
FLCC	-	Financial Literacy and Credit Counseling Centre
FRBM Act	-	Fiscal Responsibility and Budget Management Act
FSA	-	Fuel Supply Agreement
FSAP	-	Financial Sector Assessment Programme
FSB	-	Financial Stability Board
FSDC	-	Financial Stability and Development Council
GAH	-	Gilt Account Holder
GCCs	-	General Credit Cards
GDP	-	Gross Domestic Product
GDR	-	Global Depository Receipt
GDS	-	Gross Domestic Savings
GFCF	-	Gross Fixed Capital Formation
GFD	-	Gross Fiscal Deficit
GHGs	-	Green House Gases
GNP	-	Gross National Product
GoI	-	Government of India
GRF	-	Guarantee Redemption Fund
GRM	-	Grievance Redressal Mechanism
G-sec	-	Government Securities
GST	-	Goods and Services Tax
H-P	-	Hodrick Prescott
HTM	-	Held to Maturity
HVC	-	High Value Clearing
IADI	-	International Association of Deposit Insurers
IAS	-	Indian Accounting Standards
IBA	-	Indian Banks Association
ICT	-	Information and Communication Technology
IDF	-	Infrastructure Debt Fund
IDRBT	-	Institute for Development and Research in Banking Technology
IFRS	-	International Financial Reporting Standards
IGIDR	-	Indira Gandhi Institute of Development Research
IIBM	-	Indian Institute of Bank Management
IIP	-	Index of Industrial Production
IMD	-	India Meteorological Department
IMF	-	International Monetary Fund
IMO	-	Instant Money Order
INR	-	Indian Rupee
INRM	-	Integrated Natural Resource Management
IOSCO	-	International Organisation of Securities Commissions
IP	-	Internet protocol
IPM	-	Integrated Pest Management
IPO	-	Initial Public Offering
IRD	-	Interest Rate Derivatives
IRDA	-	Insurance Regulatory and Development Authority
IRF	-	Interest Rate Futures
IRS	-	Interest Rate Swaps
IS Audits	-	Information System Audits
ISO	-	International Organisation for Standardisation
IT	-	Information Technology
ITB	-	Intermediate Treasury Bills
ITP	-	India-IMF Training Programme
KCC	-	Kisan Credit Card

LIST OF ABBREVIATIONS

KYC	-	Know Your Customer
LAF	-	Liquidity Adjustment Facility
LC	-	Letter of Credit
LDM	-	Lead District Manager
LEISA	-	Low External Input Sustainable Agriculture
LRS	-	Liberalised Remittance Scheme
LTRO	-	Long Term Refinancing Operations
MASI	-	Management Audit System Inspection
MEFS	-	Medium-term Expenditure Framework Statement
MFI	-	Microfinance Institution
MFs	-	Mutual Funds
MGNREGS/A	-	Mahatma Gandhi National Rural Employment Guarantee Scheme/ Act
MICR	-	Magnetic Ink Character Recognition
MNOs	-	Mobile Network Operators
MoU	-	Memorandum of Understanding
MSE	-	Micro and Small Enterprises
MSF	-	Marginal Standing Facility
MSME	-	Micro, Small and Medium Enterprises
MT	-	Million tonnes
NABARD	-	National Bank for Agriculture and Rural Development
NAM	-	Norm of Absolute Values
NBFCs	-	Non-Banking Financial Companies
NBFCs-ND-SI	-	Non-Deposit taking Systematically Important NBFCs
NCAER	-	National Council of Applied Economic Research
NCD	-	Non-Convertible Debentures
NCERT	-	National Council of Educational Research and Training
NDA	-	Net Domestic Assets
NDF	-	Non-Deliverable Forwards
NDS-OM	-	Negotiated Dealing System-Order Matching System
NDTL	-	Net Demand and Time Liabilities
NECS	-	National Electronic Clearing Services
NEFT	-	National Electronic Fund Transfer
NER	-	North-East Region
NFA	-	Net Foreign Assets
NGO	-	Non-Governmental Organisation
NG-RTGS	-	Next Generation RTGS
NHAI	-	National Highways Authority of India
NHB	-	National Housing Bank
NIBM	-	National Institute of Bank Management
NIF	-	National Investment Fund
NIM	-	Net Interest Margin
NMIZ	-	National Manufacturing Investment Zone
NOC	-	No Objection Certificate
NOF	-	Net Owned Funds
NOOPL	-	Net Overnight Open Position Limit
NPA	-	Non Performing Asset
NPCI	-	National Payment Corporation of India
NRI	-	Non-Resident Indian
NSM	-	Note Sorting Machine
OBC	-	Other Backward Classes
OD	-	Overdraft
OECD	-	Organisation for Economic Cooperation and Development
OMO	-	Open Market Operations
OPEC	-	Organisation of Petroleum Exporting Countries
ORFS	-	Online Return Filing System
OTC	-	Over the Counter
PACS	-	Primary Agricultural Credit Societies
PD	-	Primary Dealer
PDO	-	Public Debt Office
PFRDA	-	Pension Fund Regulatory and Development Authority
PIOs	-	Persons of Indian Origin
POL	-	Petroleum, Oil and Lubricants
POS	-	Point of Sale
PPI	-	Pre-paid Payment Instrument
PPP	-	Public Private Partnership
PRN	-	Production-weighted Rainfall Index
PSB	-	Public Sector Bank
PSLCs	-	Priority Sector Lending Certificates
PSS Act	-	Payment and Settlement Systems Act
PSU	-	Public Sector Undertaking
P2P	-	Person to Person
QFIs	-	Qualified Foreign Investors
R&D	-	Research and Development
RBI	-	Reserve Bank of India
RBIA	-	Risk Based Internal Audit
RBSC	-	Reserve Bank Staff College
RCS	-	Registrar of Cooperative Societies
RE	-	Revised Estimates

LIST OF ABBREVIATIONS

RECS	- Regional Electronic Clearing Services
REER	- Real Effective Exchange Rate
RFC	- Resident Foreign Currency
RIDF	- Rural Infrastructure Development Fund
RMD	- Risk Management Department
ROA	- Return on Assets
ROE	- Return on Equity
RRB	- Regional Rural Banks
RTGS	- Real Time Gross Settlement system
RTI	- Right to Information
S&P	- Standard and Poor's
SAARC	- South Asian Association for Regional Cooperation
SC	- Scheduled Castes
SCB	- Scheduled Commercial Bank
SCI	- Structural Change Index
SDS	- Special Dispensation Scheme
SEBI	- Securities and Exchange Board of India
SEC	- Securities and Exchange Commission
SFMS	- Structured Financial Messaging Solution
SGL	- Subsidiary General Ledger
SHG	- Self Help Group
SIDBI	- Small Industries Development Bank of India
SLBCs	- State Level Bankers' Committees
SLR	- Statutory Liquidity Ratio
SPDUs	- State Power Distribution Utilities
StCB	- State Cooperative Bank
STCRC	- Short Term Co-operative Rural Credit
SWIFT	- Society for Worldwide Inter-bank Financial Telecommunication
TAG	- Technical Advisory Group
T-bill	- Treasury bill
TCO	- Total Cost of Ownership
ThFC	- Thirteenth Finance Commission
TPDS	- Targeted Public Distribution System
TRs	- Trade Repositories
UCBs	- Urban Cooperative Banks
USD	- US Dollar
USSD	- Unstructured Supplementary Service Data
VA-PT	- Vulnerability Assessment – Penetration Testing
VAR	- Vector Autoregression
VC	- Video Conferencing
VDI	- Virtual Desktop Interface
WADR	- Weighted Average Discount Rate
WAEIR	- Weighted Average Effective Interest Rate
WLA	- White Label ATMs
WMA	- Ways and Means Advances
WPI	- Wholesale Price Index
WPR	- Work Participation Rate
XML	- Extensible Mark-up Language
ZTC	- Zonal Training Centre

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

*For the Year July 1, 2011 to June 30, 2012**

PART ONE: THE ECONOMY - REVIEW AND PROSPECTS

I ASSESSMENT AND PROSPECTS

Inflation slowed in response to past monetary tightening and growth deceleration in 2011-12. Growth during 2012-13 is expected to stay below trend at around the same level as in the previous year. Inflation is likely to remain sticky around 7 per cent with upside risks emanating from a deficient monsoon. Concurrently, the risk of twin deficits has accentuated causing concern for macro-financial stability. With limited fiscal and monetary space available to provide direct stimulus to growth without stoking inflation, an expenditure switching strategy is needed that reduces government's revenue spending by cutting subsidies with a step up in capital expenditure to crowd-in private investment. Over the medium-term, addressing issues impeding infrastructure investment have become important for stepping up India's growth potential which has been dented post-crisis. While the Reserve Bank is focusing on price stability and sustainable growth over the medium-term keeping in view its welfare implications, the human face of its financial policy can be buttressed with a greater thrust on effective financial inclusion.

I.1 Growth decelerated in 2011-12 after two years of relatively good performance and dropped to below the economy's potential. The drop in growth was a result of combination of domestic and global factors. Global macroeconomic and financial uncertainty, weak external demand, elevated level of prices, widening twin deficits and falling investment combined to adversely impact growth. The investment climate worsened due to structural impediments, policy uncertainty, inflation persistence and rising interest rates.

I.2 Two years of high inflation amidst wide fiscal and current account deficits would have had adverse consequence for welfare. It adversely affected saving and investment, particularly household saving in financial assets. Inflation changes the future consumption basket by reducing the real value of the amount saved today, thus making current consumption more attractive. Real value of savers' holdings of cash as well as fixed income products declines.

I.3 The most serious consequence of inflation is its adverse distributional impact on the poor, people without social security and pensioners. Poor households are unable to maintain the consumption levels at current prices and therefore, they are particularly worse off in an inflationary situation. During 2011-12, growth also slowed down, in part because of high inflation. This further reduced welfare of the common man as firstly, it had adverse impact on employment and incomes and secondly, with low growth, the trickle down benefits for poor also reduced.

I.4 In view of the adverse welfare consequences and its impact on sustainable growth, the Reserve Bank combated high inflation through monetary tightening. Several other factors combined with monetary tightening causing growth to slow down

* While the Reserve Bank of India's accounting year is July-June, data on a number of variables are available on a financial year basis, *i.e.*, April-March, and hence, the data are analysed on the basis of the financial year. Where available, the data have been updated beyond March 2012 based on information available till mid-August. For the purpose of analysis and for providing proper perspective on policies, reference to past years as also prospective periods, wherever necessary, has been made in this Report.

to the lowest in nine years. Even though inflation moderated later in the year, macroeconomic risks increased with slowing growth and rising twin deficits. This posed difficult challenges for macro-economic management. First, though India outperformed most of its peers in terms of growth, its potential and actual growth slowed. Second, the investment downturn extended and deepened due to above mentioned factors. Third, fiscal slippage put some pressure on interest rates and crowded out resources for private investment. Fourth, external sector soundness weakened, especially as current account deficit (CAD) widened, partly due to impact of large government spending on aggregate demand. Fifth, inflation moderation provided limited comfort given the suppressed inflation and incomplete pass-through of rupee depreciation.

I.5 Inflation persistence and widening twin deficits constrained the Reserve Bank's ability for counter-cyclical measures during 2011-12. After tightening monetary policy till October 2011, the Reserve Bank paused hiking policy rates as growth risks accentuated. Excessively tight liquidity conditions during Q4 of 2011-12 along with assessment that inflation would fall in line with the projected path, prompted the Reserve Bank to start easing monetary and liquidity conditions. Amidst macro-economic deterioration it used the available space in April 2012 to cut policy rates.

I.6 Going forward, the priority should be to bring down the twin deficits so as to support potential growth even if it means a slower pace of recovery in the short run. A stable macro-economic environment, coupled with complimentary macro and micro-economic policies to support saving, investment and inclusive growth could help restore India's potential to grow at 8-8.5 per cent on a sustainable basis over the medium term.

ASSESSMENT OF 2011-12

I.7 In 2011-12, growth decelerated in each successive quarter. On the other hand, average inflation remained high, though it moderated in the last four months of the year. In the context of the growth-inflation dynamics, an assessment of the role of both monetary and fiscal policy and the impact on growth slowdown on asset quality are set out below.

Role of monetary and non-monetary factors in growth slowdown

I.8 After recording a rise of 8.4 per cent during 2009-10 and 2010-11, growth dropped to 6.5 per cent in 2011-12. Growth in Q4 of 2011-12 of 5.3 per cent was the lowest in 29 quarters. Early indications are that activity levels continued to be slow during Q1 of 2012-13, with industrial growth stagnating, slack persisting in investment activity and consumption decelerating.

I.9 The Reserve Bank had gradually tightened monetary policy over last two years through 13 policy rate hikes that began in March 2010 and continued till October 2011, raising operational policy rates by 525 basis points (bps) from 3.25 to 8.5 per cent. It also hiked the Cash Reserve Ratio (CRR) twice, increasing it by 100 bps from 5 to 6 per cent of NDTL. Given these measures, there has been a perception that the Reserve Bank's monetary tightening has been predominantly behind the growth slowdown. In this context, there are two important factors to be considered. First, the initial rounds of increase were more in the nature of normalisation of policy from its crisis-driven excessive accommodative stance. Such normalisation could not have had an adverse impact on growth. Second, even at the current level of the policy rate, the real effective lending rates of banks are relatively lower in comparison with their pre-crisis levels. This highlights the fact that policy rates alone cannot explain the sharp growth slowdown observed in the last few quarters.

I.10 An exercise undertaken by the Reserve Bank to calculate Weighted Average Lending Rate (WALR) of scheduled commercial banks using the accounts-level data from Basic Statistical Returns (BSR) suggests that this effective lending rate in nominal terms increased during 2011-12 in response to monetary tightening. Preliminary data suggests that the WALR increased to 12.7 per cent, which was slightly higher than the average of 12.4 per cent in the pre-crisis period. Nominal rates had fallen in the post-crisis period before hardening in 2011-12. Real (net of inflation) WALR also increased moderately to about 3.8 per cent in 2011-12, but remained lower than the average of about 7.0 per cent in the pre-crisis period of 2003-04 to 2007-08, when an investment boom took place. The fall in real lending rates in post-crisis period is even sharper if GDP deflators are used to calculate inflation instead of WPI. The fact is that real lending rates have secularly declined since 2003-04. During this period, investment boomed initially, but stalled in recent years even though real rates continued to decline.

I.11 Interest rates are only one of the many factors in an investment decisions. These decisions in any case depend on interest rate view over several cycles. Interest rates increased during 2011-12 and may have impacted investment, but they are clearly not the primary reason for the downturn. The decline in investment started earlier in H2 of 2010-11 for reasons that were linked to global uncertainties, structural constraints, loss of pro-reform policy momentum, persistent inflation and increasing business uncertainties.

I.12 Growth had decelerated in the Indian economy through successive quarters of 2011-12, dropping from 9.2 per cent in Q4 of 2010-11 to 5.3 per cent in Q4 of 2011-12. This steep 3.8 percentage point drop did prompt the Reserve Bank to shift its policy stance by first pausing and then front-loading the cut in the repo rate by 50 bps in April 2012.

I.13 Monetary policy is framed on several considerations of which inflation (the pace at which general level of prices changes) and growth (the pace at which national output increases) are the two main ones. Headline inflation was running at 9-10 per cent rate in each of the first eight months of 2011-12 – way above the Reserve Bank's comfort-level of 4-5 per cent. Thus, the inflation gap (actual less intended level of inflation) far exceeded the output gap (actual less potential output). While these gaps cannot mechanically determine the policy rate setting, they constitute an important consideration in calibrating monetary policy response. Any premature easing would have caused inflation risks to rise thereby adversely affecting growth over the medium-term.

I.14 In this context, it is important to appreciate as to what monetary policy can or cannot do. First, monetary policy can have a strong long-run impact on inflation, but can influence output in a more limited way by nudging growth towards potential when growth operates below or above potential. Importantly, monetary policy cannot bring about permanent or long-run changes in the levels of output, which are mainly driven by technology, productivity changes and fiscal policy, through its impact on thrift and investment behaviour.

I.15 Second, the adverse welfare consequences of high and persistent inflation are large. Slowdown does raise unemployment and lowers income and consumption, especially of those who lose jobs. In a country like India, business cycle fluctuations that cause output and job losses are more pronounced in organised than unorganised sector and impacts agricultural output relatively less. However, a rise in inflation generally lowers consumption across-the-board in varying degrees. It acts like a regressive tax and hurts the poor the most as they are virtually unhedged against inflation.

I.16 Since the April 2012 policy, the growth outlook has turned weaker, while the inflation path moved slightly higher. While core inflationary pressures remained low, they have not fallen commensurate to the growth slowdown. On the other hand, food inflation pressures have re-emerged and are likely to be exacerbated by drought conditions following the unsatisfactory monsoon so far. Consequently, monetary policy will need to be carefully calibrated to the evolving growth-inflation dynamics.

Fiscal consolidation is needed to sustain growth and reduce inflation

I.17 After an impressive period of fiscal consolidation during 2002-03 to 2007-08, there has been a marked deterioration in the fiscal position. The gross fiscal deficit (GFD)/GDP ratio that dropped from 5.9 per cent in 2002-03 to 2.5 per cent in 2007-08 is back at almost the same level. The improvement in revenue and primary deficits have been more than reversed. India's fiscal deficit has widened both structurally and cyclically. On the external front, the CAD on the balance of payment side has averaged about 3.0 per cent during 2008-09 to 2011-12 after a marginal surplus on current account on an average basis during 2002-03 to 2007-08. The deterioration partly reflects the impact of wider fiscal deficits.

I.18 The wide fiscal deficit along with the wide CAD is symptomatic of macroeconomic deterioration. These have also dented India's relative attractiveness in the eyes of global investors and prompted some sovereign rating agencies to put India on a watch list for a possible sovereign rating downgrade. In this backdrop, it is important to give priority to the pending subsidies and tax reforms in India, so that the fiscal position gets structurally strengthened and it is also possible to better withstand cyclical downturns.

I.19 There are two main reasons for deterioration in India's fiscal deficits. First, expenditures on subsidies have risen from 1.3 per cent of GDP in 2005-06 to 2.4 per cent of GDP in 2011-12. Revenue constraints make it impossible to finance them in a sustainable manner. Second, resource mobilisation by the government has been rather insufficient with low tax/GDP ratio, poor non-tax revenue mobilisations and under-achieved disinvestment targets. Also, the fiscal stimulus through tax cuts in the aftermath of the 2008 financial crisis were prolonged and were rolled back only partially. There has been a structural as well as cyclical dimension to the rise in fiscal deficits in India. Stalled tax reforms have made it difficult to put fiscal consolidation back on rails after the significant gains made prior to the global financial crisis got substantially reversed.

I.20 As part of the tax reform agenda, the Government of India had envisaged introducing Direct Tax Code (DTC) and the Goods and Services Tax (GST) in the past few years. However, these reforms have been delayed and could not be carried out even as part of the 2012-13 union budget. This has been a setback for fiscal consolidation, even though some of the tax measures contemplated as part of these reforms have already been effected over the past two years to enable a smooth transition to the new tax regimes.

I.21 As per the study undertaken by the NCAER for the Thirteenth Finance Commission (ThFC), the implementation of comprehensive GST will increase India's GDP by about 0.9-1.7 per cent. Higher GDP would widen the tax base and improve tax revenues. In this context, while the shift towards 'negative list' services tax regime is a positive move, the time lag to phase in GST needs to be minimised so that cascading of taxation is avoided, and a seamless GST for Centre and States establishes a proper input-output network of indirect taxes.

I.22 Tax reforms also need to encompass a clear policy regime on measures like GAAR (General Anti Avoidance Rule) that has impacted investors' confidence. In this context, the recently released draft guidelines on GAAR are being examined by a committee and are expected to be finalised after widespread consultation with all stakeholders. Bringing about greater clarity in taxation of international capital flows would facilitate in financing the current account deficit.

I.23 There is a need to ensure that these legislations are quickly put in place to support resource raising efforts with a view to create fiscal space for financing of initiatives relating to inclusive growth. Such tax reforms are a positive sum game and would improve fiscal positions of both Centre and States.

Maintaining asset quality is important to financial stability

I.24 The deterioration in asset quality of the banks emerged as a concern within and outside the Reserve Bank during 2011-12. In any economic downturn, asset quality gets impacted and India was no exception to this. Asset quality deterioration during 2011-12 was particularly significant in the case of public sector banks. The gross Non-performing Assets (NPAs) of the public sector banks increased to 3.2 per cent of gross advances at the end of 2011-12 from 2.3 per cent at the end of 2010-11. In net terms, their ratio went up to 1.5 per cent from 1.0 per cent over the same period. While the NPA levels are still low by historical trends or cross-country comparison, the restructured standard advances in the PSBs increased to 5.7 per cent of gross advances by at the end of 2011-12 from 4.2 per cent a year ago.

I.25 The slippage ratio increased and recovery slowed down, reflecting the stress arising in some sectors such as aviation and power. Deterioration in macroeconomic conditions put added pressures on asset quality. While some of these changes reflect the NPA cycle that generally tracks economic cycle, the sector-specific issues that include management and industrial relation issues need to be resolved. There has also been a significant rise in restructuring of loans during the year. Several firms opted for corporate debt restructuring. Restructuring increased substantially during Q4 of 2011-12, taking the restructured loans at the end of 2011-12 to about 5 per cent of the loan book of the scheduled commercial banks (SCBs), up from 3.9 per cent a year ago. Aviation, state electricity boards (SEBs), textiles, telecom, shipping, power and steel were amongst the sectors that reported stress contributing to the restructuring.

I.26 However, the increasing non-performing assets and restructuring of loans are not a systemic issue. While, some of strength of the bank balance sheets may have eroded, they are in line with the movement in the business cycles that have occurred before. The balance sheets are far from becoming fragile. The CRAR of the SCBs at the end of 2011-12 was 14.1 per cent, way above the prescribed 9 per cent norms and only marginally less than the 14.2 a year ago. Core CRAR, however, increased to 10.3 per cent at the end of 2011-12 from 10.0 per cent in 2010-11.

I.27 A series of stress tests carried out to study the impact of various adverse macro-financial shocks on the health of banks showed that the banking system remained resilient even under stress scenarios. For instance if macro-stress builds up during 2012-13 with growth falling to below 6 per cent, inflation remaining above 9 per cent and GFD/GDP ratio rising to 6.5 per cent in 2012-13, gross NPA ratios for the SCBs as a whole is expected to increase to 3.7-4.1 per cent at the end of the year from 2.9 at the end of the previous year. Their CRAR is expected to fall to 12.5 per cent from 14.1 per cent. An assessment of the stability of the banking system conducted through a series of banking stability measures did indicate that distress dependencies amongst banks had increased in recent years but remained well below the levels observed during the global financial crisis in 2008-09. This was earlier documented in the Financial Stability Report of June 2012 and reflects the collective assessment of the Sub Committee of the Financial Stability and Development Council (FSDC).

I.28 Keeping in view the increasing incidence of restructuring and for reviewing the guidelines in the light of experience gained, a Working Group (Chairperson: Shri B. Mahapatra) was constituted by the Reserve Bank. The group has recommended doing away with regulatory forbearance regarding asset classification, provisioning and capital adequacy on restructuring of loans and advances gradually over the two-year period. It has recommended increasing the provisioning requirement on stock of restructured loans from existing 2 per cent to 5 per cent in a phased manner over the two-year period along with the 5 per cent provisioning requirements on all newly restructured loans. It has also suggested increase in promoters' contribution to at least 15 per cent of the diminution in fair value of the restructured account or 2 per cent of the restructured debt, whichever is higher. A principle of higher amount of promoters' sacrifice in case of restructuring of large exposures under CDR mechanism may bring about an incentive-compatible mechanism for lending discipline. While the final change in the regulatory regime will be made after further consultative process in August 2012, there is a clear intent on the part of the Reserve Bank to bring about an asset classification regime that does not allow banking fragilities to build up in the economic downturn. While the deterioration in asset quality during 2011-12 has been partly due to cyclical downturn, inadequate credit writing standards as well as weak credit administration has also played a role. The banks need to upgrade their systems to prevent slippages and improve post-sanction recovery process.

PROSPECTS FOR 2012-13

Growth Outlook for 2012-13

I.29 The growth outlook for 2012-13 remains weak as combination of global and domestic macro-economic factors that slowed down growth in the preceding year have persisted and show no signs of getting resolved. Globally, the sovereign and bank debt overhang is still keeping the financial markets under stress. The global trade outlook has deteriorated as growth in emerging markets is slowing down in addition to recession taking roots in euro area and US also headed for a slower growth.

I.30 On the domestic front, macro-economic conditions are unlikely to improve in near term as a spell of policy stasis, structural and cyclical problems have combined to slow down the economy. Growth is slowing down, while inflation remains sticky at above comfort levels. However, the Government in August 2012, promised to take several steps to address the macro-economic weakness. These would include, the return to path of fiscal consolidation, bringing in a clear and stable tax regime, encourage saving and investment, including foreign investments and work towards generating supply-side responses to lower inflation. Key decisions to put fiscal consolidation back on track such as hikes in administered fuel prices, slashing of other subsidies and introduction of Goods and Service Tax (GST) have been delayed and there is urgency to quickly move on the indicated lines to avert further deepening of problems. As these steps materialise, growth could gradually start improving later this year and trend growth can be restored by next year. At the current juncture there is no scope for complacency as fiscal slippage is likely during 2012-13 and CAD is likely to stay above sustainable level. With fluid situation for the global economy, macro risks from twin deficits remain large and need to be addressed forthwith.

I.31 Structural factors that are impeding growth remain unaddressed. Mining activity continues be stalled in absence of a streamlined regulatory and environmental framework. While growth in the interim may have suffered as a result of attempt at legal and environmental enforcement, ultimately an incentive-compatible framework for business that penalises fraud and encourages ethical practices while ensuring fair return alone can provide a conducive investment climate. Somewhat similar problems also prevail in telecom space. New power sector investments are falling as coal linkage and pricing issues are yet to be satisfactorily resolved and State Electricity Board (SEB) losses are large. Road projects are confronting multiple issues that include land acquisition problems as well as financing constraints for overleveraged road developers. As a result, road tendering has nearly stalled during Q1 of 2012-13 after a record pace of project tendering in 2011-12. These issues need to be quickly resolved while keeping lending discipline for banks.

I.32 Newer uncertainties for growth in 2012-13 have emerged from the unsatisfactory progress of monsoon so far which is likely to result in a contraction in foodgrains output during 2012-13. Despite the recent revival, cumulative rainfall up to August 16, 2012 was 16 per cent deficient. The Reserve Bank's production weighted rainfall index (PRN) showed an even higher deficit of 21 per cent. The spatial pattern of monsoon suggests that output losses could be substantial for coarse cereals and pulses, While this year the drought conditions in parts of country are marginally less severe than that during the 2009 drought, the monsoon has been unsatisfactory to a degree that has dampened the prospects for agriculture during

2012-13. During 2009-10, *Rabi* crop reached record levels, while the *Rabi* prospects this year remain uncertain and would depend crucially on September rains that will determine the soil moisture content and the reservoir levels.

I.33 Growth during the year is likely to stay below potential for the second consecutive year. The Reserve Bank in its First Quarter Review of Monetary Policy on July 31, 2012, revised downwards its growth projection for 2012-13 to 6.5 per cent from 7.3 per cent. The downward revision mainly reflects drought impact on agricultural output and contraction in IIP during Q1 of 2012-13. Given the greater integration of the Indian economy with global economy, decelerating global growth and trade volumes will adversely impact India's industry and services sector growth. In addition, the lagged impact of weak industrial growth is likely to weigh on services sector growth.

I.34 The key question, therefore, is: what can stimulate a recovery? In absence of signs of global conditions improving, the burden of adjustment would have to be borne by domestic policies. Structural impediments impacting business confidence need to be addressed immediately. This is particularly true of the mining and infrastructure sectors. With limited fiscal and monetary space available to provide a direct stimulus to domestic growth, an expenditure switching policy is needed that reduces government's revenue spending by cutting subsidies and using the resources so released to step up public capital expenditures. Such an action would also provide some space for monetary policy, but, importantly, lower interest rates alone are unlikely to jumpstart the investment cycle. Fast-tracking of infrastructure projects and pending regulatory clearances will help to boost investments. The Government has initiated some steps to augment the production potential of core sectors, in particular mining, in the recent period. However, a lot more needs to be done to boost the performance of core industries and lead revival of industrial growth.

Inflation Outlook for 2012-13

I.35 The inflation outlook for 2012-13 remains better than the previous year, though the inflation trajectory could remain sticky. Headline inflation averaged 7.3 per cent during April-July 2012, lower than the 8.9 per cent average for 2011-12. After dropping moderately in December 2011, headline inflation has neither risen nor fallen further in a perceptible manner. The Reserve Bank's proxy for core inflation, non-food manufacturing inflation, averaged 7.8 per cent in the first three quarters of 2011-12 but dropped noticeably to 5.9 per cent in the last quarter. It has now dropped further and averaged 5.0 per cent in Q1 of 2012-13, though it showed some uptick in July 2012 and remained above its decade average in the 2000s. While persistence of inflation is still worrisome, some relief has been provided by the decline in the recent period.

I.36 The Reserve Bank, in its First Quarter Review of Monetary Policy on July 31, 2012, revised upwards its baseline projection for headline inflation in March 2013 to 7.0 per cent from 6.5 per cent factoring in the upside risks to inflation. Earlier projection was based on the assumption of normal monsoon that has not materialised. Also, the moderation in non-food manufactured product inflation has not been commensurate with moderation in growth. Persistence of inflation, even as growth is slowing, has emerged as a major policy challenge.

I.37 Inflation control remains the cornerstone of monetary policy as upside risk to inflation remain. This is largely due to unsatisfactory monsoon, large upward revision in MSPs on back of cost escalation (averaging 26 per cent for *kharif*) and exchange rate depreciation during Q1 of 2012-13. Latest assessment suggests that there could be considerable upside pressure on prices of pulses. Some of this is already in evidence. Except for Myanmar, pulses crop has failed globally and options for imports are rather limited. Pressures to some extent can also emanate in case of edible oils, though soyabean crop can substantially offset the groundnut shortfall. Risks to global commodity prices that had fallen in Q1 of 2012-13 also remain. The prevailing drought in the parts of US, Eurasia and Australia may add to price pressures on food in the global markets. Pass-through from moderation in global commodity prices to domestic inflation has in any case been partially offset by rupee deprecation.

I.38 Other upside risks arise from suppressed inflation in energy, especially diesel, electricity, coal and fertiliser prices that need to be adjusted upwards. The path of inflation could thus be impacted by the timing and magnitude of administered price revisions, though it must be emphasised that such adjustments have become necessary to reduce pressure on medium-term inflation from an expansionary fiscal policy. Continued pressure from wages and the structural nature of protein inflation could keep inflation high even with moderation in growth.

I.39 So while inflation risks in 2012-13 are on the upside, there is a need to distinguish between temporary and permanent supply shocks. Structural shocks evident in inflation emanating from protein food, oil and some commodities require appropriate short and medium-term responses from the supply side. However, notwithstanding the cause, persistent inflation, if left unchecked, could unhinge inflation expectations and lead to eventual generalisation of inflation as had happened in Q4 of 2010-11. Furthermore, demand pressures emanating from high rural wages and growing corporate staff costs would need to be factored in. In such situation, close vigil on inflation would be necessary during 2012-13 to prevent re-emergence of inflationary pressures.

Need to address twin deficits to contain risk to macro-financial stability

I.40 The emergence of twin deficits during 2011-12 was a major cause for macro-economic weakness. Current assessment suggest that they are likely to stay wide in 2012-13 in absence of sufficient policy response and no improvement in business cycle conditions.

I.41 With growth remaining slow, budgetary targets are at risk. On the receipts side, shortfall in indirect tax revenue is possible if growth remains low. With decline in corporate earnings, non-tax revenues from the earnings of public sector units (PSUs) could also fall short of the target. It would be hard to meet the divestment target in current market conditions. More importantly, expenditure overshooting arising from under-provision of petroleum subsidies is likely to put fiscal position under pressure. Consequently, some level of fiscal slippage may be unavoidable. In fact, estimates suggest that if no revision is made in administered fuel prices, this slippage may turn out to be large at the current level of crude prices (at about 0.4 per cent of GDP on this account alone). The fiscal policy for 2012-13 as announced in the Union budget directionally aims at aiding the growth revival through higher capital outlays and reducing key deficits. However, in order to make space for private credit to help investment cycle picks up a much stronger switch to capital expenditures is necessary without further increasing the deficits.

I.42 Restraining deficits is important as the budget mathematics still leaves fiscal marksmanship difficult. The focus of the rule-based consolidation, which seeks to achieve a correction of one percentage point in RD-GDP ratio and 0.8 percentage point in GFD-GDP ratio in 2012-13 (BE) critically depends on revenue augmentation through widening and rationalisation of indirect tax structure. While the Government has announced its intent to cap the expenditure on subsides to below 2 per cent of GDP in 2012-13, credible policy action without any further delay would be necessary to achieve this.

I.43 Adherence to expenditure control measures on the subsidy front would be challenging if administered fuel price hikes are delayed. The consequent subsidy burden on the Government could crowd-out public investment at a time when reviving investment, both public and private, is a critical imperative. In addition, the absence of pass-through from international crude oil prices to domestic prices would prevent the much needed adjustment in aggregate demand. This could then spill over to higher inflation and wider CAD.

I.44 The Government has promised to unveil steps for fiscal consolidation soon. It has asked three reputed fiscal experts to help formulate plans for this within weeks and promised to make adjustments both on revenue and expenditure side, while sharing fiscal correction burden progressively in relation to income classes. A clearer and more stable tax regime with non-adversarial tax administration is also being worked upon. This would include a fair mechanism for dispute resolution. GAAR legal provisions and guidelines are being re-examined and taxation for IT sector and Development Centres are also being reviewed. While these steps should help improve the fiscal regime, there is an urgent need to evolve a political consensus on GST and DTC as part of the tax reforms and also cut subsidies in order to put the fiscal regime on a firmer footing.

I.45 CAD had widened to unsustainable levels in 2011-12 as it reached historical high of 4.2 per cent of GDP. This was mainly due to high imports of oil and gold. While growth in exports is likely to be lower in 2012-13 due to slowdown projected in the global trade volume, the trend in imports will be contingent on exchange rate pass-through and upon the pace of growth in domestic economy and trend in international commodity prices, particularly oil. Furthermore, measures taken to curb gold imports may have positive influence on trade balance.

I.46 Even though merchandise trade balance in Q1 of 2012-13 narrowed, trends in services trade in Q1 of 2012-13 are disconcerting. Preliminary estimates for Q1 of 2012-13 show services exports at US$33.4 billion, thus contracting 2 per cent y-o-y. Services imports at US$20.5 billion, increased by 16 per cent. In net terms, services exports at around US$ 12.9 billion in Q1 of 2012-13 were lower by 22 per cent as compared with those in Q1 of 2011-12. This indicates that CAD risks are maintained in 2012-13. Software exports are likely to moderate as global IT spending is expected to be lower. Major software exporters have already made steep downward revisions in their guidance on expected revenues during the year. Overall, CAD-GDP ratio may not correct significantly in 2012-13 unless there is substantial improvement in global economic conditions and domestic policy response.

I.47 With a lower growth, the sustainable level of CAD is now assessed at around 2.5 per cent of GDP. For minimising the possibility of external shocks further disrupting India's growth sustainability over next few years it is important not only to focus on financing of CAD, but also on compressing CAD to lower manageable levels. Otherwise, there are risks to CAD from both domestic and external events. In recent period, CAD has been managed by improving debt inflows. However, this has long-term costs for debt sustainability and increases refinancing risk over time. Therefore, there is an urgent need to step up non-debt creating inflows, especially in form of FDI. While there are pros and cons of greater FDI opening, the balance of risks overwhelmingly suggests the need to augment such inflows. With appropriate regulation and conditions, the negative fallout of foreign investments can be minimised so that net gains can accrue. This should be seen as part of the process of managing globalisation and reaping gains from it. India has become a far more open economy than ever. It is often not realised that India's exports and imports, including services trade now works out to over 55 per cent of GDP. This is much higher than the same indicator for the US.

MEDIUM-TERM CHALLENGES FOR THE INDIAN ECONOMY

Preserving India's growth story through revival of infrastructure investments

I.48 India's growth story in recent past has been substantially driven by large infrastructure investments. Foreign direct investments in this sector have not been very large, but large investments, both in public and private sectors during last 10-years catapulted India to the rank of second fastest growing economy in the world after China. Yet, over the past year or two, infrastructure sector has reached a critical point of entanglement.

I.49 New investments have slowed down substantially and existing investments are at risk with elongated gestations and input supply shortages affecting viabilities of projects going on-stream. Reserve Bank's collation from banks and financial institutions show that envisaged total fixed investment by large firms in new projects which were sanctioned financial assistance during 2011-12 dropped by 46 per cent to about ₹2.1 trillion from ₹3.9 trillion a year ago. This drop was led by infrastructure and metals. Envisaged investment in infrastructure declined by 52 per cent to ₹1.0 trillion from ₹2.2 trillion in the previous year, with power and telecom accounting for most of this fall. Investment in telecom sector has dried up, while that in road, ports and airports has also decelerated sharply. More than half of the envisaged corporate fixed investment in large projects has been coming from infrastructure since 2008-09. Its share, however, dropped to 48.6 per cent in 2011-12 from 54.8 per cent in 2010-11. This has had a ripple effect on the economy. Order books of capital goods producing firms have declined as the size of the pie has reduced. Their share in the pie has also gone down as they have been outcompeted by cheaper imports by foreign firms.

I.50 In addition, investment climate in power sector has been affected by rising losses of public sector utilities. Though power tariffs has been raised by many SEBs over last two years and several other steps have been initiated to improve the financial health of the SEBs, drought in many parts of the country could put added pressure on their profit line during 2012-13. A large amount of bank finance getting locked in this sector has raised risks that a significant portion of these loans may require to be restructured and may even become non-performing. The exposure of banks to power sector is about ₹3.3 trillion as per sector-wise deployment of credit obtained from 47 scheduled commercial banks that account for 95 per cent of total non-food credit.

I.51 Lower coal production and supply shortages has emerged as a major bottleneck in infrastructure sector. As much as 54 GW of new power capacity was created during 11th FYP and another 60-75 GW of capacity may be planned during 12th FYP backed in part by Ultra Mega Power Projects (UMPPs). A large part of this new capacity is facing coal linkage issues. As a result, these investments are at risk due to coal shortages (see also Box II.6). A significant proportion of new capacity is without Power Purchase Agreements (PPAs). Besides coal shortages can affect a large chunk of power capacities in absence of Fuel Supply Agreements (FSAs). The current state is the result of inadequate planning and coordination between power and coal sectors, as also slow execution of coal projects. However, steps are now on anvil to resolve the problems that have impacted the coal and power sectors. Most of the distribution companies have raised power tariff over last one year. Even though in many cases the extent of revision remains below what is necessary, it would provide a positive momentum as the regulators are now seen to be active. Contemplated revisions in FSA structures and coal pricing pooling mechanism could also help, but all pending issues in respect of proposed new FSAs need to be resolved without any further delay. Private sector has added to the shortages by a dismal record of producing coal out of the mining rights given to them. Therefore, unused mining rights need to attract deterrent penalties. Coal production projections for the 11th Five Year Plan had to be revised downward due to delays in obtaining clearances, land acquisitions, rehabilitation and law and order problem. Although India has large coal reserves, demand for coal is outpacing its domestic availability substantially. Therefore, there is a need to resolve coal block auction issues in a fast-track manner, so that green growth objectives can be pursued in a manner consistent with economy's needs.

I.52 It is an anomaly that India with proven coal reserves of 114 billion tonnes has to import about 70 million tonnes of coal. A major investment initiative in India's mining sector is necessary. Steps to attract FDI in this sector would be helpful in this context. A careful balancing of environmental and growth needs would be necessary. What are needed are quick time-bound decisions under a transparent framework and not necessarily quick clearances. Provisional clearances do not often help and where necessary must be accompanied by easily monitored conditions that can be fulfilled in a short span. There is a need to make doing business easy by adopting models like the one in Singapore, where multiple agencies/Ministries sit together to quickly give its decision clearing investment projects. The onus for such clearance clearly rests with the bureaucratic machinery. Businesses also need to rejig their strategies that aim at operating in a more competitive environment earning normal profits within the legal and environmental framework and not try to exploit rules and weak regulation to its advantage at cost of integrity.

I.53 Apart from capital expenditure slowdown in the power sector, investment in 2012-13 is also at risk from the falling interest in PPP projects in the road sector. National Highways Authority of India (NHAI) undertook a record road tendering during 2011-12, awarding contracts for 6,491 kms of road length; 28 per cent higher than in previous year (see also Chart II.10). Estimated spending on NHAI projects were also higher by 33 per cent at ₹362 billion. However, the road tendering activity has suffered significantly during Q1 of 2012-13.

I.54 Road projects have slowed down due to issues in land acquisition and problems with legal, procedural and environmental clearances. More lately, availability of finance has emerged as an added constraint. Financial conditions have tightened as road construction firms are already leveraged and are unable to raise more debt in absence of fresh equity. In current market conditions these firms are unable to raise new equity. Credit to road sector shows a deceleration in Q1 of 2012-13. A significant part of the panned investment during 2012-13 would materialise even in adverse condition as NHAI is planning to award tenders for 3,000 kms of road construction on the basis of Engineering, Procurement, Construction (EPC) contracts under which the builder procures material and does construction and is paid for the costs. However, steps would be needed to preserve predominance of PPP mode of road investments.

I.55 In respect of infrastructure financing during the year 2011-12, gross bank credit to infrastructure outstanding as of April 2012 was ₹6.2 trillion. However, the flow of bank credit to infrastructure has decelerated. Data on sector-wise gross deployment of bank credit shows that its year-on-year growth has declined to 14 per cent for 2011-12 as compared to 38 per cent for 2010-11.

I.56 From a macroeconomic perspective, India faces a huge energy deficit at present which is constraining its growth process. An estimated 40 per cent of India's energy requirements would need to be met through imports during the 12th Plan. As such, there is a need to expand domestic production in the critical sub sectors such as petroleum, natural gas and coal. Equally important is to migrate towards deregulation of pricing in the energy sector so as to rationalise and moderate demand and improve energy efficiency. Furthermore, alternative sources of energy would have to be developed for bridging the demand-supply gap and work towards ensuring energy security in the Indian economy.

I.57 The projected investment requirements for infrastructure at US$ 1 trillion for the 12th Plan present a formidable challenge in view of limited fiscal space available in the public sector. The Approach Paper for the 12th Plan envisages that about half of the investment requirements of infrastructure would have to be met through funding from the private sector. A notable concern, however, has been a lack of private sector participation in certain key sectors such as railways, irrigation, water supply and sanitation, ports and power distribution. There is also a need to create a conducive environment for private sector participation with a transparent and credible regulatory mechanism. In this regard, there is a need to identify the hurdles and weaknesses in regulatory, financing, and incentive structure (both taxation and debt) and project implementation related issues that may be inhibiting.

Strengthening banking soundness through Basel III

I.58 During the year 2011-12, the Reserve Bank made significant strides towards implementation of Basel III norms that is intended to enhance the resilience of bank and strengthen banking system soundness further. The Basel III framework in India would be consistent with the new global standards. The Basel Committee on Banking Supervision that was first set up in 1974 by a group of central bank Governors from 10 countries have been providing such standards since 1988 when the Basel I Accord was signed. In 2004, a new accord know as Basel II was suggested with a view to make capital standards more risk sensitive.

I.59 To address the lesson of the 2008 global financial crisis, the Basel committee has introduced comprehensive reforms package through the Basel III framework to address both firm-specific and broader systemic risk. Basel III essentially enhances the regulatory framework introduced by the Basel II at the level of individual banks. It also sets up a macro-prudential overlay to limit systemic risk. The measures relate to enhancing the quality and quantity of capital, liquidity risk management, valuation practices dealing with procyclicality issues and dealing with systemically important banks. It also covers resolution mechanism, compensation practices, stress testing, disclosures to enhance transparency and reducing systemic risk in derivative markets by moving OTC derivatives to central clearing and settlement mechanisms *etc*. The Reserve Bank issued the guidelines on Basel III capital regulation, first in the draft form in December 2011 and then in its final form in May 2012. Banks in India are to begin implementation of these guidelines beginning January 1, 2013 and complete it in a phased manner by March 31, 2018.

I.60 In the guidelines, the minimum capital requirements have been kept one percentage above the norms laid down by the Basel Committee. Besides this, a few rules have also been kept tighter than the norms suggested by the Basel Committee.

I.61 As a prudent measure, the Reserve Bank has always prescribed 1 per cent higher capital requirement compared to 8 per cent prescribed by the Basel Committee under Basel I / Basel II capital adequacy framework. The higher prescription has served Indian banking system well over the years. The higher prescription is essentially on account of the fact that the Basel Committee norms are only the minimum norms. A higher norms covers up the possible inadequacies in the capital allocation process and model risks in banks. It may be mentioned that for similar reasons, several other jurisdictions have also proposed higher capital adequacy requirements than the minimum prescribed by the Basel Committee. Additional capital requirements over and above Basel minimum have had positive externalities. It has been noted by credit rating agencies as being rating positive and are expected to help banks access funds more easily in the markets. The higher prescriptions are not expected to put additional pressure on banks as globally banks have in fact, always operated at significantly higher level of capital adequacy than the prescribed minimum.

I.62 The broad level estimates suggest that in order to achieve full Basel III implementation by March 31, 2018, the public sector banks (PSBs) would require common equity to the tune of ₹1.4–1.5 trillion on top of internal accruals, in addition to ₹2.65–2.75 trillion in form of non-equity capital. Similarly, major private sector banks would require common equity to the tune of ₹200-250 billion on top of internal accruals, in addition to and ₹500-600 billion in form of non-equity capital. These projections are based on the conservative assumption of uniform growth in Risk Weighted Assets of 20 per cent per annum individually for all banks and individual bank's assessment of internal accruals (in the range of 1.0-1.2 per cent of Risk Weighted Assets). It is important to mention that banks would have continued to require additional capital to meet Basel II capital ratios had Basel III capital ratios not been implemented. Therefore, in case of PSBs, the incremental equity requirement due to enhanced Basel III capital ratios is expected to be to the tune of ₹750-800 billion.

I.63 There have been some arguments whether the regulatory regime could be softer for public sector banks given the backstop they enjoy with the government which is the principal owner and stakeholder in such banks. However, from the regulatory standpoint, operating on the basis of such backstops and not on the basis of prudential standards would be detrimental of the financial system besides being unethical. The Reserve Bank is committed towards developing a level-playing regime for all banks irrespective of their ownership patterns.

I.64 Implementation of Basel III would be challenging but manageable. In this context, the observation of Mr. Jaime Caruana, General Manager, Bank for International Settlements is relevant. During his speech at CAFRAL/BIS Conference in November 2011, he stated that globally, banks have been able to improve their capital ratios, ahead of schedule and this without any noticeable impact on lending spreads or tightening of lending terms.

Financial Inclusion led Reserve Bank policies with a human face

I.65 With the growing dominance of market economy, the public perception about the Reserve Bank policies has been increasingly associated with how they are impacting interest rates and exchange rates as also the performance and health of the banking industry. There has been inadequate recognition of the fact that Reserve Bank is a multi-service central bank and has been discharging its responsibilities in a wide array of domains with a view to supporting long-run growth and enhancing welfare of the common man. In addition to its pursuit of inflation control that helps the poor the most, the human face of Reserve Bank is reflected in its policies in the area of rural credit and regulation of banks and non-bank financial intermediaries, foreign exchange regulation, currency management, payment and settlement system.

I.66 To impart a human face to the bank lending policies, the Reserve Bank has supported the directed lending route as an integral part of its bank lending policies. This has been mainly through the stipulation that banks must ensure that at least 40 per cent of their total advances go to the priority sectors. The prescription in respect of foreign banks was 32 per cent, but which has now been raised to 40 per cent in case the bank has twenty or more branches. The new stipulation is to be achieved over next five years. The priority sector lending (PSL) has improved the flow of credit to certain productive sectors of the economy that would otherwise have been crowded out of the bank credit market in presence of information asymmetries.

I.67 The Reserve Bank has faced criticism from extreme votaries of strong interventionist policies to promote financial inclusion and the detractors who argue that such directed lending leads to misallocation of resources. In practice, Reserve Bank has strived to ensure a balance between equity and efficiency considerations so that financial inclusion is furthered, but banks financial health is not hampered and its lending capacities are preserved.

I.68 Nothing represents the extent of human face of the banking than the progress it makes on the goal of financial inclusion. Financial inclusion was adopted as a formal agenda for Indian banking following the Report of the Committee on Financial Inclusion (Chairman: Dr. C. Rangarajan), 2008. The Report noted that 51 per cent of farmer households did not access credit, either from institutional or non-institutional sources. Further, despite the vast network of bank branches, only 27 per cent of total farm households were indebted to formal sources (of which one-third also borrow from informal sources). Access to formal institutional credit amongst farm households was as low as 4.1 per cent in North-Eastern, 18.2 per cent in Eastern and 22.4 per cent in Central Regions.

I.69 A World Bank study by Asli Demirguc-Kunt and Leora Klapper (April 2012) is revealing about the dismal state of financial inclusion world-wide and even more so in India. Providing an analysis from a newly developed Global Financial Inclusion Database (Global Findex), that is drawn from survey data covering 148 countries shows that only half of the world's population hold accounts with formal financial institutions and only 9 per cent have taken out new loans from a bank, credit union or microfinance institution in the past one year. This study also shows that India scores rather poorly on financial inclusion parameters than the global average. In India, only 35 per cent of people had formal accounts *versus* an average of 41 per cent in developing economies. India also scored poorly in respect of credit cards, outstanding mortgage, health insurance, adult origination of new loans and mobile banking.

I.70 In the recent years, the Reserve Bank has taken several initiatives to push financial inclusion high on the agenda of Indian banking. It required banks to provide no-frills accounts, tried to improve the outreach of Indian banking through the business facilitator and business correspondent (BC) models and set up the goal for banks to provide access to formal banking to all 74,414 villages with a population over 2000. In June 2012, the process was refined further by advising all banks to prepare road maps covering all unbanked villages with population of less than 2000 with banking services. Yet, the Reserve Bank's assessment is that financial inclusion remains a substantially unfinished agenda. This is also suggested by independent appraisals through analysis of the banking data, evaluation studies and outreach activities. Latest figures indicate that there are over 110,000 BCs employed, which is not a large number in context of the under banked villages that exist.

I.71 The Reserve Bank had adopted the ICT-based agent bank model through BCs for ensuring door step delivery of financial products and services since 2006. The list of eligible individuals/entities who can be engaged as BCs is being enlarged from time to time. For-profit companies have also been allowed to be engaged as BCs. The BC model has not been very effective in addressing financial inclusion needs. The model, by itself, cannot serve the financial inclusion objective. It cannot substitute the services and the customer confidence that the brick and mortar bank branches provide. Also, most BCs are not adequately trained in the use of technology, knowledge of bank products and processes and have not imbibed the customer service culture. There is a need for mainstreaming financial inclusion. To improve the access of the poor to banking, banks need to open branches to provide low-cost intermediation with simple structures, minimum infrastructure for operating small customer transactions and supporting up to 8-10 BCs at a reasonable distance of 2-3 kms. This will lead to efficiency in cash management, documentation and redressal of customer grievances.

I.72 Following the Reserve Bank directive in November 2005, no-frills accounts have been accepted by banks as one of the important pillars of financial inclusion. Such accounts opened with nil or very low minimum balance have the potential to effectively combat credit rationing and provide the much-needed finance to a large section of the under-privileged population. In order to further encourage such accounts, the Reserve Bank in August 2012 asked banks to rechristen these as 'Basic Savings Bank Deposit Account', with a view to remove the stigma attached to earlier name and to integrate them as part of basic baking services. It also issued specific guidelines to bring about uniformity on basic banking services across banks. It specifically removed altogether the requirement of any minimum balance and has asked banks to offer deposit and withdrawal of cash at bank branch as well as ATMs.

I.73 The number of no-frills accounts by banks had increased to 103 million by March 2012. However, over three-fourths of such accounts are dormant. This raises the question whether the blanket supply-side thrust to financial inclusion is workable? For financial inclusion to work, it is necessary to replace the bank or the service provider approach with customer-centric approach. As such, more work is necessary for effective strategy for implementation of the financial inclusion goals. The medium-term strategy for banks would need continue with a multi-facet approach with activities woven around linking of bank finance with Self Help Groups (SHGs) through MFIs or otherwise. BCs would need to be an integral part of the financial inclusion by banks and banks must ensure fair remuneration and help develop faith in these agents, but coexist, they cannot substitute but only complement banking infrastructure. Furthermore, banks need to actively leverage and develop delivery models that are technology driven. In doing so they must choose technology that can support up-scaling and customisation, as per individual requirements. BCs and SHGs can play a key role in developing customer-centric approach.

I.74 The task of financial inclusion is a colossal one. It cannot be outsourced to other layers even if they form important element of the strategy in place. These layers have to be integrated with mainstream banking. It is in banks' medium to long term interest to do so, as financial inclusion may be a short term pressure on banks profitability, but over the years could increase the size and scope of banking in India. It will add to the banks' revenue stream making it commercially viable.

II ECONOMIC REVIEW

The Indian economy's performance in 2011-12 was marked by slowing growth, high inflation and widening fiscal and current account gaps. The economy grew at its slowest pace in nine years with mining, manufacturing and construction dragging growth down. Weakening of both domestic and external demand contributed to the slowdown. Importantly, in spite of slowing growth, inflation stayed high for larger part of the year. In response, the Reserve Bank persisted with tightening till October 2011 and paused before easing in April 2012. Slowing growth, high inflation and widening twin deficits, along with global flight to safety amidst a deepening euro area crisis put pressures on the financial markets and the exchange rate during the year.

II.1.1 The Indian economy was one of the fastest growing economies in the post-crisis period. During 2011-12, however, there was continuous deceleration of economic activity in each of the four quarters which pushed the expansion of the economy to below potential, which is the maximum level of output that the economy can sustain without creating macroeconomic imbalances. There has been a deceleration in all sub-sectors of the economy, barring 'electricity, gas and water supply' and 'community, social and personal services'.

II.1.2 Growth slowed down due to multiple factors. One of the reasons was the persistence of inflation at a much higher level than the threshold for two successive years. Persistent and high inflation necessitated continued tightening of monetary policy. Recent research suggests that real interest (lending) rates explain only about one-third of GDP growth. As of March 2012, real weighted average lending rates, that have an inverse relationship with investment activity, were lower than they were in the pre-crisis period between 2003-04 and 2007-08, when investment boomed.

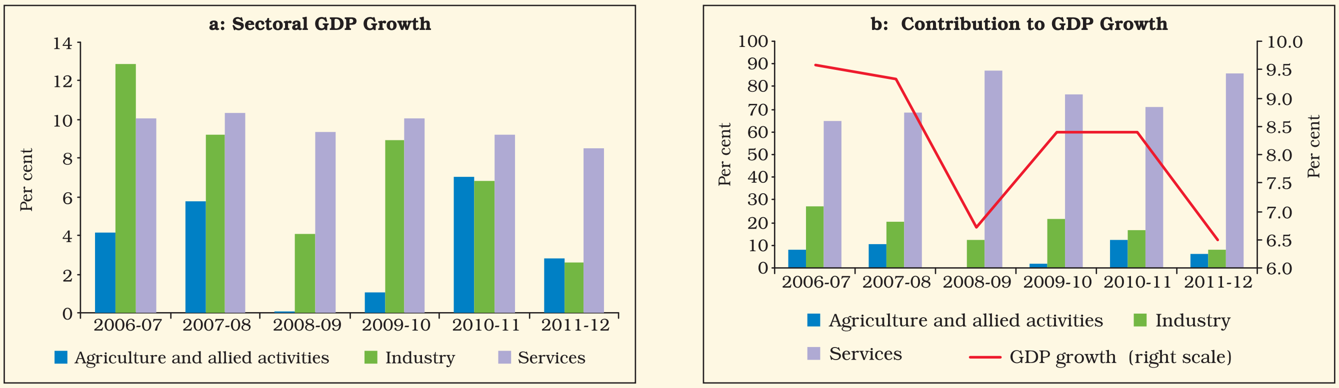
II.1.3 This suggests that non-monetary factors played a bigger role and accentuated the slowdown to beyond what was anticipated while tightening the monetary policy. Recession in the euro area and general uncertainty regarding the global economic climate chipped the external demand as well. Domestic policy uncertainties, governance and corruption issues amidst lack of political consensus on reforms led to a sharp deterioration in investment climate. Structural constraints emerged in key investment drivers in the infrastructure space – telecom, roads and power – which increased the disinflationary costs. High inflation kept aggregate demand and business confidence subdued.

II.1 THE REAL ECONOMY

Growth falters in 2011-12 after a sharp recovery in the previous two years

II.1.4 After a sharp recovery from the global financial crisis and two successive years of robust growth of 8.4 per cent, GDP growth decelerated sharply to a nine-year low of 6.5 per cent during 2011-12 (Appendix Table 1). The slowdown was reflected in all sectors of the economy but the

Chart II.1: GDP Growth



industrial sector suffered the sharpest deceleration (Appendix Table 2 and Chart II.1 a).

II.1.5 The slowdown in agriculture sector growth was on account of the base effect which dragged down its contribution to GDP growth by half (Chart II.1 b). In the case of industry, the sharp moderation in manufacturing sector growth along with decline in mining and quarrying output offset the improvement in 'electricity, gas and water supply' growth. The industrial sector's weighted percentage contribution to economic growth dropped to single digits, the first time in ten years. The moderation in services sector growth was led by sharp deceleration in 'construction' and 'trade, hotels, transport and communication'. Despite the moderation, the predominance of the services sector remains a unique feature of the overall growth story and the process of structural change in India (Box II.1).

Box II.1
Structural Change Index – A cross-country comparison

Structural transformation of an economy is considered to be both an outcome of as well as a pre-requisite for economic development. The most commonly observed structural change across countries, in line with increases in their real incomes over time, is the decline in the share of agriculture in GDP and corresponding increases in the shares of industry and then in services. The trend in the share of industry has, however, been observed to follow an inverted-U path particularly in developed countries, with a declining share observed in most countries around the middle of the twentieth century, irrespective of their initial conditions. Consequently, in the recent period, the share of the industrial sector in many countries has been found to be close to the level nearly two centuries earlier. The trend in the shares of agriculture and services has generally been monotonic.

The factors underlying structural change in economies operate both on the demand and the supply sides. The income elasticity of demand is the highest for services, followed by industrial products and agricultural goods. Hence, progressive increases in GDP typically result in the tapering of demand for agricultural products and increase in the demand for industrial goods and services. On the supply side, agricultural production faces constraints on account of a fixed factor of production (land) and consequently, the law of diminishing marginal returns sets in earlier and results in progressively lower contribution in GDP. In contrast, the greater scope for the use of capital and technology in the industrial and services sectors facilitates increased production in these sectors over time.

Structural Change Indices

The extent of structural change in economies could be measured using Structural Change Indices (SCIs). One such SCI, the Norm of Absolute Values (NAV), also known as the Michaely Index or Stoikov-Index (Cortuk and Singh, 2010), is:

$SCI = ½ \sum | x_{i,t} – x_{i,t-k} |$ where $x_{i,t}$ and $x_{i,t-k}$ represent i^{th} sector's share of total value added at time (t) and (t-k), respectively.

The SCI is bound between zero and 100, with zero representing no structural change and 100 indicating a complete reversal of structure. SCIs are sensitive to three important factors – the level of classification of the sectors (greater the granularity, higher would the index), the time period of the analysis (since the SCI compares sectoral shares at two time points), the price measure of output (current prices capture both price and volume changes over time).

(Contd....)

Cross-country Perspective

In order to measure the changing structural dynamics, the SCI is estimated for selected advanced and emerging market/developing countries for the period 1990 to 2009 using annual GDP data (Table 1).

Table 1: Cross Country Comparison of Structural Change

Country	Difference in Average Share between 1990-92 and 2007-09 (in percentage point)			SCI
	Agriculture	Industry	Services	
1	2	3	4	5
Australia	-1.6	-9.7	11.4	11.4
Brazil	-2.0	-10.8	12.8	12.8
China	-13.9	4.8	9.1	13.9
France	-1.7	-6.7	8.5	8.5
Germany	-0.5	-7.5	8.0	8.0
India*	**-11.4**	**1.8**	**9.6**	**11.4**
Japan	-0.9	-10.5	11.4	11.4
Korea	-5.4	-5.0	10.5	10.5
Russia	-8.3	-10.9	19.2	19.2
Sri Lanka	-13.7	3.9	9.8	13.7
South Africa	-1.1	-6.6	7.7	7.7
UK	-1.0	-10.1	11.1	11.1
US	-0.8	-5.7	6.6	6.6

*: Industry includes construction sector.

Note: Data on gross value added at factor cost at current US Dollar has been used.

Source: Estimated using data from the World Bank Development Indicators.

No clear pattern between SCI and level of development across countries is evident from Table 1. The extent of structural change in India over the period is similar to that in developed countries such as Australia, Japan and the UK, and to some extent, Korea. Countries such as Brazil, China and Sri Lanka had higher SCIs than India. Structural change in Russia was clearly substantially higher than that in any of the other economies.

Using the Central Statistics Office (CSO) data and the same methodology, the extent of structural change in India was found to be not very different in the pre-reform (1968-71 to 1987-90) and post-reform (1990-92 to 2009-11) periods. The SCIs were 13.6 and 13.2, respectively.

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Investment downturn accentuates demand slowdown[1]

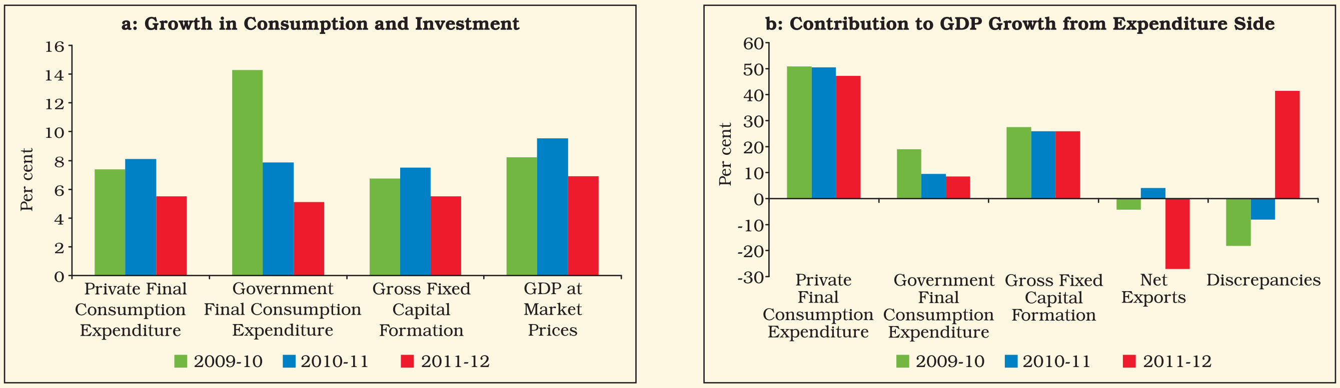
II.1.6 There was a sharp moderation in the growth rate of GDP at market prices from 9.6 per cent in 2010-11 to 6.9 per cent in 2011-12 on account of all-round deceleration in demand – consumption (both private and government), investment and external (net exports) (Chart II.2a).

II.1.7 Expenditure-side GDP data for Q4 of 2011-12 suggests that growth was 5.6 per cent and investment improved sequentially. The expenditure-side GDP data, however, have well known limitations that are also evident from the large and volatile pattern of discrepancies in the data. The contribution of ‘statistical discrepancy’ (*i.e.*, the difference between the estimates of GDP from the supply side and the sum of the estimates of the components of the expenditure side, adjusted for net indirect taxes) to the overall growth sharply increased to around 42 per cent in 2011-12 and exceeded the contribution of gross fixed capital formation (Chart II.2b).

II.1.8 The large and volatile discrepancies in the expenditure side GDP data co-exist with unreliable data on various components of aggregate demand. For instance, there is an incorrect representation of external demand as Q4 data estimates net exports as a positive figure. This is in contrast to the record current account deficit (CAD) posted during the quarter, as per data released by the Reserve Bank. Also, sufficient supplementary evidence exists to suggest that investment has slowed down. Information collected from phasing details of corporate projects sanctioned financial

[1] Despite well-known limitations, expenditure-side GDP data are being used as proxies for components of aggregate demand.

Chart II.2: Expenditure Side of GDP



assistance suggests that corporate fixed planned investment dropped sharply in H2 of 2010-11 and declined further in 2011-12. Anecdotal evidence supplements this view.

II.1.9 Capital goods production also contracted sharply, though this was partly on account of substitution by imported capital goods. Hence, investment decelerated faster than other components of domestic demand. Global uncertainties further worsened the investment climate and also slowed down growth through the net export channel.

Falling saving and investment rates may impact potential growth

II.1.10 There has been a decline in the average saving rate since 2008-09, led by a sharp decline in public sector saving rate that has not been offset by private savings (Appendix Table 3 and Table II.1). The reduction in the average public sector savings rate in the post-global crisis period largely reflects the impact of fiscal stimulus measures as well as the decline in the contribution of non-departmental enterprises. Average investment rate has also declined in the post-crisis period.

II.1.11 Preliminary estimates show that the net financial saving of the household sector declined further to 7.8 per cent of GDP at current market prices in 2011-12 from 9.3 per cent in the previous year and 12.2 per cent in 2009-10 (Chart II.3 and Appendix Table 4). The moderation in the net financial saving rate of the household sector during the year mainly reflected an absolute decline in small savings and slower growth in households' holdings of bank deposits, currency as well as life funds. At the same time, the persistence of inflation at a high average rate of about 9 per cent during 2011-12 further atrophied financial saving, as households attempted to stave off the downward pressure on their real consumption/lifestyle.

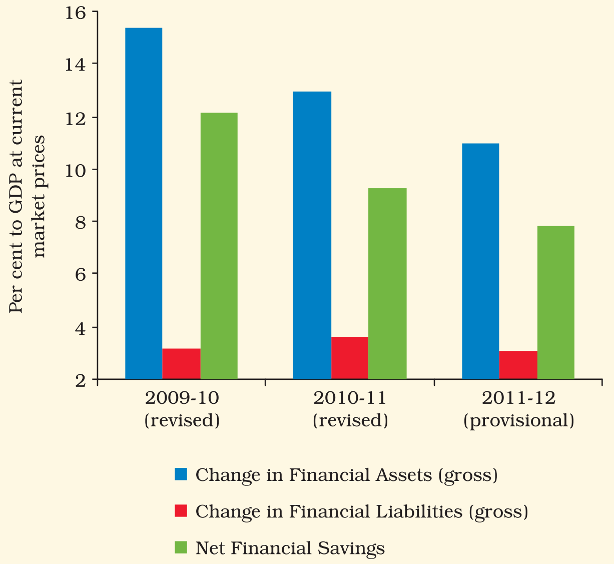
Table II.1: Savings and Investment Rate

(Per cent to GDP)

	Savings						Investment			
	Households			Private Corporate	Public Sector	Total	Households	Private Corporate	Public Sector	Total*
	Financial (Net)	Physical	Sub-Total							
1	2	3	4	5	6	7	8	9	10	11
2005-06 to 2007-08	11.6	11.4	23.0	8.3	3.7	35.0	11.4	15.1	8.4	34.9
2008-09 to 2010-11	11.0	12.9	23.9	7.8	0.9	32.7	12.9	12.0	9.1	34.1
Change	-0.6	1.5	0.9	-0.4	-2.7	-2.2	1.5	-3.1	0.8	-0.9

*: Exclusive of investment in valuables.

Chart II.3: Household Financial Savings



II.1.12 Furthermore, with real interest rates on bank deposits and instruments such as small savings remaining relatively low on account of the persistent high inflation, and the stock market adversely impacted by global developments, households seemed to have favoured investment in valuables, such as gold. In the post-global crisis period, valuables have increased from 1.3 per cent of GDP at current market prices in 2008-09 to 2.8 per cent in 2011-12; the share of valuables in investment (gross capital formation) has also increased from 3.7 per cent to 7.9 per cent, over this period. The apparent proclivity of households towards investment in valuables such as gold could have also impacted the pace of their investment in physical assets such as housing in 2011-12.

II.1.13 The trend of falling savings rate, particularly that of public sector savings, needs to be reversed for adequate resources to be available to support a high growth trajectory during the Twelfth Plan.

II.1.14 The rate of gross fixed capital formation (investment) has declined persistently from a peak of 32.9 per cent in 2007-08 to 30.4 per cent in 2010-11. The slackening of overall fixed investment was largely reflected in the private corporate sector as a result of both monetary and non-monetary factors. Sluggish growth rate of capital raised through initial public offerings (IPOs) during 2011-12 further impacted investment. The correlation between IPOs as a ratio to GDP and the fixed investment rate between 2000-01 and 2011-12 was 0.71.

II.1.15 Persistent decline in investment rates tend to adversely impact potential output. There has been a decline in potential output over the previous two years as a result of structural impediments and high inflation. On current assessment the potential output growth is around 7.5 per cent and the actual output growth is lower, resulting in a negative output gap. Going by the positive yet lagged relationship between output gap and inflation, the positive output gap during 2009-10 and 2010-11 cast some downward stickiness to the inflation rate (Box II.2).

Agricultural growth moderates on high base

II.1.16 Agricultural sector grew around trend level during 2011-12 on top of a good performance in 2010-11 (Appendix Table 5). The south-west monsoon in 2011 was normal, but the north-east monsoon was deficient by 48 per cent. Nevertheless, the trend level growth in agriculture was maintained. As per the Fourth Advance Estimates for 2011-12, production of foodgrains in general and rice and wheat in particular, is estimated to be the highest ever.

II.1.17 In 2012-13, however, the south-west monsoon is likely to be deficient with cumulative rainfall (up to August 16, 2012) for the country as a whole being 16 per cent below the LPA. The deficiency as measured by the Reserve Bank's production-weighted rainfall (PRN) index is even higher at 21 per cent. The deficiency is highest for north-west India with the rainfall being 25 per cent below LPA with scanty rainfall in Punjab and Haryana. Overall, 47 per cent of the geographical area of the country, including Gujarat, west Rajasthan, parts of Maharashtra and Karnataka received scanty/deficient rainfall.

Box II.2
Is Output Gap a Leading Indicator of Inflation?

The output gap is defined as the gap between the actual and the potential output, where potential output is the maximum possible level of output that is consistent with a stable and low rate of inflation. In a traditional Phillips curve framework, a positive (negative) output gap, signifying excess aggregate demand (supply), results in an increase (decline) in the inflation rate. The impact of the output gap on inflation could be instantaneous or could occur with a lag. Several other factors could, of course, impact inflation such as lagged inflation, the exchange rate and the indirect tax rate.

Apart from the level, a change in the output gap – termed as the 'speed limit' effect – could also impact inflation. This reflects the emergence of temporary supply bottlenecks when the pace of increase in demand outstrips the build-up of new capacity, even though the level of the output gap may still be negative. Empirical studies have found evidence of asymmetries/non-linearities in the relationship between output gap/growth and inflation for India (Mohanty *et al*, 2011).

Against this backdrop, the trends in output gap (with the potential output based on the H-P filter) and WPI inflation in India over the period 2000-01:Q1 to 2011-12:Q4 were studied (Chart). It was found that the output gap Granger caused WPI inflation at one lag, corroborating the leading indicator properties of the output gap.

Simple linear regressions of the WPI inflation rate on its own lags, output gap and a dummy variable (for period-specific outliers) for the period 2000-01:Q1 to 2011-12:Q4 yield statistically significant coefficients (Table). Inflation up to two lags is significant. While the positive sign of the first lag of inflation reflects inflation persistence say, through inflationary expectations or actual price rigidities, the negative sign of the second lag of inflation possibly shows that the inflation series is mean-reverting or stationary. Output gap is positive and significant at the first and third lags. In effect, a one percentage point increase in the output gap resulted in 0.2 and 0.3

Chart: Output Gap and Inflation

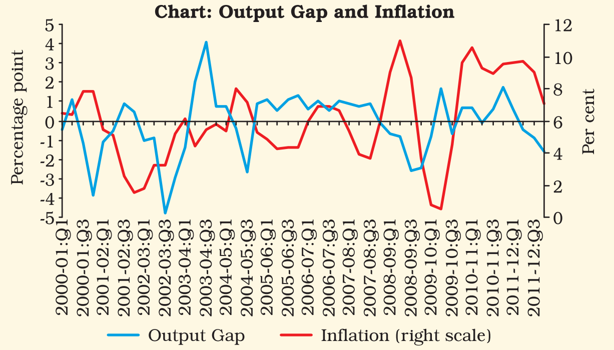


Table: Estimation Results

Explanatory Variable	Estimated Coefficient	P-Value
Constant	1.96	0.00
Inflation (-1)	1.15	0.00
Inflation (-2)	-0.50	0.00
Output Gap (-1)	0.20	0.07
Output Gap (-3)	0.29	0.01
Dummy Variable	2.90	0.00
Adjusted R-square	0.82	
Lagrange Multiplier Test (Lag 3)	0.86	
Prob (F-Statistic)	0.00	

percentage point increase in the WPI inflation rate after one and three quarters, respectively. The simple linear formulation did not detect any speed limit effects.

Normalised impulse response functions of a bi-variate VAR model consisting of output gap and the WPI inflation rate (alternatively, headline and core) show that a one standard deviation shock to output gap results in an increase in both headline and core inflation, which reaches a maximum after three quarters and the impact wears off after 6-8 quarters or around 2 years.

Given that growth has slowed down significantly in the recent period, these results thus indicate that inflation, especially core, could moderate with a lag. However, the pace and extent of moderation could be conditional on other determinants of inflation such as supply shocks from food, global commodity price movements and exchange rate pass-through as well as the overall fiscal position. Currently most of these pressures persist, which partly explains the stickiness in inflation despite growth slowing down.

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II.1.18 This has affected the *kharif* sowing in 2012-13. The sown area as of August 17, 2012 is greater than the normal for this period of the year for rice and non-foodgrains such as sugarcane, cotton and jute and mesta. The total deviation from normal is 4 per cent for foodgrains led by decline in sown area in relation to the normal of 16 per cent and 12 per cent for coarse cereals and pulses, respectively. Notwithstanding some improvement in monsoon in August 2012, the gap in area sown for coarse cereals and pulses is likely to persist. While this could have an adverse effect on agricultural output in 2012-13, the situation during the year so far (up to August 16, 2012) seems better than what was seen in the comparable period of the drought year of 2009-10 (Chart II.4).

II.1.19 The India Meteorological Department (IMD) has pegged the probability of *El Nino* conditions emerging in the later part of the season at 65 per cent. Deficient rainfall has also affected the level of water in the 84 reservoirs under the Central Water Commission (CWC). If September rains are not good, it would impact the soil moisture and reservoir levels and thus put the *rabi* output also at risk.

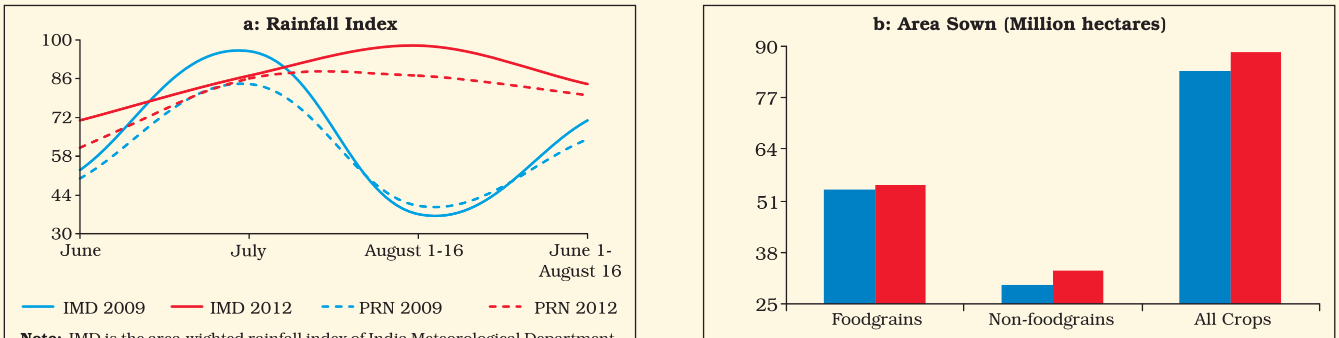
II.1.20 Even as the dependence of Indian agriculture on rainfall has reduced over the years, it remains predominantly rain-fed. About 16 per cent of the country's geographical area is drought prone. This is mostly in the arid, semi-arid and sub-humid areas. Rain-fed agriculture accounts for around 56 per cent of the total cropped area, with 77 per cent of pulses, 66 per cent of oilseeds and 45 per cent of cereals grown under rain-fed conditions. The dependence of agriculture on rainfall is manifested by decline in *kharif* output in 2008-09 and 2009-10, when the south-west monsoon was acutely deficient. Deficient north-east monsoons in the recent past adversely affected the production of *rabi* crops such as oilseeds, pulses and rice. On the contrary, during 2010-11, when both summer and winter rainfalls were above normal, production of most *kharif* and *rabi* crops increased significantly.

II.1.21 The government has prepared contingency plans which entails ensuring sufficient availability of all seeds, fodder, power and diesel, additional wage allocation under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and sufficient funds under the National Disaster Relief Fund. An inter-Ministerial Group has been constituted to review the situation on a weekly basis. Contingency plans such as production of fodder, short duration pulses and conservation of moisture for early planting of *rabi* crops such as toria, sorghum and gram are being implemented.

Food security challenges would require further policy/ operational changes

II.1.22 Foodgrain stocks in India are currently at very high levels (76.2 million tonnes in July 2012), thus providing some insulation from weather shock in the current year (Appendix Table 6). However,

Chart II.4: Comparison of South-west Monsoon and Agriculture Conditions in 2009 and 2012



Note: IMD is the area-wighted rainfall index of India Meteorological Department. PRN is the production-weighted rainfall index of the Reserve Bank.

availability of pulses, groundnut and coarse cereals may be constrained. Extremely dry and hot weather conditions during May-June 2012 in countries such as the US, China, and Russia affected crop conditions. Therefore, domestic shortages may not be readily covered by imports.

II.1.23 In spite of the record level of foodgrain stocks, food security concern persists. The food security issues in respect of foodgrains persist more in terms of likely increased entitlements (under the proposed National Food Security Bill 2011) and lack of storage capacity. However, given the changing food habits a greater emphasis is necessary to augment supply of protein-rich items, vegetable and fruits, where demand-supply gaps are putting a pressure on prices.

II.1.24 In recent years, per capita availability of food items such as foodgrains and pulses has shown a declining trend. Compared with the 1990s, production of foodgrains and horticultural crops grew at a slower pace during the 2000s despite increasing diversification of the consumption basket. Rising expenditure on high value foods, namely, fruits, vegetables, milk, eggs, meat and fish has reduced the dominance of cereals in the consumption basket, as confirmed by the consumer expenditure survey of 2009-10 conducted by the National Sample Survey Office (NSSO). Increase in income will lead to further increase in demand for these food items, which will eventually have a bearing on the overall food and nutrition security preparedness of the country. Raising the growth rate of agricultural production, including foodgrains, to levels above the growth rate of population, therefore, is crucial for long-term food security. The country has large import dependence for items such as pulses and oilseeds. According to the working group for the 12th Five Year Plan (2012-17) constituted by the Planning Commission, demand for pulses and oilseeds could exceed the domestic supply by 1-4 million tonnes and 18-26 million tonnes, respectively, by 2016-17.

II.1.25 Further, the distribution and delivery mechanism under the existing Targeted Public Distribution System (TPDS) suffers from inefficiency and leakages. The existing storage facilities are already stretched to their limits, often leading to wastage. Thus, scaling up the coverage and entitlement under TPDS would require an overhaul in the entire chain of food management systems. Measures such as augmenting storage capacity and reducing leakages apart from exploring the possibilities of introducing cash transfer, food coupon systems and digitalisation of TPDS are expected to help solve the problems facing the sector to a large extent.

Technological breakthrough, investments in protein – key to higher agriculture growth

II.1.26 Technology breakthroughs, especially in dry land farming as also investment for augmenting supply of vegetables, fruits, eggs, fish, meat and milk are key to addressing the supply constraints in agriculture which is necessary to tame inflation. As per the approach paper for the 12th Five Year Plan, achieving at least 4 per cent agricultural growth in the coming years is crucial not only for sustaining overall growth of the economy but also for a more equitable growth. This would require a quantum increase in productivity from the current levels. This, in turn, requires technological breakthrough given the limited supply of land, water and other structural constraints such as low level of mechanisation, shortage of irrigation facilities and power, and inefficient communication and extension services.

II.1.27 Frontier technologies such as biotechnology, information and communication technology (ICT), renewable energy technologies, space applications and nanotechnology; and organic farming along with Low External Input Sustainable Agriculture (LEISA) techniques, if promoted with Integrated Natural Resource Management (INRM) and Integrated Pest Management (IPM) techniques, can help improve productivity in a sustainable manner without ecological distress. Technology can also help ensure sustainability of natural resources, enhance efficiency of public investment, and diversify agriculture towards higher value crops and livestock.

II.1.28 Success in bridging productivity gap in terms of yield *vis-à-vis* world average and the gap within states/regions in the country can contribute significantly to higher production. An effort in this direction which has yielded favourable result is the assigning of mission mode status to the objective of extending Green Revolution to the eastern region. During 2011-12, West Bengal, Bihar and Jharkhand registered significant increase in yield, production and cultivated area under rice with West Bengal emerging as the highest producer of rice in the country. Initiatives with respect to pulses and oilseeds are also yielding favourable results.

II.1.29 Improving protein supplies requires spread of appropriate technologies and larger investments in poultry, fisheries and dairy farming. Though there has been rapid growth in poultry output, demand has grown faster. There is, therefore, a need for encouraging rearing of hybrid birds and poultry-layer farming, investment in improved feed conversion, poultry vaccines and medicines, veterinary services as also poultry equipment. Specific pathogen free egg production needs to be stepped up. Higher investment is also needed in fisheries covering deep sea, coastal and inland fisheries such as aquaculture in ponds, tanks and reservoirs. Private investment should be enabled in tuna processing and fish drying centres through public policy support.

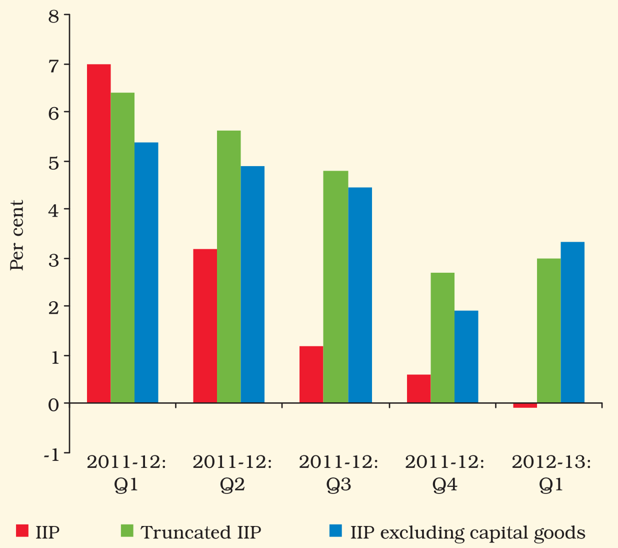
Industrial growth moderates amidst deteriorating investment climate, softer demand

II.1.30 Industrial growth, as measured by the index of industrial production (IIP), decelerated to 2.9 per cent during 2011-12 from 8.2 per cent in the previous year (Appendix Table 7). While the IIP maintained a moderate growth of 5.1 per cent during the first half of 2011-12, growth took a plunge in the second half to 0.9 per cent. The slowdown was on account of moderation in demand, both domestic and external, hardening of interest rates, slowdown in consumption expenditure, especially in interest-rate sensitive commodities, subdued business confidence and global economic uncertainty.

II.1.31 The slowdown in industrial growth was exacerbated by the volatility in the production of capital goods. Truncated IIP, constructed by the Reserve Bank by excluding item groups (out of 399) which fall in the top 2 per cent growing and bottom 2 per cent declining blocks and has a weight of 96.0 per cent in total IIP, grew 4.8 per cent in 2011-12 showing a better performance than the overall IIP. Nevertheless, a significant moderation in growth is evident even for truncated IIP in successive quarters of 2011-12 (Chart II.5). In Q1 of 2012-13, IIP declined by 0.1 per cent mainly due to a 20 per cent decline in output of capital goods. Growth in truncated IIP and IIP excluding capital goods was better than in Q4 of 2011-12.

II.1.32 The slowdown in industrial production was reflected across all sub-sectors in 2011-12, except electricity. In the manufacturing sub-sector, while 6 industry groups showed a decline in production, 6 registered growth in excess of 10.0 per cent. The mining sub-sector declined by 2.0 per cent during 2011-12. This was mainly due to regulatory and environmental issues affecting coal mining and low

Chart II.5: Industrial Growth
(Y-o-y)



output of natural gas from the Krishna-Godavari basin. However, electricity sector performed better during 2011-12 recording 8.2 per cent growth supported by higher hydro power generation aided by a normal south-west monsoon (Chart II.6 a).

II.1.33 Capital and intermediate goods growth declined during the year reflecting dampening of investment climate. In general, the import-intensity of domestic capital goods is high, and empirical tests confirm the integral link of imports as inputs to capital goods production. In 2011-12, however, even as production of capital goods declined, imports remained high. This could be indicative of gradual loss of comparative advantage in production of capital goods. The growth of consumer durables decelerated sharply due to interest rate sensitivity (Chart II.6 b). Basic goods[2] made the highest contribution to industrial growth at 75 per cent during 2011-12.

Global factors impinge on domestic industrial growth

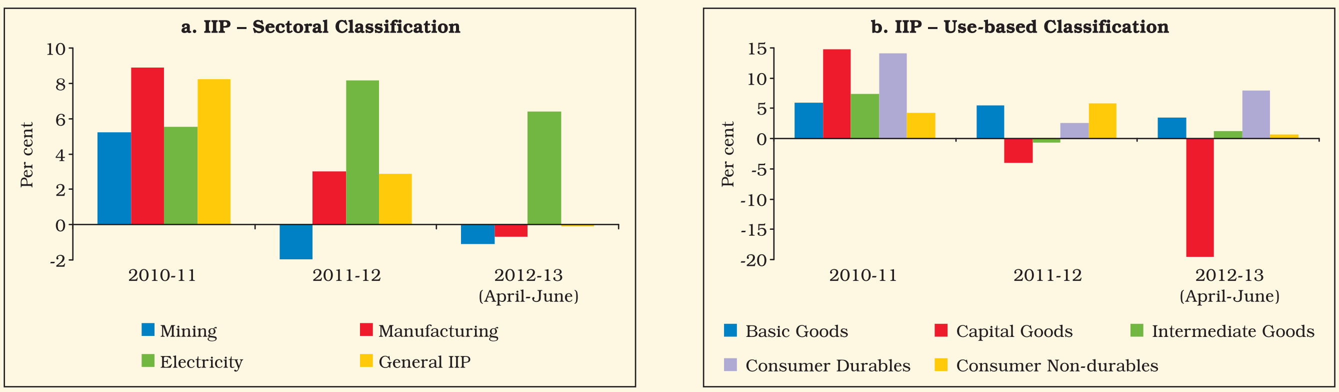
II.1.34 As noted earlier, the slowdown in overall growth of the economy during 2011-12 is mainly attributable to weak industrial performance. This, in turn, can be ascribed to both international and domestic factors. The current slowdown, that started in early 2010-11 coincided with the fragile economic conditions in the US and European countries. As during 2008-09, global factors are a part of the reason for the industrial slowdown. These include the financial crisis in the euro zone, sluggish growth in other industrialised countries and elevated crude oil prices. Among emerging market economies, countries such as Malaysia, South Korea and Brazil also witnessed weak industrial performance during the period.

II.1.35 An empirical assessment of the impact of monetary policy and global growth on industrial output suggests that a percentage point increase in real weighted average lending rate for industry in the base period results in a decline in IIP growth, on an average, by 0.6 percentage point over a one year horizon. On the other hand, a one percentage point increase in global GDP growth in the base period stimulates domestic IIP growth, on an average, by about 0.7 percentage point over the same horizon. These estimates indicate that both monetary policy actions and global growth dynamics affect the growth of domestic industry.

Removing bottlenecks facing core industries crucial to reviving industrial growth

II.1.36 Structural bottlenecks in critical sectors such as coal and natural gas affected the overall performance of industrial sector during 2011-12.

Chart II.6: Industrial Growth - by Classification



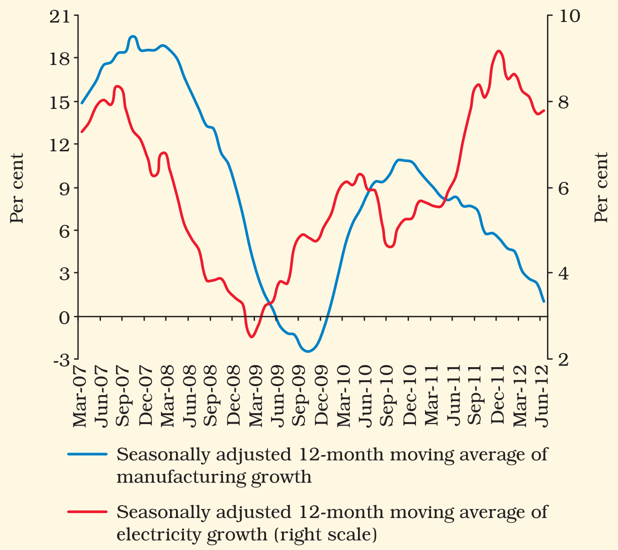
[2] Basic goods are bulk raw material/product used for further production of new items in manufacturing and agriculture. Intermediate goods are goods/products produced as incomplete product or which go as inputs in production for further finishing.

Contraction in natural gas output and slowdown in coal, fertiliser and crude oil output led to deceleration in growth of core industries to 4.4 per cent during 2011-12 compared with 6.6 per cent in the previous year (Chart II.7). There was contraction in fertilisers, natural gas and crude oil and deceleration in steel, refinery products and electricity during April-June 2012.

II.1.37 Manufacturing growth depends crucially on the inputs provided by core industries, especially, electricity which has a weight of 10.3 per cent in the IIP. An empirical assessment of the dependence of manufacturing growth, *inter alia*, on electricity availability indicates that a one percentage point increase in annual growth in electricity increases the growth rate of manufacturing by 0.4 percentage point. This has been reflected in the co-movement of growth rates of manufacturing and electricity indices (Chart II.8). However, there was a divergence between the two since June 2010 because even as there was significant deceleration in the growth of manufacturing sector, the growth in electricity continued to remain buoyant due to the substitution of petroleum products, especially diesel, with electricity in other sectors of the economy. This was reflected in the deceleration in the growth of diesel consumption. The increased electricity generation also partly helped in reducing the power deficit in the country from 10.1 per cent in 2009-10 to 8.5 per cent in 2011-12 in spite of increased demand from household segment.

Chart II.7: Growth in Infrastructure Industries

Chart II.8: Relation between Manufacturing and Electricity growth



II.1.38 The gap between domestic demand and supply of core industrial inputs has widened in recent years. For coal, the gap has increased from around 50 million tonnes in 2007-08 to 114 million tonnes in 2011-12. The projected gap by the terminal year of the 12th Five Year Plan (2016-17) is expected to be 185 million tonnes. The policy of captive mining, which was introduced to augment production, has not helped the sector to the desired extent. However, measures taken by the government recently to ensure adequate coal supply to power plants has helped improve coal output with average growth during November-March 2011-12 rising to 8.5 per cent as against (-)5.6 per cent during April-October 2011-12. The coal sector grew by 6.4 per cent in April-June 2012. Measures such as import of coal and acquisition of coal assets abroad are expected to help reduce the demand-supply gap. It is important to ensure smooth shipments, port handling and transportation of the coal imports to

quickly bridge any supply shortages for the power plants.

II.1.39 The government has initiated several steps to augment the production of core sector in the recent period. Augmenting resources for exploration and mining through private sector participation has yielded favourable results. The union budget for 2012-13 gave full exemption from basic customs duty to fuels such as natural gas, liquefied natural gas, steam coal and uranium concentrate imported for power generation. To facilitate the development of necessary infrastructure, viability gap funding has been extended to capital investment in fertiliser industry, oil and gas storage and pipeline facilities for supporting the scheme of public private partnership (PPP).

II.1.40 The industrial sector, in particular, manufacturing, is an important driver of growth and source of employment. Though there is no official estimate of capacity utilisation for the sector, given the modest share of the sector in GDP, it is likely that if enabling business environment and the required infrastructure are provided, capacity utilisation in the sector can be improved significantly (Box II.3).

Box II.3

Capacity Utilisation: Concept and Measurement in India

Capacity utilisation (CU), if properly assessed, could provide a reliable indication of incipient inflationary pressure in an economy. A realistic assessment of CU encapsulates the demand pressure in an economy such that if market demand grows, CU tends to rise, and if demand weakens, CU tends to slacken. Therefore, higher CU is associated with higher inflation.

Concept and Measurement

CU can be defined as the percentage of total productive potential that is actually being utilised in a given period. CU serves as an important indicator, reflecting the business cycles as well as policy changes. Measures of CU are extensively relied upon to help explain the changes in the rate of investment, labour productivity and inflation.

There is no unique method for measurement of CU. CU can be measured for an economy, industry or firm through survey methods or use of production data. One important method of measuring CU is the Wharton Method wherein capacity is defined as the peak output achieved in each business cycle. An implicit assumption of this method is that all short run peaks in output represent 100 per cent CU. An alternative method of tracking CU is through economic surveys of operating metrics. However, the surveys generally offer a subjective measure as they do not specify any explicit definition of capacity. An alternative method of measuring CU is the production frontier approach where the maximum possible output (*i.e.,* capacity output) for given input levels is estimated.

Measurement of CU in India: Current Practices

In India, there is no single official estimate of CU. At present, the Central Statistics Office in its monthly 'Capsule Report on Infrastructure Sector Performance' provides some estimates of CU in the core industries. The Reserve Bank in its quarterly 'Order Books, Inventories and Capacity Utilisation Survey' (OBICUS) provides estimates of the level of CU in the Indian manufacturing sector. The level of CU is derived from the data provided by companies as per the selected methodology. The survey is canvassed among 2,500 public and private limited companies in the manufacturing sector with a good size/ industry representation. Trend analysis is done to study the movements in CU based on a common set of companies in each round to facilitate better comparability of data over the reference quarters. The results of the 17th round of the survey, done for Q4 of 2011-12, were disseminated to the public in July 2012.

The Federation of Indian Chambers of Commerce and Industry in its quarterly 'Business Confidence Survey' and 'Survey on Indian Manufacturing Sector' provides assessment of CU in the industrial sector. The National Council of Applied Economic Research in its quarterly 'Business Expectation Survey' also provides information on CU in Indian industries.

Thus, most of the estimates of CU in the Indian context are based on survey methods. This is in line with the practice followed by other countries as well. However, an attempt has been made to measure CU in Indian industry using the Wharton Method. The Wharton Method offers certain advantages over the other traditional time series methods due to its success in tracking demand pressures in the economy. High CU rates are indicative of higher demand pressure in an economy, and consequently higher inflation rates. The CU rate in the Indian manufacturing sector measured by Wharton School method has generally acted as a lead indicator of inflationary pressure, which is consistent with the theoretical expectation. Inflation in manufactured products has a significant positive correlation of 0.54 with one period lagged value of CU (Chart 1). Also, the broad trend in CU as estimated by the Wharton method and OBICUS is the same (Chart 2).

(Contd....)

Chart 1: Capacity Utilisation and Inflation in the Manufacturing Sector

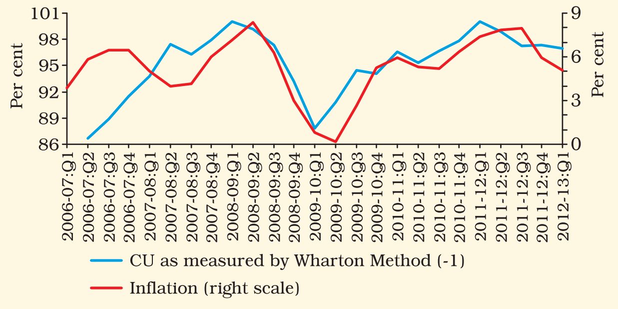
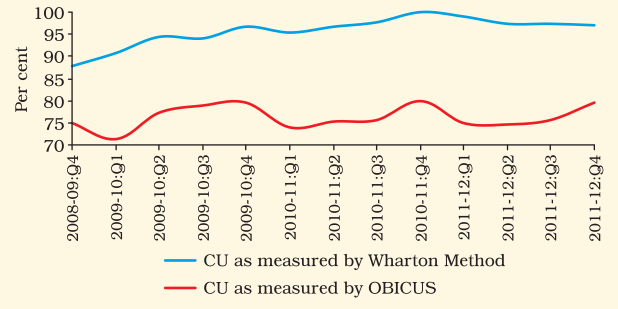


Chart 2: Capacity Utilisation as measured by Wharton Method and OBICUS



In practice, survey methods are preferred over time series methods for estimating CU as the latter suffers from a number of limitations. These include differing estimates obtained from alternative methods, assumptions implying that the entire capital stock available to the industrial sector has been used with highest allocative efficiency (which is generally not the case), the selection of peak output over a relatively short time horizon of one year, the end point specification problem and difficulties in specifying the exact form of the production function for each firm. Major disadvantage of the time series method arises from the revision of the base year as also the variability of provisional data. For example, with the change in base year of IIP to 2004-05 from 1993-94, the growth in IIP has changed by as much as +/- 11 per cent in the new series. Thus, any method used to estimate CU should be based on the exploration of competing methods emphasising on conceptual suitability of alternative measures of capacity/ potential output, assessment of existing data gaps, and interpretation and usage of different measures.

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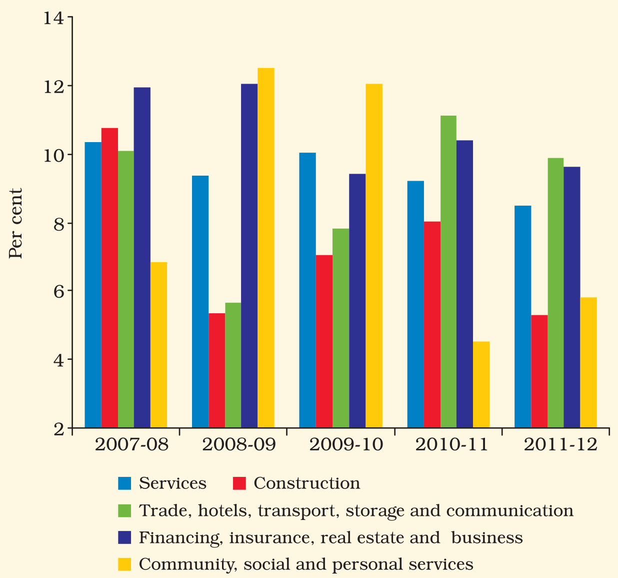
II.1.41 In countries such as China and some East Asian economies, the share of manufacturing sector in GDP ranges between 30-40 per cent. In India, the share of manufacturing, has been around 14-16 per cent during the post-reform period. In this regard, the National Manufacturing Policy, which aims to increase the share of manufacturing sector to 25 per cent of GDP by enhancing value addition and improving competitiveness along with the creation of 100 million jobs in the sector by 2022 is expected to provide a major impetus to the manufacturing sector.

Some moderation evident in services sector growth

II.1.42 Much of India's growth performance in the recent years has been contributed by the services sector which showed considerable resilience during the global economic crisis. However, some deceleration is apparent in services sector recently with growth slowing down to 8.5 per cent during 2011-12 compared to 9.2 per cent in the previous year (Chart II.9). The slowdown was mainly on account of deceleration in construction which grew by 5.3 per cent compared with 8.0 per cent in the

Chart II.9: Growth in Services Sector GDP



previous year. The deceleration in services sector is on account of both weakening demand as well as inter-linkages with the industrial sector.

II.1.43 Construction activity slowed down as housing inventories rose with price rigidities observed in the industry to protect high profit margins. With record road tendering in 2011-12, construction activity could receive support in the coming years. However, newer constraints for road projects have emerged lately, reflected in sharp drop in tendering during Q1 of 2012-13 (Chart II.10).

II.1.44 In 2001-12, 'trade, hotels, transport and communication' also slowed given its strong linkage with industrial activity. Slowdown in transportation is also mirrored in deceleration in production of commercial motor vehicles. Telecom industry slowed down along with moderation in the number of new cell phone connections, reflecting in part imposition of regulatory penalties and in part plateauing of penetration levels after a period of extra-ordinary growth.

II.1.45 The outlook for the services sector depends to a large extent on the revival of industrial growth given the dependence of sub-sectors such as trade and transport on industrial production. Prospects of the sector also depend on the developments in the global economic situation (Box II.4). Continued fragility in economic conditions in the advanced economies may have adverse impact on Indian services exports.

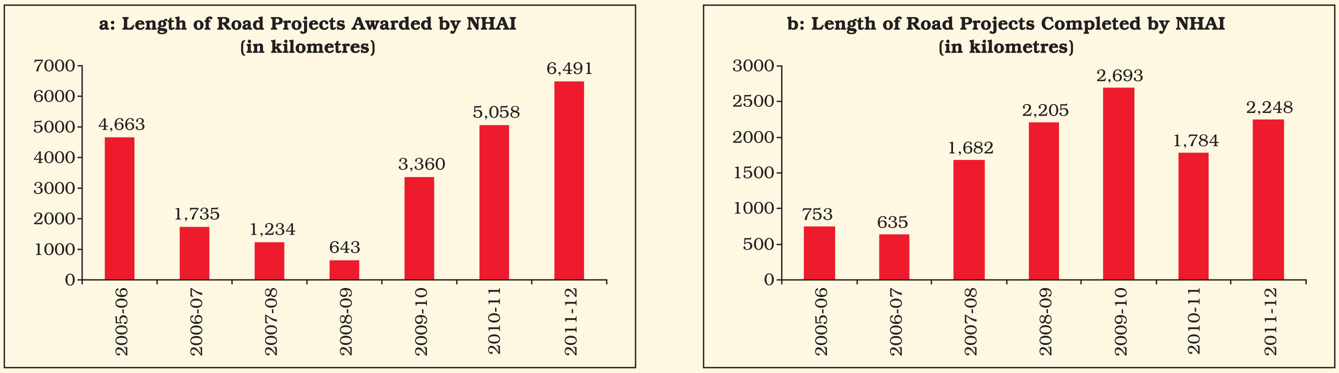
Structural shift in employment evident in recent years

II.1.46 In general, as economies grow there is a shift in employment pattern away from agriculture into manufacturing and then into service sector. In India, the pace of transformation in the structure of employment has been slow. Agriculture employed 53.2 per cent of the total work force in 2009-10, while contributing around 14.7 per cent of GDP. On the other hand, industry and services sector contributed 20.2 per cent and 65.1 per cent, respectively of GDP while employing only 11.9 per cent and 35.0 per cent, respectively, of the work force.

II.1.47 In recent years, there has been a shift in employment away from agriculture and manufacturing in favour of construction, transport and communication (Chart II.11). Employment in the construction sector increased by 62 per cent between 2004-05 and 2009-10, accounting for most of the employment generated during the period. As regards the nature of employment, casual labour accounted for most of the increase in overall employment during this period, suggesting that the employment generated may not be permanent.

II.1.48 During the period 2004-05 to 2009-10, decline in employment is observed with respect to youth and women. Employment among young males in the age group of 15-19 years declined by 12 per cent during this period. This was mainly

Chart II.10: Implementation of Road Projects by NHAI



Source: NHAI.

Box II.4
Impact of Monetary Policy and External Demand on Services Sector Growth

India's growth since the late 1980s has been driven by services sector. The growth rates of almost all components of the services sector picked up during the late 1980s and increased significantly during 2005-08 (Table). Within services sector, the expansion has been particularly strong for communication and banking and insurance. The growth rates of most of the sub-sectors, notably 'communications' continued to remain high even after the onset of the global financial crisis, reflecting the resilience of the services sector. The composition of the services sector shows that while 'trade' continues to remain the predominant sub-sector with a share of around 24 per cent, the shares of both 'banking and insurance' and 'communications' have registered sharp increases over the years. The shares of 'real estate, ownership of dwellings and business services' that includes IT services and 'construction' have also remained high even though these have declined somewhat in the post-crisis period.

Services sector growth benefitted not only from liberalisation after the initiation of structural reforms and the sharp increase in per capita incomes but also from the inherent linkages with the industrial sector. The trade, telecommunications, banking and business services (including IT services) sectors have particularly gained in this regard. The fairly robust growth of the construction and real estate sectors is reflective of rapid urbanisation.

In order to distill the impact of different factors, a linear regression of services sector growth was run based on annual data for the period 1980-81 to 2010-11. Dummy variables were incorporated to take cognisance of the initiation of structural reforms in 1991-92 (DREF), apart from a few outliers (DYRS). The explanatory variables were the call rate (CR) {as a monetary policy stance indicator}, WPI inflation (INF), industrial sector growth (IND) and world GDP growth (WG). The results of the estimation are set out below:

$$SER = 7.23 - 0.20\ CR(-1) - 0.18\ INF + 0.12\ IND + 0.41\ WG(-1) + 1.93\ DREF + 2.29\ DYRS$$

Adj R-square = 0.81 DW = 1.84

All the coefficients are statistically significant at 1 per cent, except IND which is significant at 5 per cent. The coefficients also have expected signs. The results show that a one percentage point increase in the call rate reduces services sector growth by around 0.2 percentage point one period ahead, largely reflecting the impact of an increase in the cost of funds. The impact of a percentage point increase in the inflation rate on services sector growth is nearly similar, though contemporaneous. Robust industrial sector growth provides support to the services sector. On the other hand, lagged world GDP growth is an important factor for services sector growth with coefficient of 0.41.

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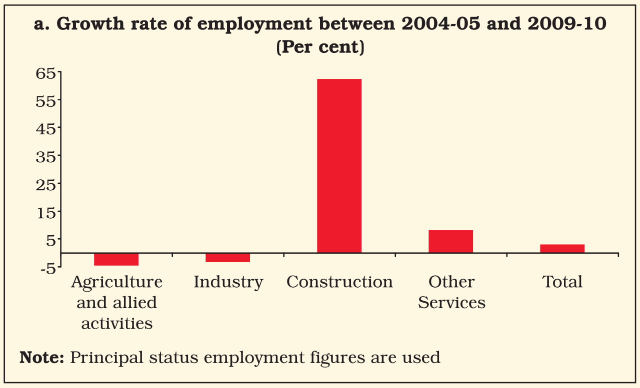
Table: Services Sector Growth

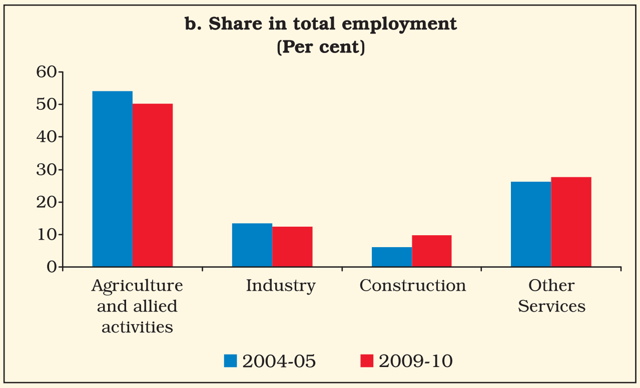
(Per cent)

	Growth Rates				Shares in Services Sector			
	1980-83	1988-91	2005-08	2008-11	1980-83	1988-91	2005-08	2008-11
1	2	3	4	5	6	7	8	9
Construction	3.9	8.6	11.3	6.8	16.2	13.8	12.9	12.2
Trade	5.6	6.4	10.7	8.0	24.4	23.5	24.2	23.3
Hotels and restaurants	7.2	8.9	14.9	2.4	1.9	1.9	2.6	2.3
Railways	4.6	2.5	9.5	8.0	3.0	2.5	1.6	1.5
Transport by other means	6.7	6.2	9.0	7.0	8.6	8.7	9.1	8.5
Storage	2.0	1.3	6.3	10.3	0.3	0.2	0.1	0.1
Communication	6.5	6.1	24.0	28.0	0.8	0.7	3.4	5.3
Banking and insurance	6.9	11.9	17.7	13.3	5.5	7.7	10.7	12.2
Real estate, ownership of dwellings and business services	6.4	8.2	9.5	8.4	13.5	15.5	14.5	14.2
Public administration and defence	4.9	5.2	4.6	13.1	12.3	13.1	8.6	9.2
Other services	3.4	7.0	6.3	7.3	15.4	14.3	12.2	11.2
Services Sector	**5.3**	**7.2**	**10.5**	**9.5**	**45.4***	**49.0***	**62.1***	**64.9***

*: Share of services sector in GDP. **Source:** Central Statistics Office.

Chart II.11: Employment





due to increased enrolment rate in educational institutions. Males in the 15-19 age-group who reported attending educational institutions as their primary activity increased from 51 per cent in 2004-05 to 63 per cent during 2009-10. As regards women, there was a withdrawal from the labour force reflected in the decline in the work participation rate (WPR) among women across all age groups. As a consequence, the proportion of women engaged in domestic duties increased from 31.6 per cent in 2004-05 to 37.8 per cent in 2009-10.

II.1.49 Along with the lower growth in employment, increase in real wages has also been significant in the recent period. Reduction in WPR has resulted in labour market tightening which could have partly contributed to rising real wages. Also, the introduction of the MGNREGA which resulted in eight-fold increase in public works since 2004-05 along with increase in higher minimum wage for public works could also have contributed to rising real wages. However, the public works accounted for less than 2 per cent of total person-days of rural employment in 2009-10. Moreover, increase in wages for public works has been lower than increase in wages for casual laboureres engaged in non-public sector works as well as regular/salaried employees.

II.1.50 Overall, the sharp deceleration in growth in 2011-12 was on account of both cyclical and structural factors. After a firm recovery in 2010-11, a cyclical downturn set in, induced by global factors and high inflation. The slowdown was exacerbated by the structural rigidities in the economy. As these structural rigidities are yet to be addressed, growth may stay low in the near term. The constraints are particularly severe in the infrastructure, mining and metal space. Investment demand could revive gradually once these are addressed.

II.2 PRICE SITUATION

Inflation remained high for the second year in a row

II.2.1 The high inflation phase that started in the last quarter of 2009-10 persisted and became generalised over two consecutive years. Inflation remained elevated at over 9 per cent in the first eight months of 2011-12, before softening moderately in December. It has since remained sticky in the range of 6.9-7.7 per cent. Non-food manufactured products inflation remained over 5 per cent for 23 consecutive months, but moderated from a high of 8.4 per cent in November 2011 to below 5 per cent by March 2012 with significant moderation in investment demand and weaker growth momentum. Sustained input cost pressures, however, imparted downward rigidity to non-food manufactured products inflation since then, even though pricing power weakened, resulting in pressures on corporate earnings. The weakening pricing power on the back of slowing growth and monetary tightening, along with favourable base effects and transitory softening of food prices, especially vegetables, contributed to the moderation in inflation.

II.2.2 Notwithstanding the moderation, inflation remained high with headline WPI inflation remaining at 6.9 per cent in July 2012 and retail price inflation as per new Consumer Price Index (CPI) remaining near double digits. Inflation prevailed above the threshold level at which growth-inflation trade off stops working and high inflation turns inimical to growth and growth sustainability (see Box II.4 of the Annual Report 2010-11).

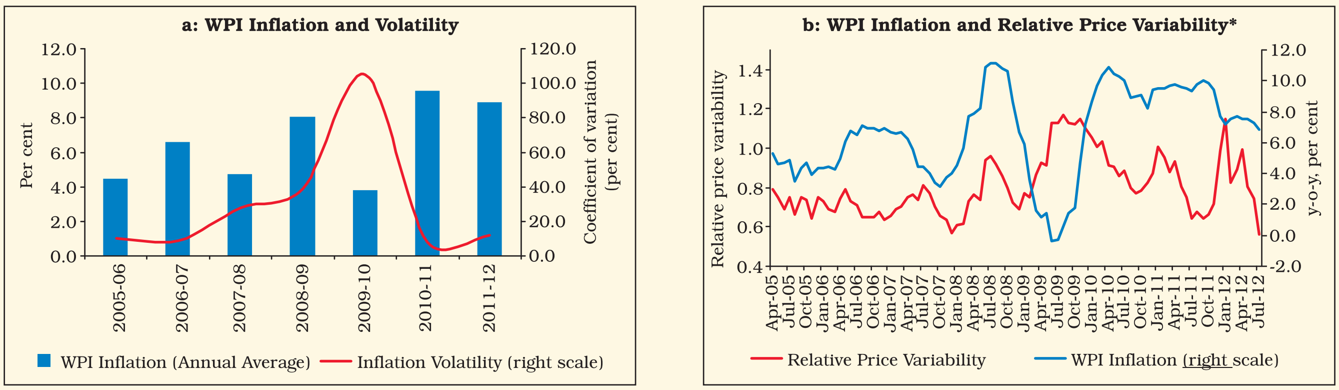
II.2.3 The monetary policy response of the Reserve Bank during the year was based on the assessment of drivers of inflation, particularly the changing role of aggregate demand relative to other determinants of inflation and time-varying multiple risk factors. Monetary policy was continuously tightened up to October 2011 given the high and persistent generalised inflation. Subsequently, amplified risks to growth and some moderation in inflation warranted a shift in the balance of weight in the conduct, stance and guidance on monetary policy (for details, see Chapter III).

Generalisation of price pressures persisted despite softening of growth momentum

II.2.4 The persistent nature of inflation during recent years can be gauged from the trends in the average rate of inflation during the past few years along with trends in volatility (as measured by the coefficient of variation of monthly inflation during the year). While the average rate of inflation increased significantly during 2010-11 and 2011-12, inflation volatility declined considerably (Chart II.12a). Lower volatility at a high level indicates the persistence of generalised high inflation and at the same time reflects the impact of tighter monetary policy in containing it from spiralling up further. Also, inflation across different commodity groups within WPI indicate that its variability declined for most of the period since the second half of 2009-10 indicating generalisation of price pressures (Chart II.12b). The decline in overall inflation during October 2011-January 2012 was marked by increasing variability as only few items contributed to the moderation in inflation. Since January 2012, the variability has come down indicating that the decline in inflation has spread to a number of commodities.

II.2.5 Since 1970s, there have been seven episodes of high and persistent inflation in India where the headline WPI inflation was above 8 per cent for more than six months on a sustained basis (Table II.2). Most of these episodes resulted in high inflation persisting for about 2-3 years. Even though these high inflation periods had different drivers like oil shocks, drought and currency devaluation,

Chart II.12: Inflation Trends and Volatility



* The index of relative price variability (RPV) is measured as RPV = $\sqrt{\sum_{i=1}^{n} w_i(\pi_i-\pi)^2}$ (where, π_i is the inflation in commodity group i, π is the overall rate of inflation and w_i is the weight of commodity group i in overall WPI).

Table II.2: Episodes of High Inflation in India: 1971 to 2012

Period	Average Inflation		Number of Months
	WPI	CPI-IW	
1	2	3	4
July 1972 – Apr1975	19.3	19.4	34
May 1979 - Dec 1981	15.7	11.1	32
Aug 1987 – Jul1988	8.8	9.6	12
Feb 1990 - Dec 1992	11.3	11.7	35
Sep 1993 - Nov 1995	10.0	9.9	27
May 2008- Nov 2008	10.2	9.1	7
Jan 2010 - Nov 2011	9.6	10.7	23

persistence of inflation seems to be a common pattern when inflation turns high.

II.2.6 Nonetheless, the current high inflation phase is one of the longest phases of high inflation since the mid-1990s. Why inflation has been so persistent even in the wake of a growth slowdown has become an important issue for monetary policy. It may be noted that all three major drivers of inflation, *viz.*, food, fuel and core have been significantly contributing to the high and persistent inflation. While food inflation has generally been volatile with large swings in the prices of certain food items like vegetables, the major driver of food inflation has been protein-rich items whose prices continue to grow at a faster pace. Both increased demand on account of structural changes in dietary patterns and rising input costs driven by increases in wages have contributed to the increase in protein inflation.

II.2.7 Even though fuel inflation remains suppressed due to the administered price mechanism, increases in fuel prices had kept fuel inflation in double digits for more than two years (Appendix Table 8). However, fuel inflation moderated to 6.0 per cent in July 2012 as domestic prices of administered fuel products have not been raised in past one year. Pressure on core inflation was visible from rising input costs- raw materials, fuel and staff costs. So, apart from demand pressures, cost pressures were also reflected in core inflation.

II.2.8 The WPI exhibited a sustained increase during 2011-12, even though the pace of increase somewhat slowed down during the latter half of the year (Chart II.13). The increase in the WPI during the initial months of the year was driven by a host of factors that included an increase in food prices, a revision in the administered prices of fuel as well as an increase in manufactured product prices in the wake of significant pressure from high input costs as well as strong demand and pricing power. The decline in growth during 2011-12 was expected to ease the pressure on core inflation. However, the extent of moderation was constrained by further pressure from rupee depreciation and high global commodity prices.

II.2.9 The phase of softening of inflation was marked by a decline in the contribution of food, which again increased from February 2012 as prices increased sharply after the seasonal decline. The contribution of non-food manufactured products

Chart II.13: Trends in Wholesale Price Inflation

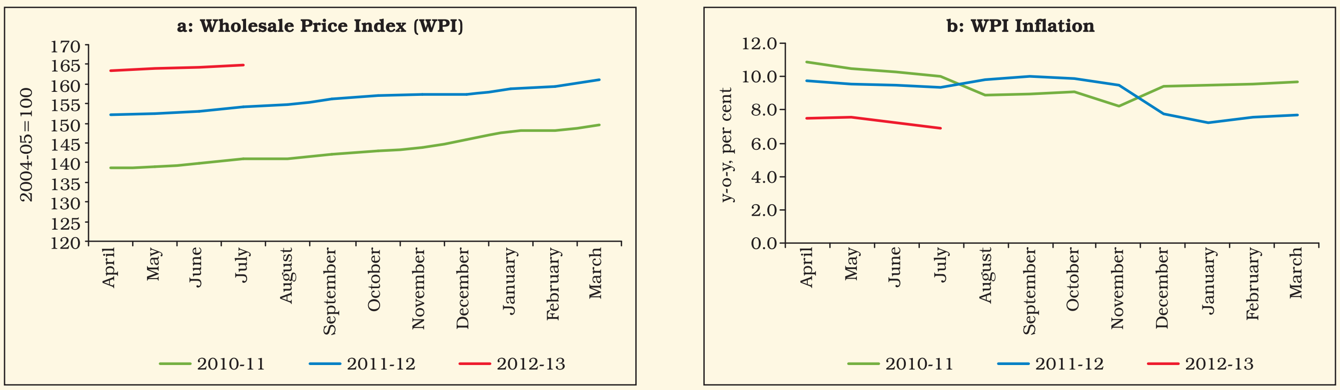
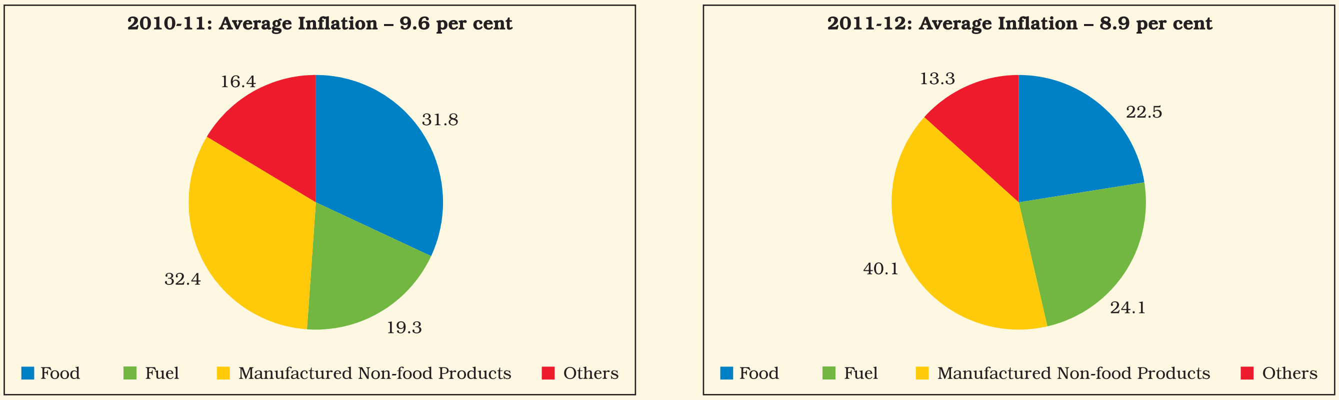


Chart II.14: Weighted Contribution (in per cent) to Inflation: Major Groups



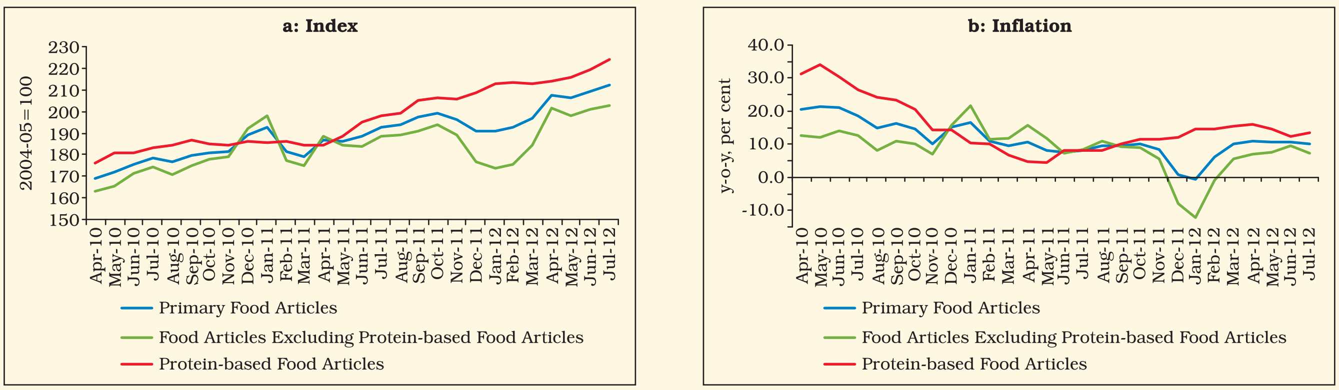
remained strong despite the deceleration in growth momentum (Chart II.14). The contribution of fuel group to overall inflation remained high and significant throughout the year despite suppressed inflation from the administered prices of some petro-products, coal and electricity.

Food inflation rebounded after declining during the year

II.2.10 India had a normal south-west monsoon during 2011, which had a moderating impact on the prices of select food items, especially cereals and pulses, for which the average inflation during the year was moderate at 3.6 per cent. However, food inflation driven by non-cereal items, whose output is less responsive to monsoon in the short-run, remained high (Chart II.15). There is some evidence that rising per-capita incomes and changes in dietary patterns led to increase in demand for protein-rich items. Input cost pressures have also been significant in recent years, with significant increases in wages. Besides weak supply responses, input cost pressures sustained the food inflation at a high level, except for occasional seasonal declines. Primary food articles inflation declined sharply during November 2011–January 2012, from above 10 per cent to negative territory, largely reflecting a seasonal decline in the prices of vegetables and a favourable base effect. However, prices rebounded significantly subsequently, resulting in food inflation reverting to double-digit levels by April 2012. The prices of protein-based food articles have remained persistently high since October 2011.

II.2.11 Managing food inflation requires measures to augment supply since demand management through monetary policy to contain food inflation

Chart II.15: Trends in Food Inflation



has its own limits and costs in terms of growth sacrifice. Food inflation has not only exhibited greater volatility at higher average levels, but there is also increasing divergence between prices at the wholesale and retail levels. This points to the role of rigidities in the supply chain. Effective policy interventions in this regard need to take into account several institutional factors (Box II.5).

Box II.5
Supply Chain Management in Agriculture: Farm Gate to Retail Market

In explaining large volatility in commodity prices, especially of farm products, the concept of farm retail spread, developed within the paradigm of supply chain management, is traditionally employed to characterise marketing efficiency. An efficient marketing system minimises the cost of marketing services to ensure the largest possible share for the producer in the consumer's rupee. Various micro-level studies in India have found that the producer's share in final price of many agricultural commodities (which undergo little value addition from the point of leaving the farm gate) is not very high. As these studies were conducted at different times and for different commodities, the results cannot be generalised. However, they provide a sufficiently clear picture of the inefficiencies that existed or exist in the supply chain management of various commodities. These inefficiencies have been especially reflected in high food inflation led by protein items. With income increases and demographic transition, the supply chain is struggling to meet the demand (Gokarn, 2011).

The marketing channels for various commodities are distinguished from each other based on the market functionaries involved in carrying the produce from the farmers to the ultimate consumers. The length of the marketing channel depends on the size of the market, the nature of the commodity and the pattern of demand at the consumer level. These channels as identified in micro level studies can be classified into (i) Producer-Consumer, (ii) Producer-Retailer-Consumer, (iii) Producer-Wholesaler-Retailer-Consumer, (iv) Producer-Commission agent-Wholesaler-Retailer-Consumer and (v) Producer-Village Merchant-Wholesaler-Retailer-Consumer. As mentioned by Balappa and Hugar (2003) while Channels (i) and (ii) are slowly emerging, other channels are well established, with the farmers preferring shorter supply chain channels among them. Gupta and Sharma (2009) found that farmers are not solely guided by the marketing efficiency of the channel (which secures the maximum producer's share in the consumer's rupee), but also seek to market their produce through channels that serve retail markets with the capability to absorb larger supplies. Finally, intermediaries in the value chain of several commodities exist to tap the scale economies associated with services like transportation (Saraswat, 2009).

The three major challenges in the supply chain environment are: 1) improving the accessibility of regulated markets, 2) promoting greater competitiveness by suitable amendments to Agricultural Produce Market Committee (APMC) Act and 3) facilitating the emergence of a nationwide common market. Although the ideal density of regulated markets could be 15,000 to 18,000 ha of gross cropped area as mentioned in the Report of the 'Working Group on Agricultural Marketing Infrastructure and Policy Required for Internal and External Trade for the Eleventh Five-Year Plan', it varies between 13,580 ha in West Bengal to 37,050 ha in Madhya Pradesh. Suggestions have also been made to reform the APMC Act to address the perceived concerns regarding *mandi* governance (Economic Survey, 2011-12) and monopolistic tendencies (Inter-Ministerial Group on Inflation). The different rates of entry tax/octroi tax and sales tax that vary across states as well as across commodities prevent the emergence of a nationwide common market for agricultural produce. Moreover, restrictions on the movement of goods under the Essential Commodities Act remain in place in various states.

The suggestions from various policy documents to strengthen the supply chain can be classified as: 1) enhancing the capabilities of farmers, 2) strengthening infrastructure, and 3) legislative interventions. By encouraging farmers to organise themselves into groups – growers' groups, co-operatives, self-help groups and producer companies – supply chains can be streamlined as well as made more egalitarian. Also, investments across the entire agri-value chain spectrum, such as creation of cold chains, rural godowns, new agricultural marketing infrastructure, and modernisation of existing markets could be promoted by providing them with tax holidays and suitable exemptions. As suggested by the Inter-Ministerial Group on Inflation, perishables could be taken out of the ambit of the APMC Act to encourage arbitrage activity by small traders and farmers by allowing them to freely trade perishables through buying where it is cheap and selling where it is expensive. Similarly from the long-term perspective of inflation management, it is crucial to improve *mandi* governance by holding regular elections of agricultural produce market committees as well as to bring professionalism into the functioning of the existing regulated markets through public private partnership.

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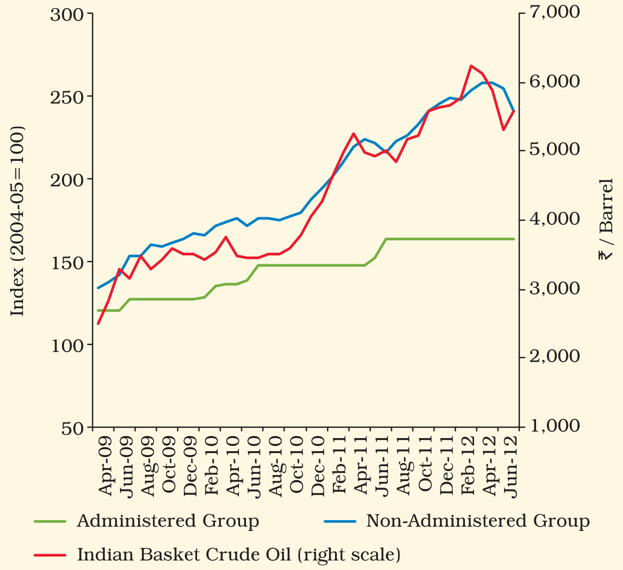
Suppressed fuel inflation through administered pricing continued

II.2.12 Pressure from the sustained increase in global oil prices continued during 2011-12. Global crude oil prices (Indian Basket), which averaged US$85 per barrel during 2010-11 increased by about 31 per cent to US$112 per barrel during 2011-12. The increase in domestic mineral oil prices, however, was much lower, by about 17 per cent (Chart II.16). Freely priced product prices moved in line with the changes in international prices while administered fuel prices were revised in June 2011. Despite the revision in administered prices of fuel, the suppressed inflation in the energy segment remains significant. This has resulted in under-recoveries to the amount of ₹1.38 trillion during 2011-12, with the bulk of under-recoveries (about 59 per cent) coming from diesel. This would entail higher subsidies to the oil marketing companies with its attendant fiscal pressure on inflation.

II.2.13 Among the other major items in the fuel group, one major pressure on overall inflation has been the changes in the prices of coal. In January 2012, the price of non-coking coal was increased by 33 per cent, contributing thereby to an increase

Chart II.16: Global and Domestic Fuel Prices



in the overall WPI by 0.34 per cent in terms of the direct impact. Given that coal is an input for many industries, including electricity generation, changes in coal prices do transmit to generalised inflation. Recent emerging trends in the coal sector indicate the need to address basic issues in this sector (Box II.6). Also, electricity price increases in the past have been much lower than the increase in

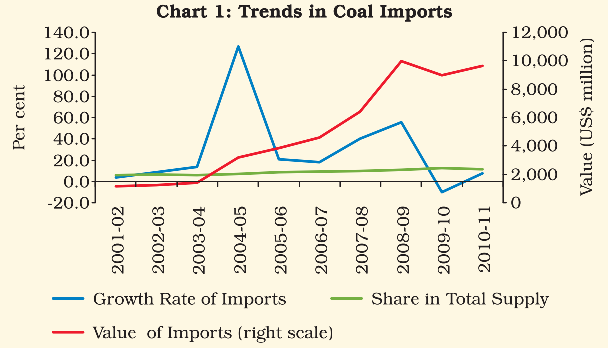
Box II.6
Need for Revamping Coal Policy to Address Supply Shortages and Suppressed Inflation

Coal is one of the world's most important sources of energy, fuelling around 42 per cent of electricity generation worldwide and also meeting about 30 per cent of global primary energy needs. In India, two-third of the country's electricity generation is based on coal. India's coal reserves have been assessed at about 286 billion tonnes as on April 1, 2011, of which 114 billion tonnes (or 40 per cent of total reserves) are proven reserves according to the Geological Survey of India (GSI). At the current level of production of around 540 million tonnes per annum in 2011-12, the coal reserves in the country are expected to last for more than 100 years.

Despite being the third largest producer of coal in the world, India is a significant net importer of coal as the country's domestic production is insufficient to meet the large and growing needs of power companies, steel mills and cement producers (Chart 1).

According to the Ministry of Coal, the gap in demand and domestic supply of coal has increased to 161 million tonnes

Chart 1: Trends in Coal Imports



(MT) in 2011-12 from about 43.4 MT in 2006-07. According to the revised estimates of the Ministry of Coal, the demand is projected to increase to 980 million tonnes in the terminal

(Contd....)

year (2016-17) of the 12th Five-Year Plan, against which indigenous availability is projected to be 795 million tonnes. Therefore, the gap between demand and domestic availability is projected to be 185 million tonnes which needs to be bridged by importing coal.

The shortage of coal is affecting electricity generation in different power plants. According to the Central Electricity Authority, power generation utilities have already reported a production loss of 8.7 billion units during 2011-12 (up to February 2012) on top of an 8.4 billion unit loss in 2010-11 and a 14.5 billion unit loss in 2009-10 on account of coal shortage. The Ministry of Coal pointed out that coal shortage has resulted in a significant increase in coal imports, from 43.1 MT in 2006-07 to 98.9 MT in 2011-12. Higher import dependence calls for parity between domestic and international prices, given the known adverse implications of administered pricing of petroleum products for domestic imbalances. International coal prices have been higher than domestic coal prices even when adjusted for quality and the divergence has persisted for some time, despite the fact that domestic coal prices were completely de-regulated in 2000. Coal India Limited (CIL), that provides 80 per cent of the domestic supplies, periodically fixes the price of coal in line with market prices. Thus, a combination of higher import dependence and elevated international prices of coal has the potential to impact key macro indicators like inflation, growth, fiscal deficit and current account deficit, as witnessed in the case of oil imports, although the magnitude may differ.

A revision in the coal pricing formula was contemplated in January 2012 to bring domestic coal prices in line with international prices. However, the increase was rolled back subsequently as the overall coal price increase on account of the new pricing was substantial. This would have increased the input costs for power generation and the steel and cement industries which would have been inflationary. According to the New Coal Distribution Policy (NCDP), coal supplies are governed by legally enforceable agreements between the seller (coal companies) and the consumer under specific terms and conditions. Various model Fuel Supply Agreements (FSAs) exist for different categories of consumers. The Government recently decided that CIL would sign FSAs with power plants that have entered into long-term Power Purchase Agreements (PPAs) with distribution companies (DISCOMs) and have been commissioned/would get commissioned on or before March 31, 2015. In this context, CIL has proposed a new FSA assuring coal supply at 80 per cent of the annual contracted quantity with a penalty of 0.01 per cent in case of shortfall in supply, operative after a period of three years after signing of FSA. These terms are not acceptable to the power sector. In this backdrop, a large part of the new capacities in power sector are at risk due to coal shortages. These, in part, would have to be met by imported coal at higher cost. As such, pooled coal prices would need to go up. Even in case of the FSAs, the domestic price of coal may see upward revisions in the coming years as the FSAs assure coal supplies at the notified prices, which are subject to revision from time to time.

input costs, which has also severely impacted the finances of state-run electricity boards.

Inflationary pressures on core component eased in the latter half of the year

II.2.14 Non-food manufactured products inflation, which remained at or above 7 per cent during February–December 2011, moderated significantly to below 5 per cent by March 2012. The high inflation in this segment during the initial part of the year was on account of the sharp increase in input cost pressures, which the firms could pass on in the presence of buoyant demand. As growth decelerated, the pricing power of firms weakened, which led to a decline in the inflation momentum in this category on a sustained basis in the second half of the year. During Q1 of 2012-13, non-food manufactured products inflation ruled at for 5.0 per cent before rising to 5.4 per cent in July 2012 (Chart II.17).

Chart II.17: Non-food Manufactured Products (NFMP) Index, Inflation and Month-over-Month Seasonally Adjusted Annualised Changes

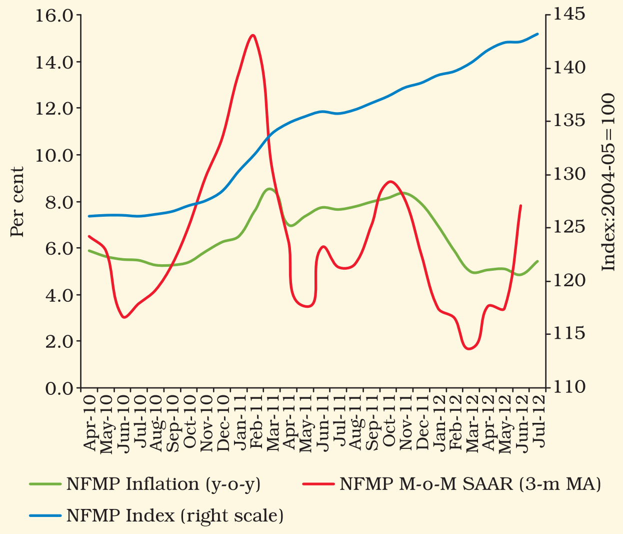
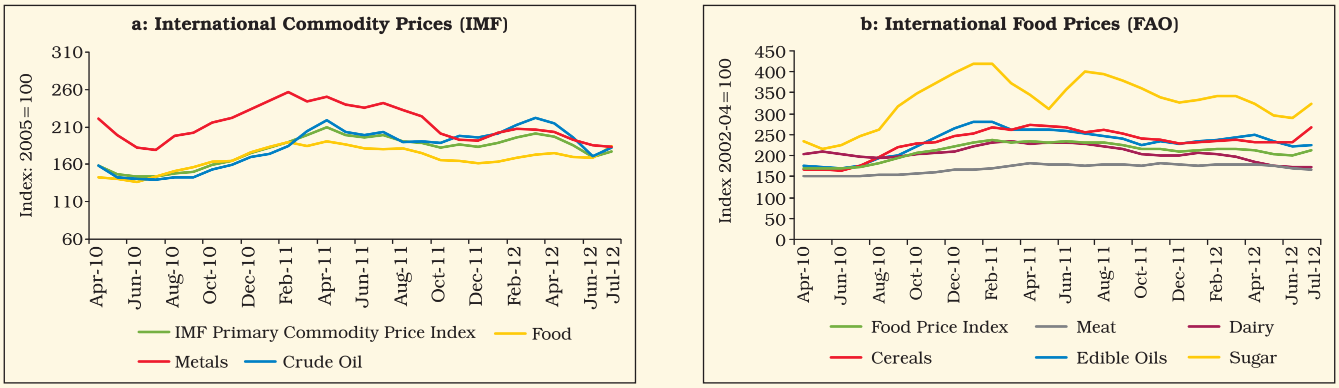


Chart II.18: Trends in Global Commodity Prices



Global commodity prices generally moderated, with some hardening in the latter half of the year

II.2.15 Global commodity prices exhibited a contrarian trend relative to domestic inflation during 2011-12. Commodity prices trended downwards for the larger part of the year, factoring in deepening euro area debt problems, risks to global growth, easing of geo-political tensions in the Middle East and improved supply prospects in key commodities, including agricultural commodities (Chart II.18). During the last quarter of 2011-12, however, commodity prices, especially crude oil, increased significantly, following geo-political tensions in Iran and improved growth prospects for the US. Although commodity prices moderated significantly since March 2012, tight demand-supply conditions in key commodities along with the presence of large liquidity in the global market keep commodity prices highly vulnerable to shocks. This is evident from the recent reversal in energy prices as well as increase in global food prices as drought in US and unfavourable weather conditions in Europe and other major producers impacted on supplies.

Exchange rate movements impacted the inflation trajectory

II.2.16 Apart from trends in commodity prices, exchange rate movements also impacted the overall inflation path. The pass-through of depreciation of the rupee since August 2011 has often either amplified or dampened the impact of commodity prices, depending on the direction and magnitude of commodity price changes. Empirical estimates in the Indian case indicate that the pass-through has declined over time (Box II.7). However, given the magnitude of depreciation of the rupee since August 2011, the exchange rate became a source of pressure on inflation.

Widening fiscal gap poses threat to inflation moderation

II.2.17 Although the government had envisaged a path for fiscal consolidation during 2011-12, the shortfall on achieving the target on key deficit indicators emerged as a major issue in inflation management. The shortfall in revenue partly on account of the growth slowdown and the increase in the subsidy burden, particularly in fuel and fertilisers, contributed to the widening of the deficit (for details, see Section II.5: Government Finances). Though fiscal intervention in terms of administered prices kept part of the inflation suppressed in the near-term, overshooting of expenditure increases aggregate demand and leads to medium-term risk to price stability.

Wage pressures on inflation remained significant

II.2.18 High inflation, through its impact on inflation expectations, could influence wage-setting behaviour and thereby generate a wage-price spiral. Available empirical evidence in the recent period indicates that wages both in rural areas and in the manufacturing sector, have been growing at a rate

Box II.7
Rupee Depreciation Impact on Inflation

Exchange rate pass-through (ERPT) reflects the percentage change in local currency import prices following a one per cent change in the exchange rate between importing and exporting countries. Pass-through of depreciation of exchange rate to domestic consumer price inflation seems to have declined across several countries over time, partly reflecting the result of a switchover to inflation-focused monetary policy frameworks and the success of monetary policy in anchoring inflation expectations (Mishkin, 2008). When commitment of monetary policy to inflation is strong and credible and inflation expectations remain well-anchored, the impact of shocks – whether from aggregate demand, energy prices or the exchange rate – on inflation expectations and trend inflation may be weaker.

Monetary policy performance in anchoring inflation expectations, however, is only one among several determinants of pass-through. Other determinants of pass-through include: (a) inflation persistence, (b) pricing to market behaviour, (c) price elasticity of demand in the importing country, (d) share of local distribution and marketing costs in the final retail price, (e) size of a country, (f) degree of openness, (g) exchange rate volatility and persistence of exchange rate shocks, and most importantly (h) domestic demand conditions at the time of the depreciation of the exchange rate.

Pricing-to-market behaviour may indicate that exporters from the rest of the world are partially absorbing the impact of the depreciation in the importing country. If domestic manufactures of import substitutes keep their prices unchanged, it also weakens pass-through. Disaggregated commodity-wise analysis could suggest that price elasticity of demand for certain items – like gold and oil – may be low, which in turn would imply higher pass-through in such items. At times, however, because of suppressed inflation reflecting fiscal policy interventions in the pricing of imported items, pass-through may remain depressed. With rising openness, higher import penetration may also increase pass-through. If depreciation is perceived to be short-lived and not permanent, pass-through may not be high. Misalignment of the exchange rate, in terms of the behaviour of the Real Effective Exchange Rate (REER), could often be a lead indicator of how the market perceives depreciation. An important determinant of pass-through could be domestic demand conditions, which is an indicator of pricing power. In items that are price elastic, weak domestic demand would significantly limit the pricing power of firms. As a result, both exporting firms from the rest of the world and the importing firm in the country of depreciation may have to adjust their profit margins resulting in lower pass-through.

In India, monetary policy over time has established greater commitment to the inflation objective despite a multi-objective and multi-indicator approach to policy. However, because of successive supply shocks, in recent years inflation persistence, often at elevated levels, has been experienced. Large misalignments in exchange rate have been generally non-existent, and the Reserve Bank's emphasis on containing volatility in the exchange rate has ensured stability. India's openness, in terms of share of imports in GDP, however, has increased but suppressed inflation in petroleum products continues, despite the importance of market-based pricing to improve the fiscal position.

Empirical evidence on ERPT in India finds overwhelming evidence for an incomplete pass-through even though there is varied evidence on the quantum of pass-through. Khundrakpam (2007) found that there was no clear-cut evidence of a fall in exchange rate pass-through to domestic prices after the 1991 reforms. Further, there was asymmetry in pass-through between appreciation and depreciation, and between sizes of the exchange rate change. Bhattacharya *et al.* (2008) found that a one per cent change in the exchange rate causes a 0.04–0.17 per cent change in the CPI level and a 0.29 per cent change in the WPI level in the long run. Mallick and Marques (2008) found that the pass-through remained incomplete in the 1990s but exceeded the tariff rate pass-through.

ERPT, in recent years, has been low, perhaps due to significant suppressed inflation in petroleum products. It is also possible that exporters from the rest of the world might have absorbed part of the impact in order to retain their market share in India, which in turn would have led to a somewhat lower pass-through. Given the depressed global demand conditions, pricing-to-market behaviour of exporters from the rest of the world might have contributed to the decline in the estimated pass-through impact on inflation.

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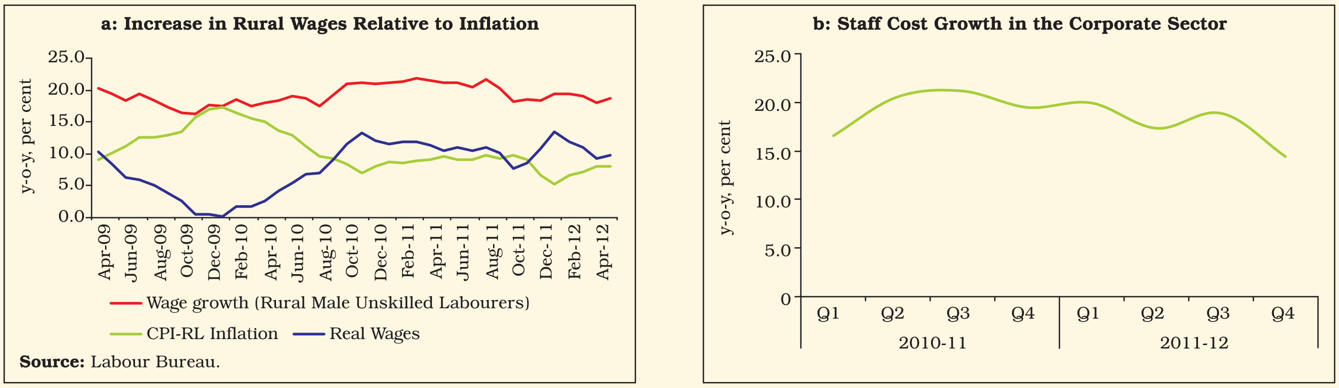
faster than inflation (Chart II.19). There is significant divergence in wage-price relationship in rural areas across different states which point towards the role of state specific factors in conditioning the overall wage-inflation dynamics (Chart II.20). Increases in real wages indicate that inflation is

Chart II.19: Trends in Wages and Staff Costs

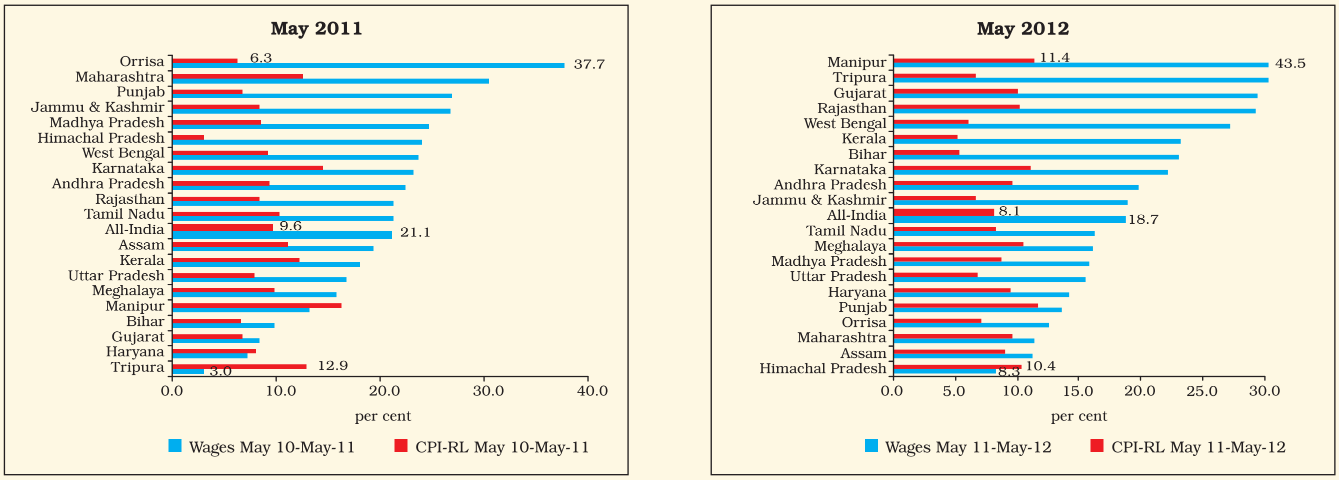


not always a tax on the working population, particularly when the wage increase is in excess of productivity growth. The pressure on inflation from wages has become more visible in the post Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) period, as MGNREGS provides a floor to wages in rural areas, which are also indexed to inflation (Box II.8).

New CPI suggests higher inflation in the 'non-food non-oil category', with much of the pressures visible in services.

II.2.19 While the Reserve Bank continued to present its inflation outlook in terms of WPI inflation for the conduct of its monetary policy, inflation assessment has always been based on both WPI and different measures of CPI. The greater reliance on WPI for monetary policy in contrast with a reliance on CPI for most other countries reflected better data quality arising from more frequent data availability (until the weekly series was discontinued), the shorter lags with which data is available, a wider basket of commodities and a more up-to-date base year. From January 2012, inflation numbers based on the new CPI with a more recent base (year 2010=100) became available. The new series has, however, shown significant divergence relative to WPI and other CPI measures, both in terms of level and the overall

Chart II.20: Increase in CPI for Rural Labourers (CP-RL) and Rural Wages*



* Daily Wage Rate for Rural Unskilled Labourers (Male).
Source: Labour Bureau.

Box II.8
The Risk of Wage-Price Spiral: What the Empirical Evidence for India Suggests

Cost-push inflation caused by sustained wage pressures has always been a dominant theoretical determinant of inflation, even though over time the relevance of wage-push as an independent determinant of inflation has been subjected to rigorous empirical scrutiny. Wage-push inflation results when nominal wage rate increases exceed growth in labour productivity and firms, instead of taking the pressure on their profit margins, pass on the higher wage costs in the form of higher prices. As workers get higher wages, they sustain their demand for goods and services when inflation rises, and, with a lag, demand even higher wages. This leads to wage-price spiral.

Conventional wisdom suggests that activity in labour markets could be a lead indicator of inflation. A fall in the unemployment rate relative to the natural rate could mean an overheating of the economy and, hence, higher wage inflation and headline inflation. Wage-price inflation, thus, has a common determinant, *i.e.* labour market conditions. Wage inflation and price inflation, therefore, may exhibit co-movement and there could also be bi-directional causality; but a wage-price spiral independent of positive output-gap and tight labour market conditions could be difficult to sustain.

Empirical evidence, however, suggests that wages have increased even with high unemployment, implying that wage inflation is increasingly less responsive to unemployment trends. There have been episodes of both unemployment declining without much corresponding improvement in growth (such as the recent Bernanke conundrum) and also high growth accompanied by inadequate job creation (such as the concern about job-less growth in India). Moreover, alongside higher unemployment in advanced economies, the announced job vacancy rate at times also increases, suggesting an upward shift in the Beveridge curve (which shows the relationship between unemployment rate and vacancy rate). This often reflects the gap between skill needs for open vacancies and the skill set possessed by the unemployed. Thus, when there is a large premium for skills, wages may increase even with high unemployment. Till the skill gap persists, wages could keep rising. Another major driver of wage-push inflation often could be wage indexation, in which case wage-push may become an independent determinant of inflation.

At times, instead of using hard options to contain inflation, a country may opt for a soft option like wage indexation to limit the costs of high inflation to the common man. In that process, however, the economy gets exposed to other risks. The first such risk is that "…indexation weakens policymakers' will to fight inflation" (Ball and Cecchetti, 1989). As underscored by Okun (1971), wage indexation "may be read as evidence that the government has raised its tolerance level of inflation …It is quite rational to expect that the more effectively the government can minimise the social costs of inflation (through indexation), the more inflation it will accept". Second, wage indexation will tighten the constraint of wage rigidity and lead to misallocation of resources by preventing necessary relative wage adjustments relative to productivity trends in different sectors. In any disinflation policy strategy, nominal downward rigidity of wages is a major constraint, which gets amplified with wage indexation. Keeping real wage growth at a rate that does not exceed productivity growth is important for both long-term growth and external competitiveness. As noted by Mihaljek and Saxena (2010), skilled labour shortages and public sector wage policies are two factors that could lead to real wages exceeding productivity in emerging economies.

In India, in the post-MGNREGS period, wages in rural areas have increased at a faster rate than inflation. Agricultural growth in the Eleventh Plan period has remained below the 4 per cent target, but real wages have increased at a higher rate. Even in urban areas, annual wage increases have been strong, despite weaker output growth in the recent years. The coverage of MGNREGS in terms of total man-days employed, may not be significant enough to exert pressure on inflation from demand pressures arising from income transfers. However, the major inflationary risk emerges from MGNREGS exerting pressure on the overall wage structure, and also raising the wage level annually because of wage indexation. The risk of an emerging wage-price spiral in India can be studied empirically using the limited available data on rural wages and industrial sector wage data. Empirical estimates based on monthly wages for rural unskilled labourers and CPI rural labourer's inflation (available from the Labour Bureau) indicate that there is a bi-directional causality between wage inflation and price inflation (Table 1) implying that there is evidence of a wage-price spiral.

Table 1: Causal Relationship between Wages and Inflation in Rural India

Sample: May 2001 to February 2012		
Null Hypothesis:	F-Statistic	Prob.
Wage Change does not Granger cause Price Change	5.77	0.004
Price Change does not Granger cause Wage Change	2.88	0.060

In the organised manufacturing sector, the average wage per worker was growing at a moderate rate of 3.9 per cent per annum during the period 2000-01 to 2005-06, which accelerated to 9.3 per cent during 2006-07 to 2009-10. Available evidence on the wage-price spiral partly explains the stickiness of the inflation path and why cyclical moderation in growth momentum does not lead to a corresponding softening of inflation.

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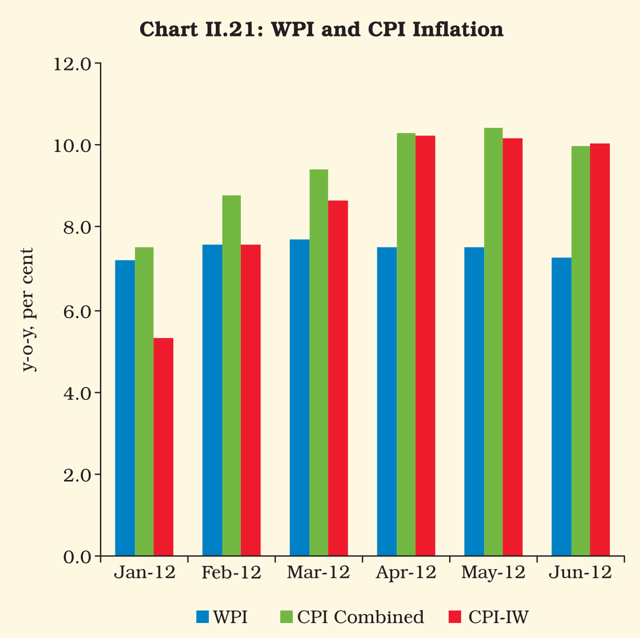


trend (Chart II.21). While a certain degree of divergence was expected because of the difference in coverage, weights and price quotes of different indices, a rising inflation path in an environment of softening growth momentum has raised the question of whether price rigidities are more at the retail level as compared to the wholesale level. Even when the volatile components are removed to make an assessment of the behaviour of the price situation relative to demand conditions, the 'non-food non-oil' CPI-All India inflation remains above 'non-food non-oil' inflation in WPI (Table II.3). The inclusion of services and rent as also the collection of price quotes at the retail level explain part of the divergence. Higher CPI inflation suggests that the cost of inflation from the standpoint of consumer welfare has been much higher than appears from trends in WPI. However, until data on the new CPI over a longer time period become available, it would be difficult to assess its behaviour in relation to other key macroeconomic variables. Till such time, it may be difficult to fully assess the information content of the new CPI for monetary policy purposes, but the new index is viewed as supplementary evidence on price trends at the retail level.

Table II.3: WPI and New-CPI (Combined) Inflation

	Food		Fuel		Excluding Food and Fuel		Overall	
	WPI	New CPI	WPI	New CPI	WPI	New CPI	WPI	New CPI
1	2	3	4	5	6	7	8	9
Weight	*24.3*	*47.6*	*14.9*	*9.5*	*60.8*	*42.9*	*100*	*100*
Jan-12	1.5	3.9	17.0	13.0	7.5	10.6	7.2	7.5
Feb-12	5.9	6.7	15.1	12.8	6.3	10.4	7.6	8.8
Mar-12	8.7	8.1	12.8	11.8	5.8	10.2	7.7	9.4
Apr-12	9.1	10.1	12.1	11.2	5.4	10.2	7.5	10.3
May-12	9.0	10.5	11.5	10.7	5.7	10.1	7.5	10.4
June-12	9.0	10.8	10.3	10.3	5.6	9.1	7.3	10.0

Inflationary pressures likely to persist in 2012-13

II.2.20 Going forward, risks to inflation remain from unsatisfactory monsoon and increases in MSP even as growth slowdown eases demand pressures. Monsoon till August 16, 2012 has been 16 per cent below Long Period Average. Reserve Bank's production weighted index places the monsoon deficiency at 21 per cent. Sowing picked up considerably in the latter half of July but significant shortfall remains in case of coarse cereals, pulses and some oilseeds, especially groundnut. These sowing shortfalls could emerge as price pressure points. As global food prices are already on the rise on the back of drought in parts of US, Eurasia and Australia, the option to bridge demand-supply gaps through imports would have its limits. The large carryovers and buffers in domestic stocks of food would come in handy at this juncture, though efforts are necessary to ensure that its movement and use is efficient.

II.2.21 With likely increase in food inflation, containing spillovers and generalisation of price pressures is important in the current context. Though core inflationary pressures remained muted during Q1 of 2012-13, risks remain. Continued rise in real wages and food price shocks may spill over to core inflation. The decline in global metals and energy prices during Q1 of 2012-13 provided some relief, but these gains have been partly offset by rupee depreciation and recent rebound in global energy and food prices. In this backdrop, persistence of inflation, even as growth is slowing, has emerged as a major challenge for monetary policy.

II.3 MONEY AND CREDIT

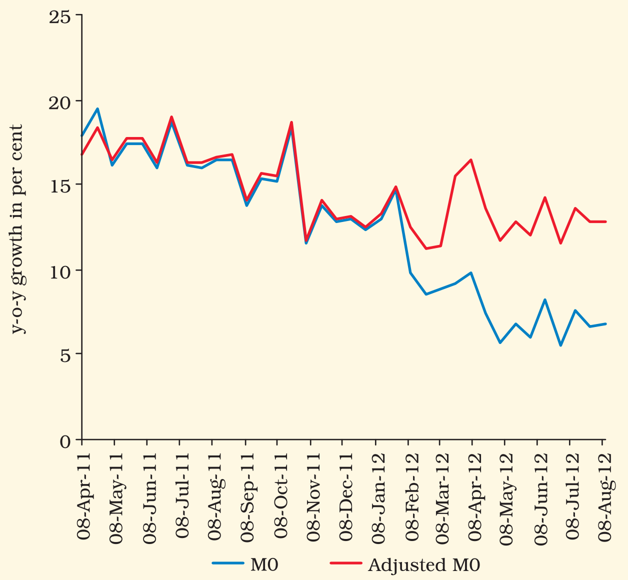
II.3.1 Monetary and credit conditions in the year 2011-12 were marked by two distinct broad phases. During the first half of the year, monetary policy was tightened. Liquidity conditions generally remained in line with the policy objective of maintaining moderate deficit of 1 per cent of NDTL, under which monetary policy transmission was seen to be more effective. More liquidity was judged to be inimical to the monetary policy goal of containing inflation, as it could spill over to prices via excess demand. In the second half, the Reserve Bank paused its tightening cycle. Liquidity deficit, however, worsened due to some unforeseen factors. First, the Reserve Bank sold dollars to contain the volatility in the rupee exchange rate. Second, the frictional mismatch caused by the sudden build-up of government cash balances persisted for a longer duration. Third, the gap between growth in credit and deposit, which was narrowing during the first three quarters of the year, widened again during the fourth quarter on account of a sharp deceleration in aggregate deposit growth and a pick-up in credit growth.

II.3.2 Headline inflation averaged about 9.5 per cent over two calendar years – 2010 and 2011, after remaining low during most of 2009. In response, the Reserve Bank persisted with its anti-inflationary monetary policy stance during February 2010-October 2011, gradually raising the operational policy repo rate by 525 basis points and the CRR by 100 basis points. The tightening was necessary as inflation risks outweighed risks to growth and would have adversely impacted growth. As domestic demand slowed, partly due to monetary policy actions, headline inflation moderated. Taking into account the forward-looking assessment that growth was slowing more than what was foreseen earlier, the Reserve Bank signalled a monetary policy pause in Q3 of 2011-12. It also infused liquidity by undertaking open market operations through outright purchases. Subsequently, the Reserve Bank eased policy rates in April 2012 factoring in the moderation in growth. In August 2012, the Reserve Bank reduced SLR by 1 percentage point with a view to providing liquidity to facilitate credit availability to productive sectors.

Expansion in net domestic assets (NDA) offset by decline in net foreign assets (NFA); reserve money growth remained low during 2011-12

II.3.3 The movements in reserve money during 2011-12 reflected the offsetting liquidity management operations of the Reserve Bank in response to the autonomous liquidity drivers (Chart II.22 and Appendix Table 9). During the year, the autonomous drivers, *viz.*, government cash balance, the Reserve Bank's forex operations and currency with the public, resulted in the drain of liquidity from the banking system. Large scale open market operations through outright purchases of G-sec of ₹1.3 trillion and daily liquidity adjustment facility (LAF) operations by the Reserve Bank resulted in the expansion of net domestic assets (NDA). However, reserve money growth decelerated during the year as NFA declined due to the Reserve Bank's interventions in foreign exchange market. The deceleration in reserve money was further accentuated by a reduction in the cash reserve ratio (CRR) during the fourth quarter that in the first round reduced the deposits maintained with the Reserve Bank

Chart II.22: Growth in Reserve Money



by around ₹795 billion. Even after adjusting for the change in CRR, reserve money growth decelerated during 2011-12.

II.3.4 Currency in circulation, which is the largest component of reserve money, decelerated in 2011-12 mainly on account of moderation in economic activity and inflation. The cumulative rise in the deposit rates progressively raised the opportunity cost of holding idle cash, which caused a switch in household savings from cash holdings.

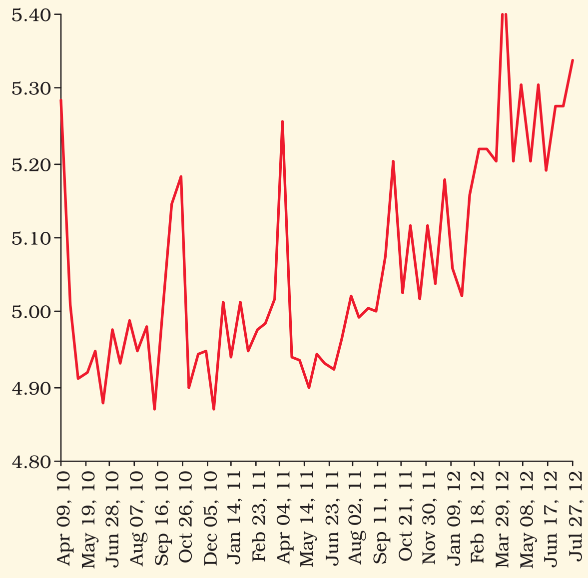
II.3.5 Liquidity deficit in the first half of 2011-12 remained within the comfort zone of the Reserve Bank on account of increased government spending. The government persistently resorted to Ways and Means Advances (WMA) along with occasional over draft (OD). Accordingly, the need for injection of durable discretionary liquidity did not arise during the first half.

II.3.6 The deceleration in the growth of reserve money (adjusted for CRR), particularly since November 2011, reflected offsetting movements in the autonomous and policy drivers of liquidity. The Reserve Bank responded to the structural drivers of liquidity – forex sales and increased demand for currency as compared to previous quarters – by the injection of durable liquidity in the form of OMO purchases and CRR cuts. The frictional dimension of autonomous liquidity – a build-up of government balance – was addressed by the provision of overnight liquidity under LAF/MSF. Following the seasonal easing of government balances, the narrowing of the wedge between the pace of growth of deposit and credit, and the Reserve Bank's active management of liquidity through LAF and OMO, liquidity deficit under LAF declined during 2012-13 so far. Chapter III provides a detailed discussion on the Reserve Bank's liquidity management operations.

Behavioural and policy factors result in higher money multiplier

II.3.7 The deceleration in reserve money in 2011-12 was led by a moderation in the demand for currency. The value of the money multiplier depends on two behavioural ratios – currency-

Chart II.23: Money Multiplier



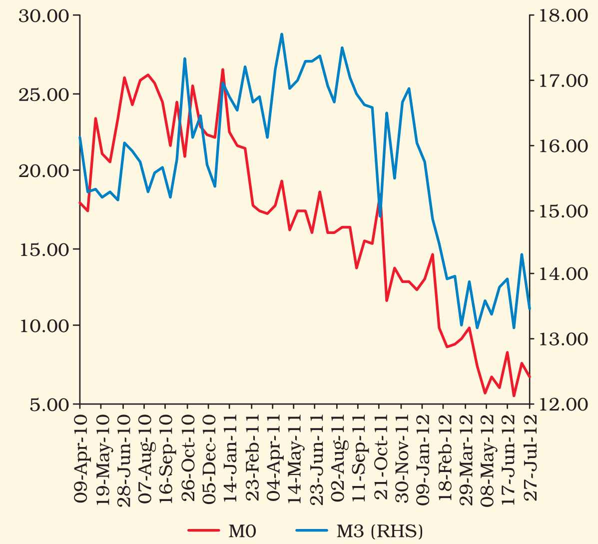
deposit ratio and reserves-deposit ratio. During the first three quarters of 2011-12, the response of banks and households to the hardening of monetary conditions led to the rise in the value of the money multiplier (Chart II.23). During 2011-12, the money multiplier peaked on the fortnight ended February 24, 2012, following the 50 basis points cut in the CRR in January 2012, which reduced the amount of required reserves to be maintained. Following a second round of decline in the CRR by 75 bps from the fortnight beginning March 10, 2012, the money multiplier rose further in recent period.

II.3.8 The rise in the money multiplier, however, could not offset the sharp deceleration in the reserve money, and money supply growth decelerated to 13.1 per cent at end-March 2012 from 16.1 per cent a year ago (Chart II.24). Even though the money supply growth marginally recovered subsequently at 13.5 per cent as on July 27, 2012 it still remains below the Reserve Bank's indicative trajectory of 15 per cent.

Broad money growth remains strong, but softens in Q4 as deposit growth decelerates

II.3.9 Consistency among money, growth and prices depends on the stability of the demand

Chart II.24: Growth in Broad Money and Reserve Money (y-o-y; per cent)



function for money. Empirically, the demand for money in India is found to be stable over the medium to longer term (Box II.9).

II.3.10 Broad money (M_3) growth, which was above the 15.5 per cent year-end trajectory by the third quarter of 2011-12, declined sharply from mid-January 2012, partly due to insufficient liquidity creation to offset frictional and structural liquidity deficits and partly due to slowing growth and inflation. All components of broad money exhibited a deceleration during 2011-12 (Appendix Table 10). Time deposits recorded strong growth during the first three quarters mainly on account of the rising opportunity cost of holding cash or demand deposits as the interest rates on time deposits responded to the anti-inflationary monetary policy stance of the Reserve Bank. The substitution from

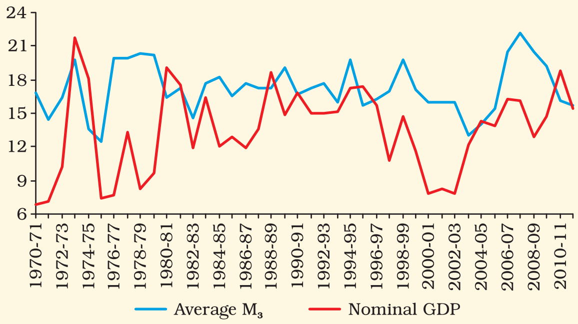
Box II.9
Demand for Money

The importance of money as an information variable for the conduct of monetary policy hinges on the stability of its demand with respect to its determinants. Even though India abandoned what was known as 'monetary targeting with feedback' in 1998, where broad money (M_3) served as the intermediate target of monetary policy, monetary aggregates in general and M_3 in particular continue to play an important role in the formulation of monetary policy.

Consistent with its projections on growth and inflation, the Reserve Bank gives its projection for M_3 growth for the financial year at the beginning of each financial year. Subsequent changes, if any, in the outturn of the evolving growth-inflation dynamics results in a change in the monetary projection. This presumes a stable demand for money. Any deviation between the initial projection and the final outturn of M_3 depends not only on the accuracy of the projection of growth and inflation – the proximate determinant of money demand – but also on the stability of the money demand function. Further, there are evidences of bi-directional causal relation between money, prices and income as was recognised in the 'monetary targeting with feedback' approach.

What has now prompted a revisit of the stability of the money demand function is whether the deceleration in money growth during recent years is in line with the deceleration in nominal GDP growth (Chart 1). Does it imply financial disintermediation induced instability in the demand for money that has prompted many formerly monetary targeting countries to abandon it? Or is it a consequence of the decelerating financial saving of households as households

Chart 1: Growth Rate of Nominal GDP and M_3



rebalance their portfolios in favour of assets that are illiquid but yield a higher rate of return? These issues have necessitated a re-examination of the demand for money in India.

Theoretically, the demand for money depends primarily on income and the opportunity cost of holding money. As real income grows, the demand for money increases to finance a higher volume of transactions. Further, the higher real rate of return on alternative assets increases the opportunity cost of holding money, thereby reducing the 'speculative' demand for money.

Also, financial innovations that involve the introduction of new financial instruments influence the demand for money.

(Contd....)

In addition, with full convertibility on the current account in 1994, the measures taken to liberalise the capital account, exchange rate and foreign rate of interest are expected to have a bearing on the demand for money.

The mainstream literature in the Indian context define the demand for broad money (M_3) as a function of either real income and price level (*e.g.*, Mohanty and Mitra (1999), Ramachandran (2004)) or real income and a short term nominal interest rate (*e.g.*, Rao and Singh (2006)). The empirical literature has debated considerably on the stability of money demand and found mixed evidences depending on the model specification and time period under consideration.

An empirical investigation of demand for money for the period 1970-71 to 2011-12 reveals that there is a long run cointegration relationship between money balances, real income and the price level. Money demand is defined as the average M_3 for the year, real income is measured in terms of GDP at constant market prices. The price level is captured using the WPI. All these variables are in natural log forms. Accordingly, the estimate for long-run money demand is as under:

$$M_3 = 9.62 + \underset{(0.33405)}{1.30}\,GDP + \underset{(0.24515)}{0.98}\,WPI \ldots\ldots\ldots\ldots\ldots(1)$$

where the figures in parentheses indicate standard error of the estimates.

The coefficients are significant at 5 per cent level. The income elasticity of money demand is estimated to be 1.3, while a one percentage increase in price level translates into a nearly proportionate increase in the long run demand for money. Standard tests indicate robustness of these results. Other explanatory variables, for instance, proxies for financial innovations, alternative sources of funding *etc.* didn't exhibit significant long term relation in the above specification.

On the whole, the empirical analysis indicates that the demand for money (equation 1 above) in India remained generally stable over the period under consideration.

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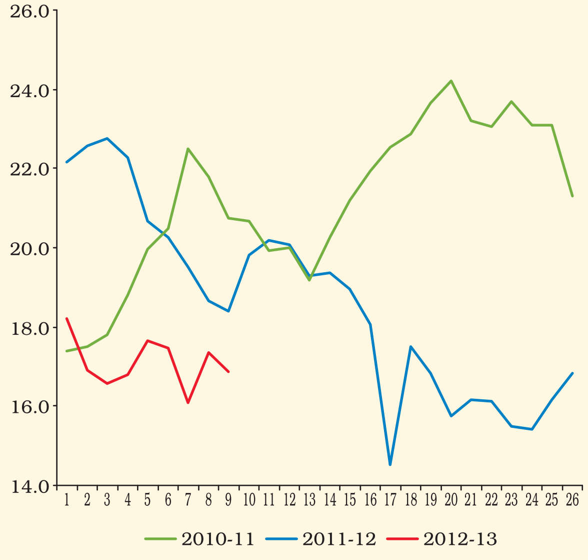
other components of household financial savings, such as small savings and mutual funds was also mirrored in the strong growth in time deposits. During the fourth quarter of 2011-12, however, tight liquidity conditions slowed down time deposit growth, which was further aggravated by the base effect. Banks supplemented deposits with alternate sources such as borrowings by way of debt instruments and LAF.

II.3.11 On the sources side, the deceleration in M_3 was led by commercial credit growth. Besides, the Reserve Bank's foreign exchange operations also caused a drag on M_3 growth. The banking system credit to the government, however, increased significantly. For commercial banks, this reflected their participation in the large market borrowing programme.

Credit decelerates as growth slows

II.3.12 The Reserve Bank lowered its projection for the growth of non-food credit from 19 per cent in May 2011 to 18 per cent in July 2011 and finally to 16 per cent in January 2012. This was done in recognition of the gradual deceleration in credit growth below the Reserve Bank's trajectory even as M_3 growth was above the Reserve Bank's indicative trajectory (Chart II.25). The deceleration in credit reflected the combined effect of weakening

Chart II.25: Non-food Credit Growth (Y-o-Y, per cent)



Box II.10
Interest Rate and Credit Channels of Monetary Transmission

Monetary transmission explains the mechanisms by which monetary policy changes achieve the ultimate objectives of impacting inflation and growth. The interest rate and credit channels have been particularly important in the Indian case. The interest rate channel explains how changes in money supply affect investment, aggregate demand, inflation and output through changes in interest rates. A contractionary monetary policy raises the real lending rate, thus raising the cost of capital. This causes investment spending, and therefore, aggregate demand to slow down and lead to growth deceleration and the lowering of inflation.

The credit channel of monetary transmission occurs through two broad channels – the balance sheet channel and the bank lending channel. The balance sheet channel works by affecting the external finance premium, *i.e.*, the difference between the costs of funds raised externally (equity and debt) and internally (retained earnings). As imperfections and information asymmetry prevails in the credit market, external finance premium tends to rise when central banks raise short-term interest rates. This affects net cash flows and the impact depends on financial ratios such as the net worth or the coverage ratio of a firm. Cyclical movements in borrower's balance sheets can amplify and propagate business cycles through "financial accelerators" (Bernanke, Gertler and Gilchrist, 1996).

The bank lending channel works by monetary policy impacting the supply of bank loans. As external finance premium rises, bank finance decreases in the sources of funds. This is because sources of finance are imperfect substitutes for one another. Banks, which play an important role in reducing informational problems, tend to lose their retail deposit base as the central bank contracts base money. Since banks cannot fully substitute these through other sources such as CDs or by raising capital, they are forced to contract bank loans.

There is significant new evidence of these channels operating in India. Mohanty (2012) using a quarterly structural vector autoregression model showed that policy rate increases in India in recent years had a negative effect on output growth with a lag of two quarters and a moderating effect on inflation with a lag of three quarter. The overall impact persists for 8-10 quarters. Khundrakpam (2011) found that policy induced expansion or contraction in money supply makes banks adjust their credit portfolio. For the period after the introduction of LAF, a 100 bps increase in policy rate was found to reduce credit by 2.8 per cent in nominal terms and 2.2 per cent in real terms. Monetary policy in India under the framework of multiple indicator approach takes into account both interest rate movements and developments in the credit market for policy decision. The speed of transmission in India is often impacted by banks' having a large share of term deposits. With such deposits locked, banks cost of funds do not change fast enough for them to change their lending rates.

References

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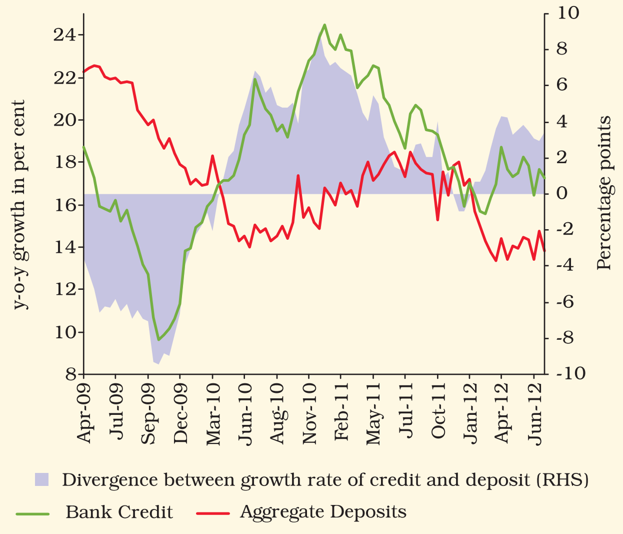
Khundrakpam, J. K. (2011), "Credit Channel of Monetary Transmission in India: How Effective and Long are the Lags", *RBI Working Paper* No.20/2011 November.

Mohanty, Deepak (2012), "Evidence of Interest Rate Channel of Monetary Policy Transmission in India", *RBI Working Paper* No.6/2012, May.

growth and increasing risk aversion by banks. As a result the SCBs' investments in government securities increased sharply. However, there is significant evidence suggesting that in India, the interest rate channels and credit channels have been working effectively in recent years (Box II.10).

II.3.13 The deceleration in credit coupled with the upswing in deposit growth caused the divergence between credit and deposit growth to narrow during the first three quarters of 2011-12 (Chart II.26). The divergence even turned negative in December 2011. The divergence increased following the sharper deceleration of deposit growth during Q4 of 2011-12 and the turnaround in credit during March 2012. This trend of low deposit growth and pick-up in credit continued in

Chart II.26: Aggregate Deposits and Bank Credit of SCBs



Q1 of 2012-13, thus maintaining the high wedge between credit and deposit. As deposit growth moderated, commercial banks increased their recourse to non-deposit sources, *viz.*, borrowings, including through the LAF window. The reduction in CRR in Q4 of 2011-12 also augmented the lonable resources of banks. Reflecting these trends, the outstanding credit-deposit ratio rose from 74.5 per cent at end-March 2011 to 76.7 per cent at end-March 2012. The incremental credit-deposit ratio continued to remain at a high level of 95.5 per cent during 2011-12 (97.5 per cent during the previous year) as banks accessed LAF borrowings for extending credit. In Q1 of 2012-13, however both outstanding as well as incremental credit deposit ratio declined.

Rising non-performing assets (NPAs) adversely affect credit growth

II.3.14 Against the backdrop of growth deceleration, the banks exhibited risk aversion in extending credit. Credit growth decelerated across bank groups during 2011-12 ranging between 16.3 per cent in the case of public sector banks (PSBs) and 19.7 per cent for private sector banks. The comparable figures for the previous year were 21.0 per cent and 24.7 per cent, respectively. Since PSBs account for about 74 per cent of the outstanding credit extended by commercial banks, the credit growth of commercial banks decelerated to 17.0 per cent from 21.5 per cent in the previous year. In part, credit deceleration reflects banks' risk aversion in face of rising NPAs and increased leverage of corporate balance sheets.

II.3.15 The deceleration in non-food credit during 2011-12 was accounted for by all sectors, barring agriculture (Appendix Table 11). The deceleration was particularly sharp for the services sector and personal loans and was modest for the priority sector and industry. Within industry, however, medium scale industries witnessed a sharp decline in the flow of credit. During 2012-13 so far, non-food credit growth at 16.9 per cent in mid-August 2012, is in line with the indicative trajectory of the Reserve Bank.

II.3.16 In the year 2012-13 so far, there has been a significant easing of liquidity and monetary conditions reflecting lagged impact of 125 bps cut in CRR in Q4 of 2011-12, 50 bps cut in policy rate and liquidity infusion of over ₹800 billion through outright OMOs and ₹100 billion through export credit refinance, the limit for which was raised from 15 per cent to 50 per cent of the outstanding export credit. With continued liquidity infusion, there has been a gradual pick-up in monetary and credit aggregates. The 1 percentage point SLR reduction effective August 2012, is expected to further ease liquidity and encourage banks to increase loans and advances.

II.4 FINANCIAL MARKETS

Euro area debt crisis keeps markets volatile

II.4.1 Uncertainties emanating from the ongoing euro area sovereign debt crisis, the downgrade in the outlook of several advanced economies (AEs), and stability issues of euro area banks amid bank recapitalisation concerns, among other factors, kept the international financial markets volatile for most of 2011-12. Cross-holding of sovereign debt, especially by euro area banks, also translated the sovereign debt crisis into banking sector stresses. High debt levels and stretched fiscal space made it difficult for euro area sovereigns to re-capitalise the banks with public money. Concerns over economic growth also came to the fore with many AEs, particularly in the euro area, experiencing low or negative rates of growth. Although some AEs took policy measures to infuse more liquidity, the private demand has remained low reflecting *inter alia* deleveraging by households and tight bank lending.

II.4.2 Higher market volatility was witnessed after the downgrade of the long term US sovereign debt in August 2011. Equity markets witnessed a sell-off, with investor preference shifting towards perceived safe haven assets. The Federal Reserve embarked on an “operation twist” to support the US economy in the face of slow growth and high unemployment. Developments in the euro area warranted swift action by policy makers to avoid a downward spiral in the financial markets. The European Central Bank (ECB) responded by undertaking two Long Term Refinancing Operations (LTRO) that pumped in over €1 trillion. The European Financial Stability Facility (EFSF) also increased its resources to €780 billion. Against imminent default possibility, a bond swap was effected with large haircuts to enable Greece to meet its obligation. The various policy measures in the euro area in response to the crisis had implications for global financial markets (Box II.11).

Box II.11
Euro Area Crisis – An Assessment of Policy Action

The euro area is caught in a deep, structural and multifaceted crisis characterised by large fiscal deficit, enormous public debt, banking problems and consistently eroding competitive position manifested in a gradually deteriorating current account balance. Beginning with the peripheral euro area in 2009, the sovereign debt crisis has of late cascaded to engulf core euro area economies, like France and Austria, which were downgraded from their AAA rating status in January 2012. It has also brought Greece closer to a possible exit from the euro and resulted in a spillover to a banking crisis in Spain and Portugal. As countries in a currency union, the affected economies are faced with a policy dilemma since they do not have the liberty of using exchange rate and monetary policy as stabilisation measures.

I. Policy Measures

The policy measures taken to alleviate the crisis were mainly fourfold: (i) regional financial arrangements and euro-IMF joint provision of resources, (ii) exceptional liquidity facility provided by ECB, (iii) measures to recapitalise and strengthen prudential norms in the European banking system and (iv) structural measures to correct a distorted fiscal system.

Financial arrangements in the region were effected through the establishment of new institutions, such as the European Financial Stabilisation Mechanism (EFSM) in May 2010, the European Financial Stability Facility (EFSF) in August 2010 and the European Stabilisation Mechanism (ESM) that is being operationalised but has not found favour for a banking license as yet. While EFSM involves funds raised by the European Commission backed by EU budget, institutions such as EFSF were authorised to mobilise resources by issuing bonds and other debt instruments in the market backed by guarantees of 17 euro area member states. These institutions, in alliance with the IMF, financed rescue packages for Greece, Ireland, Portugal and Italy.

The ECB arranged to stabilise the sovereign debt markets through security market programmes that involved sterilised purchases of both public and private debt of the affected countries. In December 2011, the ECB committed to supply banks in the euro area with euro-denominated funding for three years in two special long-term refinancing operations (LTROs) that would enable banks to meet their potential funding needs from maturing bonds over the next few years. Since the large sovereign debt holdings of European banks raised the probability of a spillover of the crisis to the financial sector, efforts were made to inspire confidence in the banking system. Popular measures included encouraging stress tests for the banks and their transparent dissemination and the recapitalisation of 65 major banks by raising their core tier I capital to risk-weighted assets ratio to 9.0 per cent by end-June 2012.

In terms of medium-term policy measures, European leaders often reiterated their commitment to implementing fiscal austerity measures. At the Brussels Summit in December 2011, EU members agreed that general government budgets should either be balanced or in surplus. Besides, institutions outside the euro area have extended their support through measures such as central banks' provision of contingent swap lines in 2010 and again in late 2011, and also announced easy and unconventional monetary policy measures.

Besides, various structural measures are currently being undertaken including the recent (June 2012) European Council decision on "Compact for Growth and Jobs" which aims to mobilise 120 billion euros for immediate investment by unlocking domestic potential for growth, including through opening up competition in network industries, promoting the digital economy, exploiting the potential of a green economy, removing unjustified restrictions on service providers and making it easier to start a business.

There is also a line of thought that though not very likely, exit of troubled nations like Greece from the union may allow more policy flexibility to the affected countries in the medium-term.

Assessment

The policy measures taken by the euro area, *viz.*, bailing out affected economies and liquidity provision have not proved to be effective in debt crisis resolution. Concerns over fiscal sustainability and solvency of these economies still remain. For example, in June 2012, Spain's economic condition worsened necessitating bail-out packages for its banks. These appear to be aimed at staving off the crisis rather than addressing its structural issues.

Since the economies in a currency union do not have the option to adjust the exchange rate, the necessary adjustment has to come through fiscal consolidation. However, the ongoing fiscal austerity measures are likely to impact near-term recovery. The clear inter-temporal choice between fiscal consolidation and near-term growth then necessitates concrete collective effort to establish a fiscal union. Besides,

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efforts should be made to encourage domestic savings and develop indigenous government bond markets to reduce the reliance on foreign capital to finance public debt.

Second, regional arrangements have limited firepower, and may require multilateral financial assistance to supplement resources. But this would have direct implications for IMF resource mobilisation, and since the ratification of the 2010 quota reforms is a protracted process, the IMF may have to rely on borrowed resources that may deviate from the equilibrium ratio between quota and borrowed resources, with potential governance implications. This not only pre-empts resources from low-income countries that have become more vulnerable to global economic uncertainties but also puts pressure on crisis by-standers that may be facing an uncertain macroeconomic situation.

Third, increased liquidity provision in the region may add to global liquidity, which, in turn, may feed into global inflation and raise monetary policy challenges for EDEs. If increased global liquidity is channelled into commodity markets, rising commodity prices, particularly oil, will stretch current account deficits in oil importing economies like India. Tightening the prudential norms in the European banking systems may lead to deleveraging, which may increase exchange rate volatility in EDEs.

Against this backdrop, there has been a debate about whether the crisis response in the euro area has been appropriate. One argument is that the "troika" of the EU, the ECB and the IMF has delayed in responding to the crisis. Douglas J. Elliott, Fellow at Brookings Institution in his testimony argued that the euro crisis could plunge Europe into a deep recession and put the U.S. into at least a mild recession. There are those who argue that the economics of austerity may fail in the euro area. Others argue that the currency union is inherently unsustainable and taxpayer money is being drained through unworkable bailouts. The problem is whether others in the periphery can be ring-fenced and how to thwart a likely strong contagion. Broin (2012) warns that if loss-sharing cannot be agreed on, a messy default is likely to end in a forced exit with far-reaching implications for the rest of the world.

Brutti and Saure (2011) find that exposure to Greek sovereign debt and the debt of Greek banks constitute an important transmission channel in the case of the euro area and, overall, financial linkages explain up to two-third of the transmission of sovereign debt in the euro crisis. Further, if Greece leaves the Union, the apprehension about probable exit of other countries from the euro area is likely to increase considerably as their situation is equally fragile. Portugal and Ireland may have to restructure their public debt regardless of whether Greece defaults. Illiquid but solvent countries like Italy and Spain will have to be rescued through lender of last resort support to avoid default. It would have a cascading impact on German and French bank balance sheets as they hold majority of the Greek loans. Subbarao (2012) has pointed to the trilemma being faced by the central banks, including the ECB, in managing price stability, financial stability and sovereign debt sustainability at the same time. This new trilemma has emerged after the global crisis.

Reference

Broin, Peader O. (2012), "The Euro Crisis: Orderly Default or Euro Exit", The Institute of International and European Affairs, Report No.8.

Brutti, Filippo and Phillip Saure (2011), "Transmission of Sovereign Risk in a Euro Crisis", December, Swiss National Bank Study Centre, Gerzensee Working Paper No.12.01.

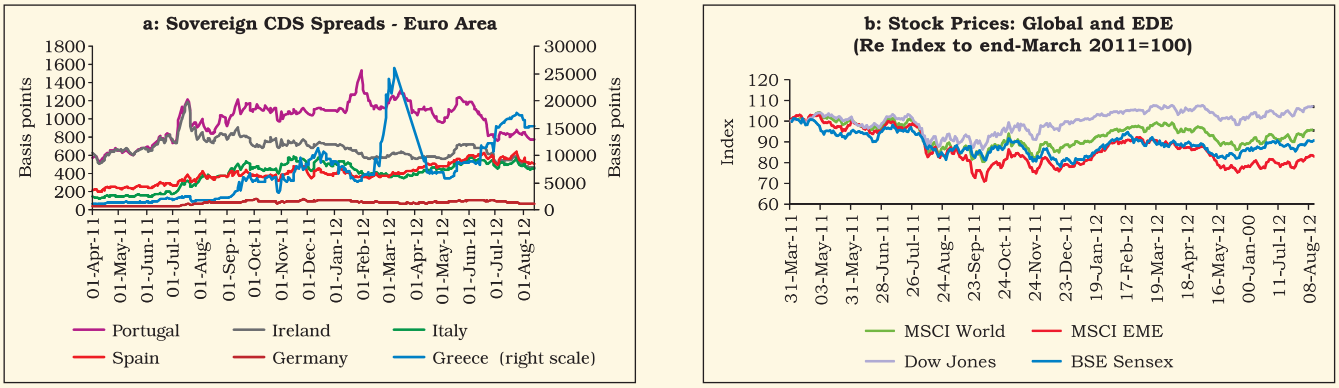
Subbarao, Duvvuri (forthcoming), "Price Stability, Financial Stability, and Sovereign Debt Sustainability Policy Challenges from the New Trilemma", Macroeconomics and Finance in Emerging Market Economies.

US Congress (2011), "What the euro crisis means for Taxpayers and US economy", Testimony of Douglas Elliott before House sub-committee on Troubled Asset Reconstruction Programme (TARP), Financial Services and Bailouts of Public and Private Programs, December 15, 2011

II.4.3 In early 2012, global financial markets, particularly equity markets, witnessed a firm trend due to liquidity emanating from the LTRO and other policy actions by AEs. However, concerns over the euro area sovereign debt crisis have resurfaced in anticipation that a change of leadership in Greece and France may be inclined to re-negotiate the austerity-based bailout plan, leading to stress in financial markets (Chart II.27). During June –mid August 2012, despite various measures taken by the European Council to break the vicious circle between banks and sovereigns, the bond yield of Spain continued to be at elevated level. Further, recent developments like the LIBOR manipulation has also added to the uncertainty by demonstrating the fragilities in the banking and financial sector. The discussion paper from the Financial Conduct Authority of the UK government "The Wheatley Review of LIBOR" released in August 2012, *inter alia* lays out the necessary reforms for tighter governance of LIBOR, soliciting feedback from concerned parties.

II.4.4 The Indian financial markets (especially the equity and currency markets) witnessed significant spillover from the global turmoil in addition to the domestic growth and inflation concerns, anti

Chart II.27: Indicators of Global Financial Market Developments



inflationary monetary policy and governance issues. The financial markets quickly reflected the shocks emanating from the global and domestic economy.

A financial conditions index developed in-house highlights the information content in the financial variables (Box II.12).

Box II.12
Financial Conditions Index

There is a large body of literature on extracting signals about the real economy from financial variables. Economists and analysts have often used different financial prices as lead indicators of the future course of the economy. Interest rates and interest rate spreads are considered to be useful in predicting the course of the economy (Bernanke, 1990). The shape of the yield curve, *i.e.* the term structure of interest rates, contains information about the expectations of market participants about the state of the economy in the future. The yield curve contains considerable information on the future path of inflation for horizons of more than one year.

Similarly, the spread between three -month commercial paper (CP) and three -month Treasury bill (T-bill) depicts the credit default risk associated with corporates (if liquidity spread can be ignored). Stock and Watson (1989) have found that the spread between CP and T-bill rates, 10-year and 1-year government bond, housing starts, manufacturer's unfulfilled orders in durable goods industries and growth of part -time work are good predictors of business cycles.

Studying the movements in different financial assets in isolation, however, may be of limited use as each price contains information only about a certain aspect of the economy and does not necessarily reveal much about other aspects. This problem can be overcome by constructing an index using the relevant financial variables. This kind of index is usually called a Financial Conditions Index (FCI) and it summarises information about the future state of the economy contained in current financial variables (Hatzius *et al.,* 2010). In essence, the FCI analyses the synthesis of various, sometimes contradictory, signals from financial markets.

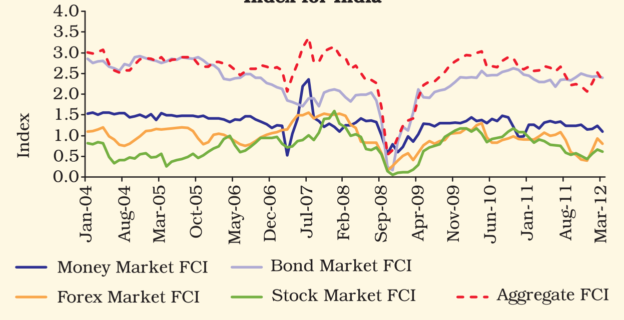
Indices such as the Bank of Canada's Monetary Conditions Index, Macroeconomic Advisers Monetary and Financial Conditions Index (MFCI), Bloomberg Financial Conditions Index (BBFCI), Goldman Sachs Financial Conditions Index (GSFCI), Federal Reserve of Kansas City Financial Stress Index (KCFSI), OECD FCI, and Monetary Conditions Index for India (Kannan *et al 2006)* have been constructed at various times. Drawing from the literature, a FCI for India has been constructed in a *principal components analysis* framework using monthly data between January 2004 and March 2012. While indices have been computed for money market, bond market, forex market and stock market, an aggregate financial conditions index that covers all segments is also computed (Table 1).

Table 1: Components of the Financial Conditions Index

Call Spread (Call Rate – Effective Policy Rate)	*Money Market FCI*	*Aggregate FCI*
CBLO Spread (Effective Policy Rate – CBLO Rate)		
Market Repo Spread (Effective Policy Rate – Market Repo Rate)		
Short Spread (3m CP – 3m T-Bill)		
10 yr G-Sec Yield	*Bond Market FCI*	
Long Spread (10 yr AAA Corp Bond – 10 yr G-Sec)		
Medium Spread (5 yr AAA Corp Bond – 5 yr G-Sec)		
Exchange Rate	*Forex Market FCI*	
3-month Implied Volatility		
Forex CMAX		
S&P CNXNifty Annual Returns	*Stock Market FCI*	
PE Ratio of S&P CNX Nifty		
S&P CNX Nifty Market capitalisation to GDP Ratio		

(Contd....)

Chart 1: Movement in Financial Conditions Index for India



The index has been constructed so that high values depict accommodative financial conditions, whereas low values depict tight financial conditions. It may be seen from Chart 1 that the financial conditions index captures the stressed financial conditions in the wake of the global financial crisis.

Evidently, the index shows highly stressed financial conditions in October 2008, just after the collapse of Lehman Brothers. The usefulness of the FCI should be appreciated in the context of its ability to forecast or explain economic variables like GDP, IIP and inflation. The correlation of FCI with growth rates of GDP and IIP are 0.43 and 0.60, respectively, which are statistically significant. The recovery in financial conditions has broadly been in line with recovery in the IIP and GDP growth rates (Chart 2). However, more research is called for to establish the link between the aggregate financial conditions index and economic variables.

Reference

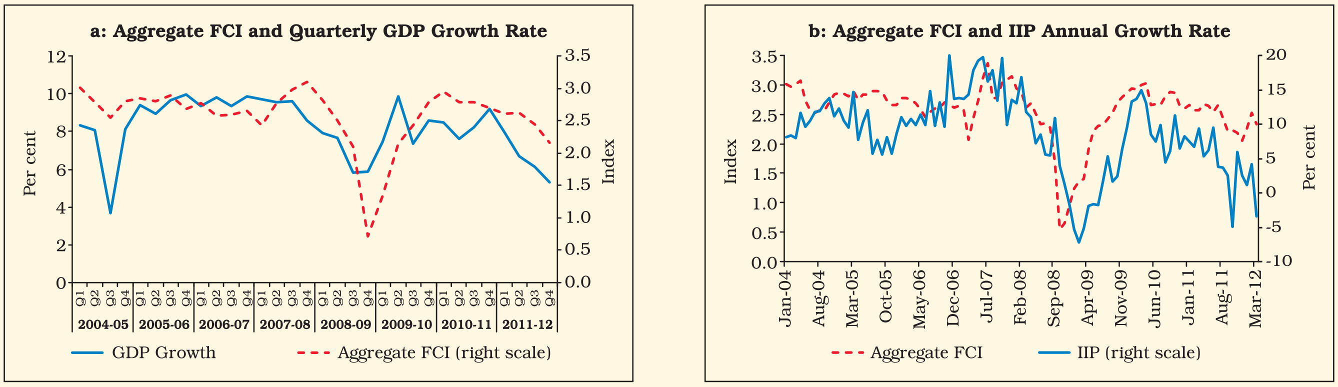
Bernanke, Ben S. (1990), "On the Predictive Power of Interest Rates and Interest Rate Spreads." *New England Economic Review,* November/December, pp. 51-68.

Hatzius, J, P.Hooper, F.Mishkin, K. Schoenholtz and M. Watson (2010), "Financial Conditions Index: A Fresh Look after the Financial Crisis", *National Bureau of Economic Research Working Paper* No -16150, Cambridge, July.

Kannan, R, Siddhartha Sanyal and Binod Bihari Bhoi (2006), "Monetary Conditions Index for India", Reserve Bank of India Occasional Papers Vol. 27, No. 3, Winter

Stock, J. and M. Watson (1989), "New Indexes of Coincident and Leading Economic Indicators," in O. Blanchard and S. Fischer (eds.*), NBER Macroeconomics Annual (Cambridge, MA: MIT)*, 352-94.

Chart 2: Trends in FCI, GDP and IIP



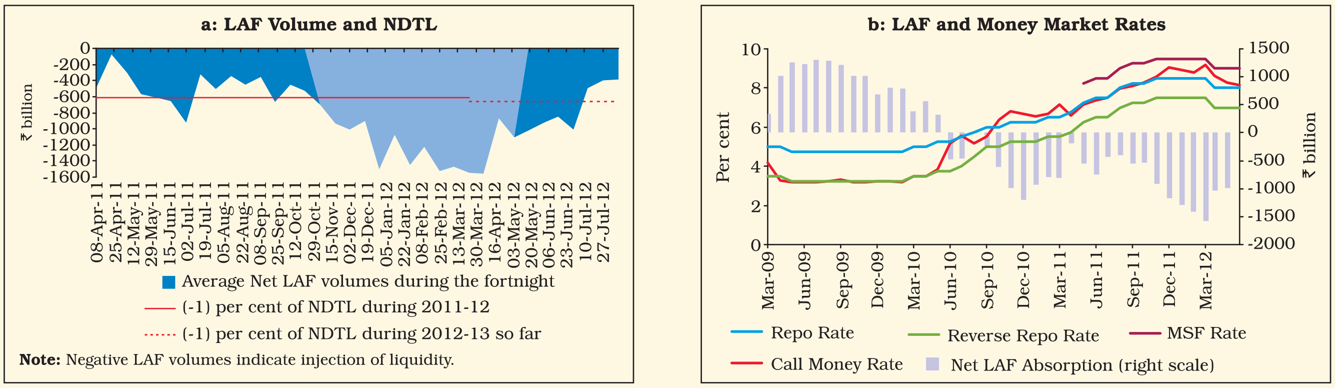
Monetary transmission strong in deficit liquidity conditions for most of the year

II.4.5 The monetary policy stance of the Reserve Bank saw a gradual shift from the primary focus of containing inflation and anchoring inflation expectations (during May-October 2011) to more growth enabling, with due cognisance of the inflationary pressures. In line with the policy stance, 2011-12 saw liquidity conditions remaining in a deficit mode, with the later part of the year beginning November 2011 experiencing liquidity deficit beyond the stated comfort level of (+/–) one per cent of net demand and time liabilities (NDTL) of banks (Chart II.28a).

Money market rates rose, reflecting monetary policy and structural liquidity deficit

II.4.6 The call money rate generally hovered around the repo rate during H1 of 2011-12, when the liquidity deficit was contained mostly within the comfort zone of the Reserve Bank. However, tighter liquidity conditions in H2 kept the call rate mostly above the repo rate (although below the MSF rate). As an aberration of the trend, the year-end scramble for funds by banks to shore up their balance-sheets

Chart II.28: Transmission of Policy Rates to Financial Markets



(and front-loading of reserve) caused the call money rate to move sharply above the MSF rate on March 30, 2012. The rates in the collateralised segments of the money market moved in tandem with the call rate, but generally remained below it during the year (Chart II.28 b). The money market rates have declined in 2012-13 so far, with the easing of liquidity conditions, and reduction in the policy rate announced in the Monetary Policy 2012-13 Statement (April 17, 2012).

II.4.7 The speed of transmission of monetary policy measures to the financial markets determines the efficacy of the policy action. As noted by the working group on Operating Procedure of Monetary Policy (Chairman: Shri Deepak Mohanty), the speed of monetary policy transmission across financial markets was faster in a liquidity deficit situation than otherwise. In-house empirical analysis on the inter-linkages between financial markets and monetary policy transmission reaffirm the finding. Asymmetry in monetary policy transmission to financial markets in India is observed during 2005-11, with the transmission being faster and more persistent when the liquidity is in deficit mode than otherwise.

Higher bank deposit and lending rates also reflect improved monetary policy transmission

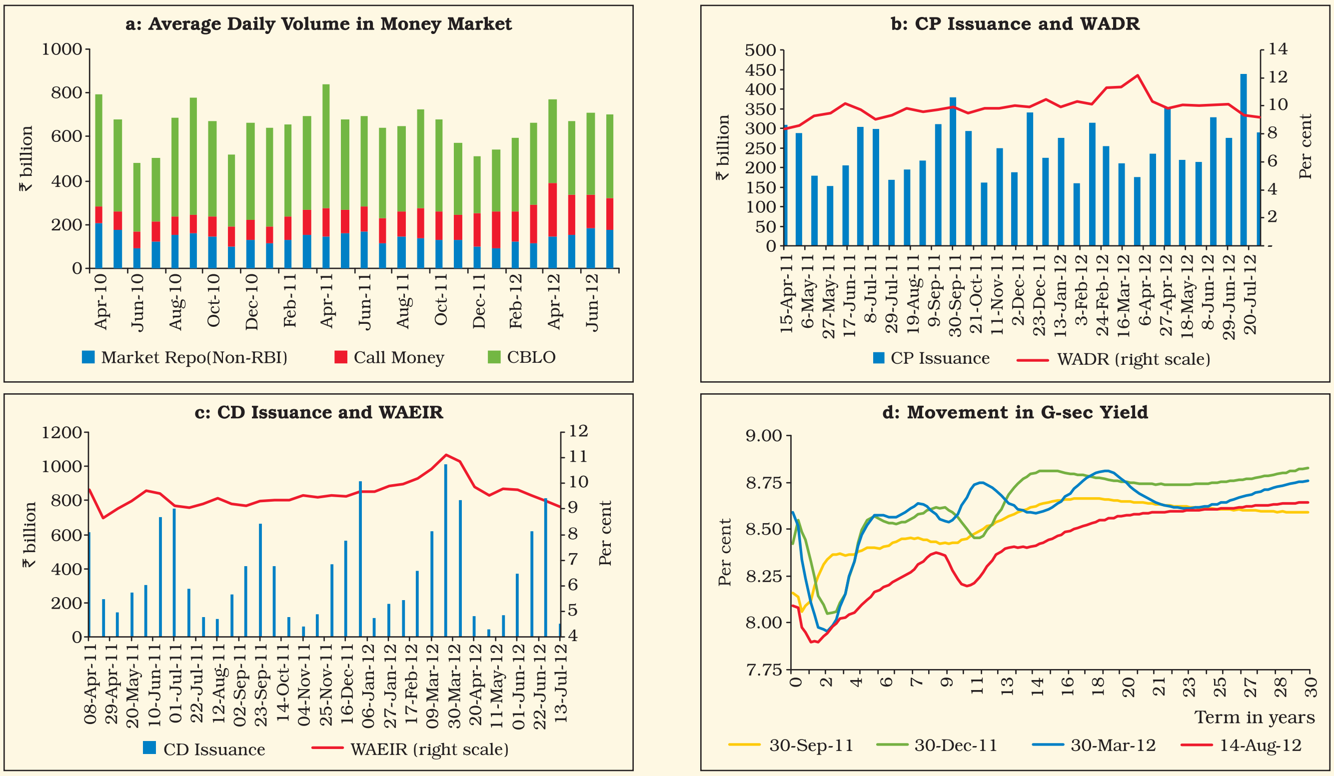
II.4.8 During 2011-12, scheduled commercial banks (SCBs) increased their modal deposit rate by 82 basis points (bps) and modal base rate by 125 bps. The weighted average lending rates of five major public sector banks increased from 10.98 per cent in March 2011 to 12.80 per cent by September 2011 and remained around that level in April 2012 before declining to 12.58 per cent in June 2012, suggesting that bank lending rates were broadly following the policy rate signal.

Volumes in collateralised money market declined

II.4.9 Transaction volumes in the collateralised borrowing and lending obligation (CBLO) and market repo segments declined in 2011-12 compared to the previous year (Chart II.29). Banks and primary dealers were the major groups of borrowers in the collateralised segments, whereas mutual funds (MFs) and banks remained the major groups of lenders in these segments.

II.4.10 The average fortnightly issuance of certificates of deposit (CD) and commercial paper (CP) increased during 2011-12. 'Leasing and Finance' and 'Manufacturing' companies remained the major issuers of CPs. The effective interest rate for aggregate CD issuances increased to 11.13 per cent at end-March 2012 compared with 9.96 per cent at end-March 2011. The CD rates spiked during March 2012 reflecting overall tight liquidity conditions in the money markets and the reluctance of MFs to rollover bank CDs after asset management companies were made accountable for fair valuations on a mark-to-market basis. The weighted average discount rate (WADR) on CP also

Chart II.29: Activities in Domestic Money and G-Sec Markets



increased to 12.2 per cent as at end-March 2012 from 10.4 per cent as at end-March 2011. While the average fortnightly issuance of CPs has increased during 2012-13 so far (till mid-July 2012), it has decreased for CDs. The WAEIR of aggregate CDs and WADR of aggregate CPs declined to 9.1 and 9.3 per cent, respectively, in mid-July 2012.

G-sec yields remained range bound despite large government market borrowing

II.4.11 The G-sec yields generally hardened during the early part of H1 of 2011-12 on account of rise in price of commodities, including crude oil, concerns about inflation and government's fiscal deficit. The rise in yields also reflected transmission of the hikes in policy rates by 50 basis points in May 2011. In the later part of H1, the G-sec yields remained range bound amidst tight liquidity conditions, persistent inflation concerns, hike in policy rates by cumulative 100 bps in three stages and growth concerns as reflected from weak IIP data and rush for safe haven assets after S&P downgraded the credit rating of the US (Chart II.29d).

II.4.12 During the initial part of H2 of 2011-12, the yields continued to rise after the Reserve Bank hiked the policy rate by 25 bps. The yields, however, eased from mid-November 2011 on the back of enhancement in FII investment limits in G-sec, easing of food inflation and the pause in rate hikes as announced in the Mid-Quarter Monetary Policy Review (December 2011). OMO purchases by Reserve Bank also helped in easing of G-Sec yields (Box II.13). However, prevailing tight liquidity conditions and concerns about increased government's borrowing program for 2012-13 as announced in the Union Budget caused yields to harden towards end of Q4 of 2011-12.

II.4.13 G-sec yields softened during April 2012 in response to cut in policy rates, easing of inflation and slowdown in industrial activity and exports. The

Box II.13
Impact of OMO on G-sec Market Trading Activity

A combination of factors (both frictional and structural) led to a net tight liquidity position in the later part of 2011-12. As a measure to address the tight liquidity prevailing in the system since Q3 of 2011-12, the Reserve Bank conducted OMOs through both the auction and NDS-OM routes. Since the commencement of OMOs in November 2011, the Reserve Bank injected net durable liquidity of ₹1.35 trillion into the system during 2011-12 (Chart 1). OMOs and CRR cuts together helped ease the liquidity stress to a large extent.

The objective of OMO purchases is liquidity management. The Reserve Bank's OMO purchases, however, adds to the existing demand for G-secs, drives down yields and boosts trading volumes, thereby imparting liquidity to the G-sec market (Chart 2). The impact on yields, if any, is the result of the G-sec market demand -supply dynamics and may not be construed as a signal for monetary policy purposes.

Since liquidity injection of durable nature is the goal in conducting OMO auctions, the Reserve Bank has to identify an optimal mix of liquid and semi-liquid/illiquid securities. While the rationale for including semi-liquid/illiquid securities is to enhance their secondary market liquidity, the liquid securities are chosen to make the OMO successful. The liquid securities are often those with the least price risk and thus have a higher probability of success in the auctions. The downside to this arrangement is that it may reduce the availability of tradable stock of liquid securities and, if the supply is not commensurate with the purchases through OMOs, it may adversely impact the secondary market liquidity.

Chart 1: OMO Auction and Liquidity Deficit

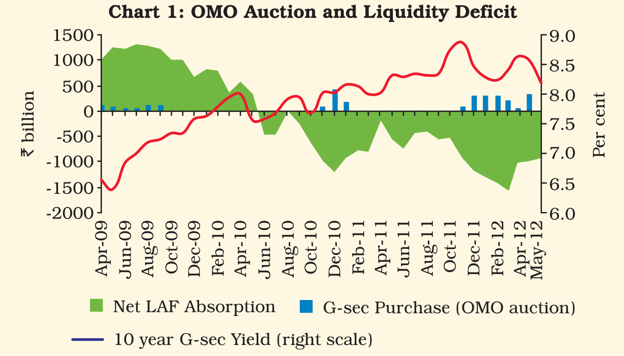
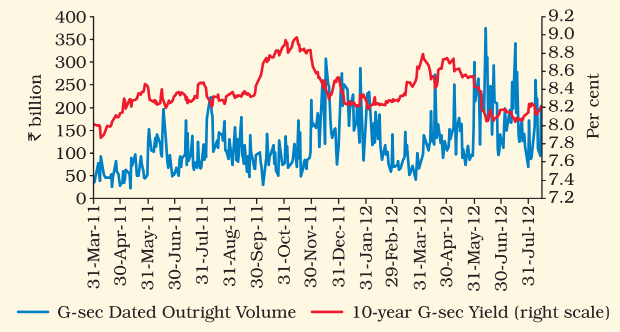


Chart 2: Secondary Market Price-Volume Movements



yields, however, rose sharply after S&P downgraded India's long-term rating outlook to negative towards end-April 2012. During 2012-13 (up to August 13), the Reserve Bank injected durable liquidity to the extent of ₹591 billion through OMO purchases in auctions and another around ₹222 billion through purchase of securities on the anonymous trading platform. The G-sec yields hardened after the Reserve Bank reduced the SLR by one per cent from 24 per cent to 23 per cent in the First Quarter Review of Monetary Policy 2012-13 (July 31, 2012).

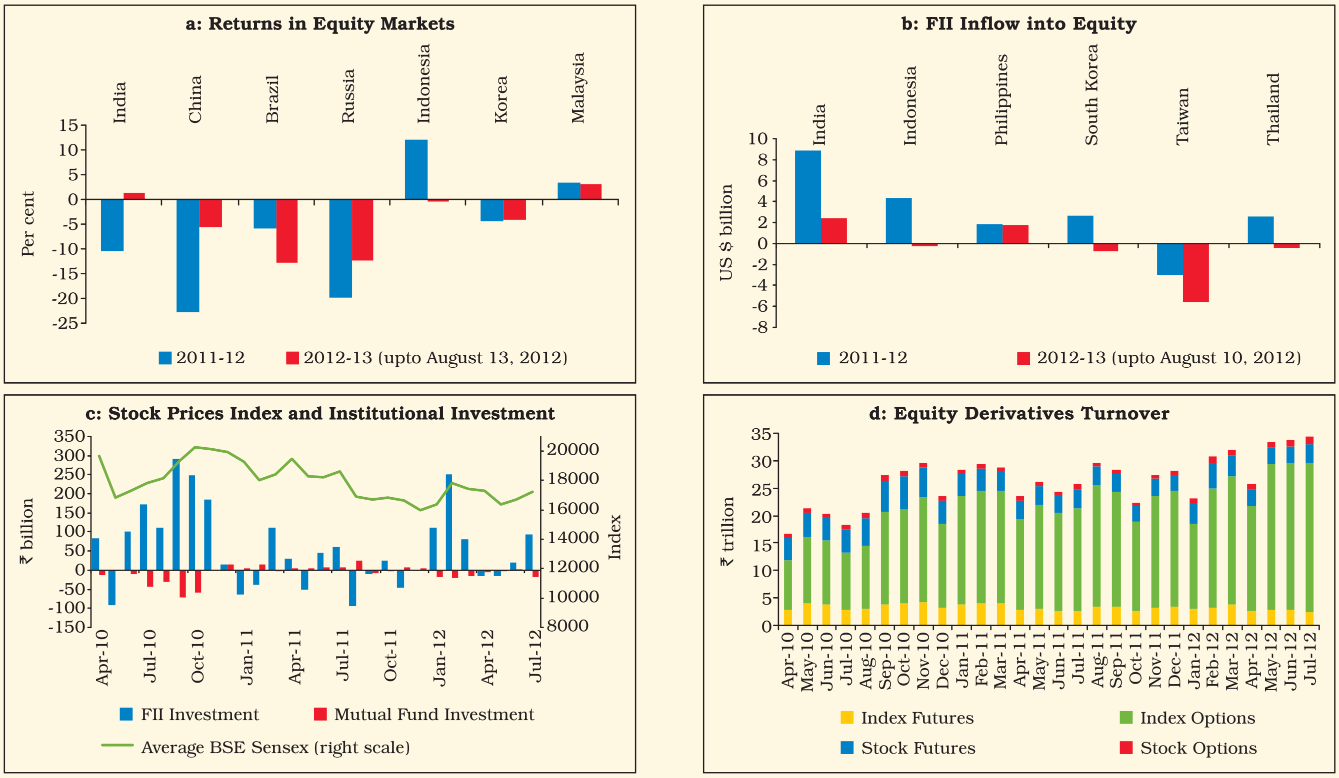
II.4.14 The daily average volume in the G-sec market, which stood at ₹105 billion during 2010-11, rose to around ₹130 billion in the year 2011-12. The daily average volume stood at ₹183 billion in Q1 of 2012-13. The volume generally varied inversely with the movement of the 10-year yield.

Equity market indices reflected FII flows and macroeconomic developments

II.4.15 In line with global markets, Indian equity prices continued their declining trend during most of 2011-12. After remaining weak for three quarters, the Indian equity market witnessed strong recovery in Q4 on the back of renewed FII support, moderation in inflation and firm trends in the global equity market. Overall, the Indian equity markets remained weak, owing to global developments, weak macroeconomic indicators and depreciation of rupee (Appendix Table No. 12). Two key Indian equity indices – the BSE Sensex and the S&P CNX Nifty - declined by 10.5 per cent and 9.2 per cent, respectively, during 2011-12 (Chart II.30).

II.4.16 During 2012-13, the Indian equity market started on a subdued note on FII outflows, concerns

Chart II.30: Movements in Equity Markets



over the low domestic growth, weak revenue outlook for major Indian IT companies and renewed euro area uncertainties. Investment sentiment was compounded by the downgrade of India's long term rating outlook to negative from stable, worries over retrospective tax and general anti-avoidance rules (GAAR) and the rupee slide. However, in the later part of June 2012, following a pick-up in FII investment in the equity market, clarifications by the government on retrospective tax, GAAR and the government decision to boost investments in infrastructure, the market witnessed a turnaround. Growth enabling policy actions by AEs and also the European Council's decision to support euro area sovereigns and banks also aided the market sentiments.

II.4.17 Nevertheless, during Q1 of 2012-13 both the BSE Sensex and the S&P CNX Nifty declined by 7.5 per cent and 6.5 per cent, respectively on y-o-y basis with FIIs and MFs having sold shares worth ₹6.6 billion and ₹6.4 billion, respectively in Q1 of 2012-13. However, in the Q2 of 2012-13 so far (up to August 13, 2012), FIIs bought shares worth ₹136.0 billion, while MFs sold shares worth ₹28.9 billion. In tandem the BSE Sensex and the S&P CNX Nifty recovered by 4.7 per cent and 5.4 per cent, respectively.

II.4.18 The turnover in the Indian equity derivatives segment increased substantially over the year. Out of total derivatives turnover, the index options segment remained the highest contributor to the total derivative turnover (Chart II.30d, Appendix Table No. 13).

Dormant primary markets largely reflect subdued sentiments

II.4.19 Resource mobilisation in the primary segment of the domestic capital market was significantly lower (65.8 per cent) during 2011-12 over the previous year. Dampened secondary market conditions, and the poor performance of IPOs after their listing affected investor and promoter sentiment. Firms abstained from mobilising resources through public issues during October–January 2012 when investor risk appetite was low. There were no public issues in the primary market. However, during February–June 2012 the primary market witnessed a few issuances, indicating slow recovery. Overall, primary market sentiment remained subdued during the year so far.

II.4.20 In any new project, equity capital is an essential component of total capital. In sluggish IPO market, it is very difficult to mobilise equity capital from public. Further, in the absence of equity capital, raising debt would be difficult for the firms which are already leveraged significantly. Hence, the sluggishness of IPO market could have contributed to the overall investment slowdown.

II.4.21 During 2011-12, on the external front, resources mobilised through Euro issues were also sharply lower due to uncertain liquidity conditions in the European banking system on the back of the persistent euro area debt crisis.

Exchange rate remained volatile, reflecting domestic and global concerns

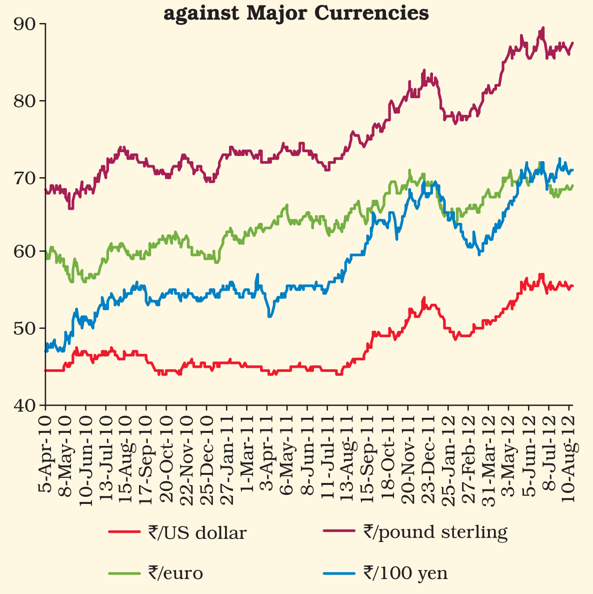
II.4.22 The currency market was under pressure during August–December 2011 due to a slowdown in capital inflows that reflected global uncertainty. However, conditions eased in Q4 of 2011-12, reflecting a pickup in capital inflows as well as the impact of policy measures undertaken to improve the dollar supply and contain speculation (Chart II.31). During 2011-12, the 6-, 30- and 36-currency trade weighted real effective exchange rates (REER) depreciated in the range of 7-8 per cent, primarily reflecting the nominal depreciation of the rupee against the US dollar by about 13 per cent (Appendix Table No. 14).

II.4.23 During H1 of 2011-12, the turnover for currency futures showed a rising trend, but remained range bound thereafter.

Housing prices remain firm

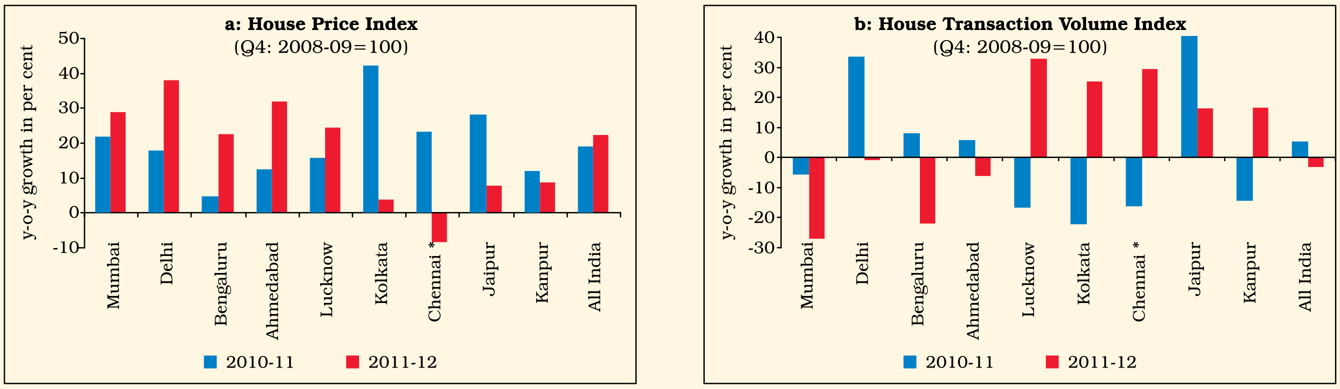
II.4.24 Despite the hardening of mortgage rates, housing prices continue to remain firm at the aggregate national level. The Reserve Bank's House Price Index (HPI), based on residential property prices for nine cities collected from the registration authorities of the respective state governments, increased during 2011-12 (average of four quarters) at all-India level and also in all the constituent cities, barring Chennai. Although House Transactions Volume Index declined during 2011-12 (average of four quarters) at all-India level, significant acceleration is witnessed in case of Lucknow, Kolkata, Chennai, Jaipur and Kanpur (Chart II.32).

Chart II.31: Exchange Rate Movements against Major Currencies



II.4.25 Over the last two years housing price inflation has ranged between 16 - 25 per cent during various quarters. Gold prices have increased at an even faster rate of 14 - 40 per cent. These two markets have not only provided effective inflation hedges, but also enabled savers to earn good real returns amidst high inflation. However, with housing and gold prices running ahead of inflation, there is a need for containing risks. In April 2012, the Reserve Bank took prudential measures on bank lending to NBFCS engaged in lending against gold. While credit to housing and commercial real estate has slowed down, a close vigil is still necessary as housing price inflation has not moderated. The Reserve Bank will continue to

Chart II.32: Trends in Housing Market



Note: 1. All India index is a weighted average of city indices with weights based on population proportion.
2. Chennai index is based on both residential and commercial properties.

monitor the asset prices ahead from a macro-prudential angle.

II.5 GOVERNMENT FINANCES

Fiscal targets missed in 2011-12, with adverse impact on the macroeconomy

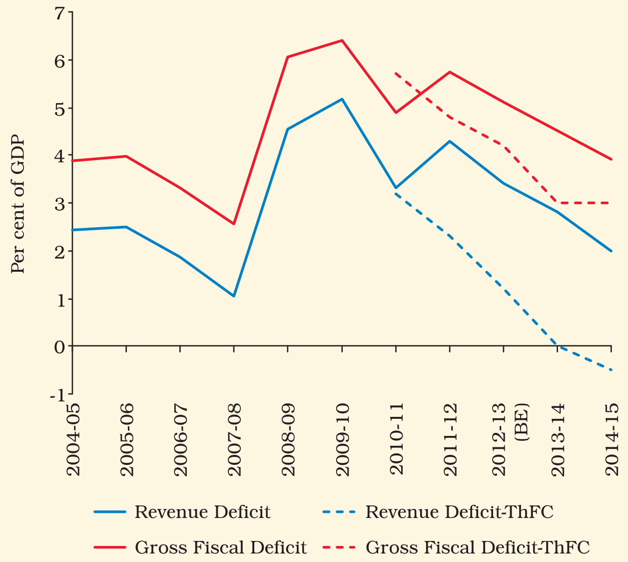
II.5.1 The centre's finances for 2011-12 experienced considerable slippage as key deficit indicators turned out to be much higher than budgeted due to shortfall in tax revenues and overshooting of expenditure (Appendix Table 15). This hampered return to the fiscal consolidation path and impacted the economy adversely. Current indications are that fiscal targets can again be missed in 2012-13, unless immediate remedial measures are undertaken.

II.5.2 A host of factors, both domestic and external, contributed to the widening of deficit indicators. The firming up of international crude oil prices, the reduction in indirect taxes on petroleum products, shortfall in revenue due to more than anticipated slowdown in economic growth and lower than budgeted disinvestment receipts contributed to the fiscal slippage in 2011-12. Consequently, the gross fiscal deficit (GFD)-GDP ratio moved up to 5.8 per cent in 2011-12 compared to the budgeted ratio of 4.6 per cent, although some reduction in plan expenditure muted the extent of fiscal deterioration.

Budgetary stance for 2012-13 and the medium-term roadmap suggest fiscal consolidation ahead but risks remain

II.5.3 The union budget for 2012-13 sets out a roadmap for fiscal consolidation by budgeting a significant reduction in the GFD-GDP ratio beginning from 2012-13 and continuing the process through further corrections in the revenue deficit (RD)-GDP and GFD-GDP ratios under the rolling targets for the next two years. The envisaged correction of 0.9 per cent in the RD-GDP ratio and 0.7 per cent in the GFD-GDP ratio during 2012-13 (BE) would increase the space for private sector credit in the economy. This is to be achieved through revenue enhancing (especially indirect tax measures and non-tax revenues through spectrum auction receipts) and expenditure control measures, *viz.*, restricting expenditure on subsidies to below 2 per cent of GDP. The widening of the services tax base, and a partial rollback of crisis-related reductions in various indirect tax rates are expected to contribute to the tax receipts of the central government. There are risks to fiscal targets laid down for 2012-13, particularly if the envisaged tax buoyancies are not realised and the cap on subsidies is not adhered to. The medium-term fiscal roadmap in the union budget envisages a slower paced correction relative to the path prescribed by the Thirteenth Finance Commission (ThFC) (Chart II.33). During the first quarter of 2012-13, the fiscal deficit of the central

Chart II.33: Key Deficit Indicators of the Central Government



government was more than one third of the budget estimate for the whole year.

II.5.4 The amendment of the FRBM Act 2003 which, *inter alia,* incorporates a "Medium-term Expenditure Framework Statement" (MEFS) is a significant initiative taken in 2012-13 towards fiscal consolidation. Under the amended FRBM Act, the government seeks to eliminate effective revenue deficit (which excludes grants for creation of capital assets from revenue expenditure) by 2014-15, thereby targeting correction in respect of the structural component of deficit in the revenue account. The MEFS would set out three-year rolling targets for expenditure indicators as part of the strategy to improve the quality of public expenditure management.

II.5.5 Despite the widening of the centre's fiscal imbalances during 2011-12, its debt-GDP ratio continued to decline from 52.8 per cent in 2010-11 to 51.9 per cent in 2011-12 (RE) due to high nominal growth rate of GDP. Excluding the amount not used for financing central government deficit, (*viz*., the component of the National Small Savings Fund that is invested in state governments' securities and liabilities raised under the market stabilisation scheme), the outstanding liabilities-GDP ratio of the central government is budgeted to decline marginally to 45.5 per cent of GDP during 2012-13 from 45.7 per cent in 2011-12 (RE).

II.5.6 As per the projections under the rolling targets, the outstanding liabilities-GDP ratio is expected to be lower than the ThFC's recommended level of 44.8 per cent by 2014-15. However, a comprehensive analysis using various approaches is needed to assess the sustainability of central government debt over a longer term (Box II.14).

Speedier implementation of tax reforms needed for recovery in tax-GDP ratio to pre-crisis levels

II.5.7 During 2012-13, the government seeks to increase the tax-GDP ratio by 0.5 percentage point over 2011-12 (RE) to 10.6 per cent, through roll-back of standard excise duty rates from 10 per cent to 12 per cent, widening of the service tax base and rationalisation of customs duty rates. The budgeted growth in gross tax revenues (19.5 per cent) is, however, placed below the average growth (23.6 per cent) recorded during the pre-crisis fiscal consolidation phase (2004-05 to 2007-08), thereby recognising the ongoing economic downturn. Although the budgeted growth in direct tax receipts, *viz*., corporation tax and income tax, is conservative, that for receipts from union excise and customs duties is substantially higher than the pre-crisis trend. This could be subject to downside risks emanating from the continuation of slowdown in industrial activity and international trade.

II.5.8 Service tax rate has also been raised from 10 per cent to 12 per cent. The widening of the service tax base by including within its ambit all services other than those in the negative list, is a step in the right direction but it would necessitate careful implementation. Measures have also been taken to harmonise central excise and service taxes through the introduction of a common simplified registration form and a common return for both the taxes. Steps are being taken to operationalise Goods and Services Tax (GST) network to function as a 'National Information Utility' for the

Box II.14
Sustainability of Public Debt

Traditionally, fiscal sustainability is assessed in terms of indicator analysis. The standard approach to evaluate debt sustainability is by focusing on the ratio of the government debt to GDP. The debt is considered sustainable if the debt-GDP ratio is stable or declining over time while a continuous increase in this ratio is considered unsustainable. The assessment of the debt-GDP ratio depends on the real interest rate on the debt, the real growth rate of the economy, the 'primary balance' of the government budget (the surplus or deficit excluding interest payments), and the debt ratio in the previous period. Analysts also use this relationship to identify the primary surplus required to stabilise or reduce the debt in future.

Several studies have approached the issue of debt sustainability by posing a specific question – "What is the threshold for debt beyond which its burden significantly affects capital accumulation and growth?" The debt sustainability framework was first developed by Domar (1944) which postulated the growth rate of income exceeding the interest rate as a necessary condition for sustainability. Domar showed that a constant overall deficit to GDP ratio ensured convergence of both the debt-GDP ratio and the interest-GDP ratio to finite values. The debate on sustainability took a new twist in the 1980s in connection with the growth of the public sector. In evaluating public finance sustainability it was no longer sufficient to examine the tax rate implications of a constant deficit *à la* Domar. It became necessary to estimate the future deficit path implied by current policies. Blanchard *et al* (1990) proposed two necessary conditions for sustainability: (a) the ratio of debt to GNP eventually converging back to its initial level (b) the present discounted value of the ratio of primary deficits to GNP being equal to the negative of the current level of debt to GNP.

All three conditions (Domar and Blanchard *et al*) have been employed in empirical studies to assess the 'sustainability' of public finances. The sustainable level of public debt varies between countries depending on several economic and political features. It is usually higher for industrialised countries than for emerging market economies. The former have historically shown the capability to generate sufficiently large primary surpluses to ensure the sustainability of their debt even in adverse circumstances whereas the latter have generally not gained this credibility. This is due to, *inter alia*, weak revenue bases (with lower yields and higher volatility) and less effective expenditure control during economic upswings (this is particularly the case in Latin America). However, there are significant regional differences among emerging market economies, with Asian countries generally doing more to ensure debt sustainability than countries in other regions.

The IMF has also developed a formal framework for conducting public and external debt sustainability analyses (DSAs) as a tool to better detect, prevent, and resolve potential crises. This framework became operational in 2002. The objective of the framework is three-fold: (i) assess the current debt situation, its maturity structure, whether it has fixed or floating rates, whether it is indexed, and by whom it is held; (ii) identify vulnerabilities in the debt structure or the policy framework far enough in advance so that policy corrections can be introduced before payment difficulties arise; (iii) in cases where such difficulties have emerged, or are about to emerge, examine the impact of alternative debt-stabilising policy paths. The framework consists of two complementary components: the analysis of the sustainability of total public debt and that of total external debt. Each component includes a baseline scenario, based on a set of macroeconomic projections that articulate the government's intended policies, with the main assumptions and parameters clearly laid out; and a series of sensitivity tests applied to the baseline scenario, providing a probabilistic upper bound for the debt dynamics under various assumptions regarding policy variables, macroeconomic developments, and financing costs. The paths of debt indicators under the baseline scenario and the stress tests allow an assessment regarding the vulnerability of a country to a payments crisis

In the case of India, after a decade of large fiscal deficits, a rule-based fiscal framework, namely, the Fiscal Responsibility and Budget Management (FRBM) Act was enacted in 2003, with the objective of ensuring inter-generational equity in fiscal management and the fiscal sustainability necessary for long-term macroeconomic stability. The implementation of the FRBM Act coincided with a decline in the central government's fiscal deficit by about 1.8 per cent of GDP between 2004-05 and 2007-08. The amended FRBM Act incorporates a Medium-term Expenditure Framework Statement to bring about an improvement in the quality of the expenditure. The FRBM Act, in its original as well as amended form, stipulates debt targets under the rolling targets framework. All state governments have passed their FRBM Acts, out of which 27 states have amended their FRBMs as recommended by the ThFC. Accordingly, states have set out targets for gradual reductions in their individual debt-GSDP ratio. In a recent study, Topalova and Nyberg suggested that a debt ratio in the range of 60-65 per cent of GDP by 2015-16 might be suitable/ sustainable for India. This is lower than the 67.8 per cent suggested by the ThFC by 2014-15.

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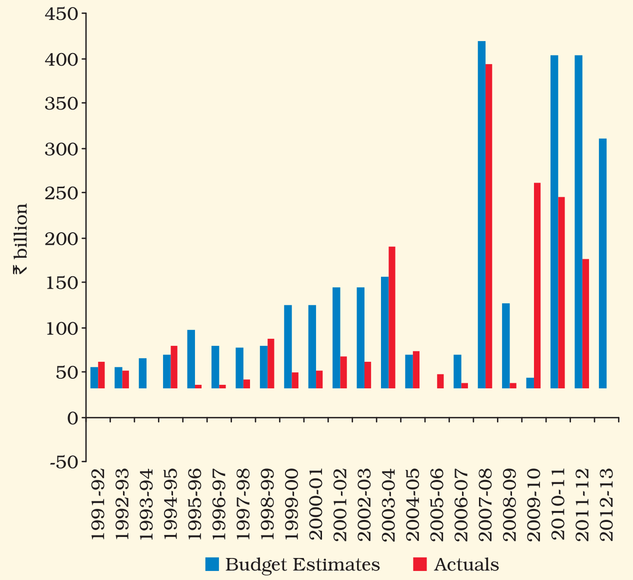
implementation of GST, as and when it is introduced. Despite these positive steps, there is a need to expedite the implementation of DTC and GST to enable the recovery of the tax-GDP ratio to pre-crisis level. Notably, the general government revenue-GDP ratio in India has been considerably below that in both advanced economies and emerging market economies and has been declining since 2007 (Chart II.34).

II.5.9 Another downside risk on the revenue front emanates from a possible shortfall in realising budgeted proceeds from disinvestment for 2012-13 as was the case in 2011-12 and in the past (Chart II.35). In view of the uncertainty in realisation of disinvestment proceeds, there is a need to assess the fiscal imbalances without reckoning proceeds available from disinvestment. Therefore, the 'financing gap', which excludes disinvestment receipts from the calculation of GFD, as used by the 2011-12 report of the Prime Minister's Economic Advisory Council (PMEAC), becomes an important indicator for assessing the durable nature of government's fiscal correction process (Chart II.36). This is also necessary, given the government's objective of returning, by 2014-15, to the earlier policy of crediting disinvestment proceeds to the National Investment Fund rather than utilising them to finance budgetary expenditure (Box II.15).

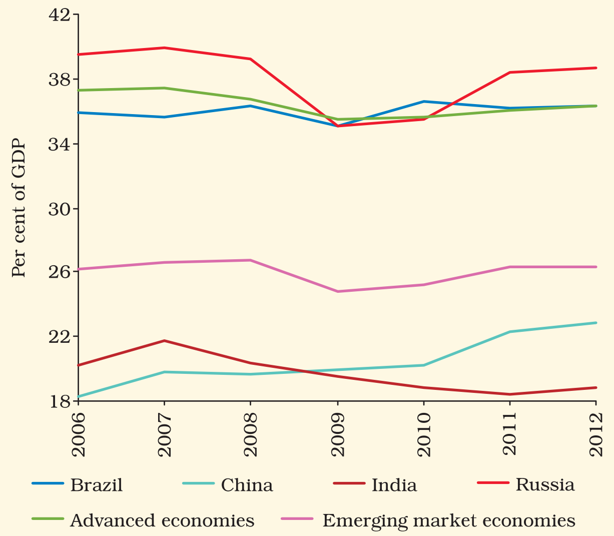
Chart II.35: Disinvestment Receipts - Budgeted *vs* Actuals



Shift in budgeted expenditure towards capital outlays will materialise only through capping of expenditure on subsidies

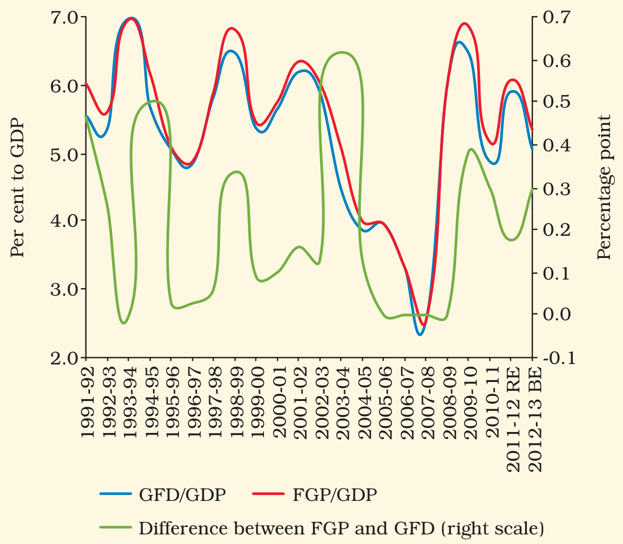
II.5.10 Revenue expenditure growth is budgeted to decline in 2012-13, while capital expenditure

Chart II.34: Trends in General Government Revenue



Source: Fiscal monitor, IMF, April 2012.

Chart II.36: Comparison between GFD and Financing Gap (FGP)



Box II.15
Divestment Policy in India

A natural evolutionary process of a developing economy has generally involved sequential phasing out of the government from direct capital formation in the economy followed by a reduction in its stake in public sector undertakings (PSUs). This essentially reflects the need to provide for greater private sector participation for more efficient use of resources.

The underlying objective of the divestment policy in India, which was part of the New Industrial Policy introduced in 1991, was to raise resources, encourage wider private participation and promote greater accountability of the PSUs. In the initial phase, select profit-making PSUs were to be divested. The Rangarajan Committee (1993) had recommended: (a) identifying select PSUs for disinvestment up to any level except in defence and atomic energy; (b) transparency in the disinvestment process with due protection of the rights of the workers; and (c) setting up an autonomous body for the smooth functioning and monitoring of the divestment programme. Accordingly, the Disinvestment Commission was constituted in 1996 to advise the government on the extent, mode, timing and pricing of divestment. It suggested four modes of divestment: (i) trade sale involving 100 per cent change of ownership through direct sale of shares at a fixed price; (ii) strategic sale involving sale of a substantial part of investment along with management control to private enterprise or individuals; (iii) offer of shares, implying sale of shares to individuals and companies and (iv) closure or sale of assets and liquidation of the company. In practice, the government has mostly resorted to the third mode of disinvestment, selling its shares in PSUs to minority shareholders.

Divestment in PSUs is the main source of receipts under the head of non-debt capital receipts. The government has partially divested its stake in PSUs in the telecom, oil, energy, metals and minerals, automobiles and hospitality industries. During 2005-06 to 2008-09, the disinvestment proceeds were not used for financing budgetary expenditure but were credited to the National Investment Fund (NIF), constituted in 2005. The returns on investments from the NIF were treated as non-tax revenues to be used to finance expenditure on social infrastructure and provide capital to viable PSUs. In 2009-10, the government decided to use the divestment proceeds received during the three-year period, *viz.*, 2009-12 to finance social sector programmes that create capital assets. Accordingly, disinvestment receipts were being used to partly meet expenditure on select flagship programmes related to rural employment, irrigation infrastructure, and urban and rural infrastructure. Also, the returns from the investments made earlier through the NIF continued to be employed to finance selected social sector schemes that promote education, health and employment and to meet the capital investment requirements of profitable and revivable PSUs. The government decided to continue the existing arrangement of using disinvestment proceeds to finance programme expenditure for 2012-13 and 2013-14.

Notably, the realisation of projected disinvestment receipts is subject to market uncertainties. The government has not been able to achieve the budget estimates for disinvestment in 14 out of 21 years. Although the policy of reckoning disinvestment proceeds as a non-debt capital receipt to finance budgetary expenditure reduces fiscal deficit, it would be desirable that the government returns to the policy of crediting disinvestment proceeds to NIF, thereby making the process fiscal deficit neutral.

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http://www.divest.nic.in/

(both plan and non-plan components) is expected to increase sharply. However, for the government to contain its non-plan expenditure within the budget estimates for 2012-13, the commitment of capping expenditure on subsidies within 2 per cent of GDP should be adhered to. Credible fiscal consolidation accompanied by higher capital outlays is key to reviving investor sentiments and the economy. The budgeted shift in expenditure composition with higher allocations for capital expenditure augurs well for economic growth, given higher capital outlay multipliers (Box II.16).

Box II.16
Fiscal Multipliers in India

Large scale fiscal stimulus provided to stimulate economic activity in various countries in the aftermath of the global financial crisis during 2007-2009 has renewed interest in the size of fiscal multipliers. Fiscal multipliers measure the responsiveness of output to changes in government spending or taxation. Conventionally, Keynesian theory shows higher multipliers for government spending relative to taxes since spending has a more immediate and direct impact on aggregate demand. Recent research, however, points to the

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possibility of higher size of tax multipliers as tax cuts can also stimulate investment demand, whether directly through investment tax credits or indirectly as a complement with higher demand for labour, over and above the Keynesian channel through increase in disposable income. In contrast, the fiscal multiplier is zero under Ricardian equivalence between taxes and debt in a dynamic framework. Ricardian consumers are forward-looking and fully aware of the government's inter-temporal budget constraint.

Empirical studies put forth a wide range of estimates for the fiscal multipliers for economies, ranging from negative to more than one (IMF, 2008), thereby failing to provide a clear guidance for the effectiveness of counter-cyclical fiscal policy. The effectiveness of counter-cyclical fiscal policy depends not only on the size of the stimulus but also its composition, *i.e.,* the relative importance of tax cuts *versus* government spending. There is interplay of factors such as monetary stance, health of the banking sector, interest rate constrained by the zero lower bound problems, slack in labour market and level of public debt. Various studies have shown that fiscal multipliers are smaller for poorer economies, more open economies, economies with flexible exchange rates and economies with high public debt levels.

Given that there are not too many studies quantifying the size of the fiscal multiplier for India, there is a need for one, particularly in the context of the post-crisis stimulus provided by the government which led to a considerable deviation of fiscal indicators from the targets envisaged under fiscal rules. An empirical exercise was undertaken for the period 1980-81 to 2010-11 to estimate the size of multipliers of various expenditure aggregates of combined government finances based on vector auto regression (VAR) framework[a]. The VAR is estimated in growth rates using lags suggested by the Akaike Information Criteria.

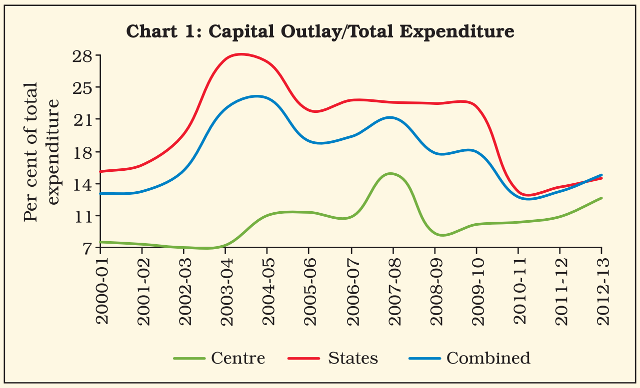
Various components of combined government expenditure (deflated by WPI), *i.e.*, revenue expenditure, capital outlay, development expenditure, total expenditure and tax revenue have been used in alternative specifications to examine their impact on real GDP growth. The variables are then converted into growth rates so that the ratio of the impulse response of GDP to shock variables can be interpreted as elasticity. The short-term multiplier is then obtained by dividing the elasticity by the ratio of real spending to GDP. The long-term multipliers (in terms of GDP) are obtained by cumulating the impulse responses and dividing the total by the ratio of spending to GDP. Denoting GDP by Y and government expenditure by G, the elasticity is $\alpha = (\Delta Y/Y)/(\Delta G/G)$, and, therefore, the multiplier is $\Delta Y/\Delta G = \alpha / (G/Y)$. Among the endogenous variables, expenditure, GDP and tax variables are included while call money rate representing the monetary policy stance, trade openness and global GDP growth are treated as exogenous variables. The results are set out below:

Fiscal Multipliers in India – 1980-81 to 2010-11

Combined Government (Centre + States)	Impact Multipliers	Long run Multipliers
Revenue expenditure	0.47	-
Capital outlay	0.11	2.41
Aggregate expenditure	0.55	0.27

The results show that GDP responds positively to a positive shock to combined government expenditure. In the case of revenue expenditure, the impact is high in the first year but fades out thereafter as expected. The capital outlay has a large long-term multiplier, reflecting its greater productivity in the long run compared with the short run, revealed by the low impact multiplier.

The impact multiplier of aggregate expenditure is higher while its long run multiplier is low but positive. The composition of government expenditure which is tilted in favour of revenue expenditure can be regarded as the reason for this outcome. The above results show the criticality of re-orienting the expenditure composition of the government in favour of capital outlay to its pre-crisis average of 20.9 per cent (2003-08) to improve growth prospects in the long run (Chart).



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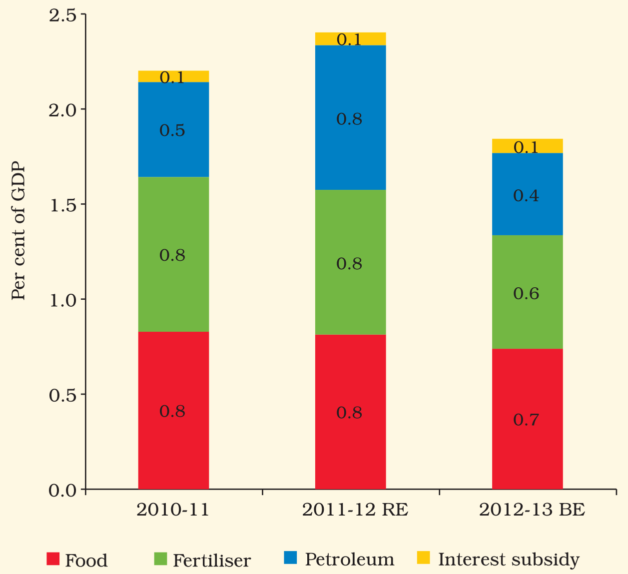
[a] Taking cognisance of the fact that, the state governments account for a significant portion of aggregate government spending in India, the VAR exercise uses combined capital expenditure and taxes as fiscal variables for India.

II.5.11 Undoubtedly, some subsidies for development purposes are inevitable but subsides which do not reach the intended beneficiaries or are not in tune with the macroeconomic fundamentals should be rationalised. The capping of subsidies coupled with better targeting of beneficiaries is a positive step. The achievement of this objective would necessitate steps to allow the pass-through of international crude oil and fertiliser prices to domestic prices. The budgeted reduction in expenditure on subsidies is mainly due to a decline of over 36 per cent in the petroleum subsidy in 2012-13 over 2011-12 (RE) (Chart II.37). The compensation to oil marketing companies (OMCs) for under-recoveries budgeted at ₹400 billion for 2012-13 would be inadequate, taking into account the spillover of petroleum subsidy payments for the last quarter of 2011-12 and the delay in the deregulation of administered prices, particularly diesel.

Increasing dependence on market borrowing for financing fiscal deficit necessitates appropriate monetary management

II.5.12 The fiscal deficit financing pattern for 2012-13 shows continued reliance on market borrowings (96 per cent of GFD), though the recourse to short-term financing through treasury bills is budgeted at 2 per cent, significantly lower than the 22 per cent in 2011-12. The government expects inflows in small savings during 2012-13 after the outflows experienced in 2011-12. The envisaged market borrowings by the government for 2012-13 will have to be managed appropriately to avoid crowding out of private investment. It may also be noted that revenue receipts falling short of targets would entail higher market borrowings which, in turn, could limit the space for monetary policy to respond to the slowdown in growth.

Chart II.37: Major Subsidies of the Central Government



Higher than budgeted development expenditure by the states augurs well for their economies

II.5.13 The consolidated position of state governments shows that revenue surplus, at 0.1 per cent of GDP during 2011-12 (RE), was lower than that budgeted for the year due to higher revenue expenditure, which more than offset the increase in revenue receipts. Within revenue receipts, both tax revenues and current transfers from the centre were higher than the budget estimates, the latter on account of higher tax devolution from the centre. Despite moderation in economic growth, higher own tax revenues reflected better than budgeted own tax buoyancies, aided in large part by higher VAT/sales tax collections on petroleum products. On the expenditure side, the increase was on account of development expenditure. Nevertheless, 20 states showed a revenue surplus during 2011-12 (RE), with the surpluses of nine states higher than that budgeted for the year.

II.5.14 The consolidated GFD-GDP ratio for the states during 2011-12 (RE) was higher than the budget estimates mainly due to the decline in the revenue surplus, even though the capital outlay-GDP ratio was lower than its budgeted level (Appendix Table 16). State-wise data indicates that GFD-GSDP ratios were higher than the budget estimates and the ThFC targets in sixteen and seven states, respectively. Development expenditure including social sector expenditure was higher than the budgeted level.

States likely to remain in fiscal consolidation mode in 2012-13, but development and social sector expenditure as ratio to GDP budgeted to decline

II.5.15 Key deficit indicators of the states are budgeted to show improvement during 2012-13. The consolidated revenue surplus is budgeted to increase due to an increase in revenue receipts coupled with a reduction in revenue expenditure. Both own revenues and current transfers from the centre are budgeted to increase during 2012-13. The revenue surplus is expected to not only provide resources for increased capital outlay during 2012-13 but would also enable a reduction in GFD-GDP ratio. State-wise data shows that the ThFC target for GFD-GSDP ratio is budgeted to be met by 26 of the 28 states. The envisaged expenditure pattern of states shows that, while the committed expenditure-GDP ratio (comprising interest payments, administrative services and pensions) is budgeted to increase, the development expenditure and social sector expenditure as ratios to GDP are budgeted to decline during 2012-13. While pursuing the fiscal consolidation agenda further, it would be important to take steps to reduce committed expenditures to free more resources for development, social and capital expenditures.

Pressures on state finances emerging from state power distribution utilities

II.5.16 A growing area of concern for the states is the significant increase in financial losses of state power distribution utilities (SPDUs) which cast a burden on the finances of state governments. Accordingly, structural reforms are needed to improve the efficiency and viability of these SPDUs, which would have a bearing on the finances of the states. While the revenue accounts of several state governments continue to record surpluses, this needs to be seen in the light of mounting losses in the SPDUs. Besides budgetary support to the SPDUs through subsidies, grants, loans and equity investments, the states also extend guarantees for loans taken by the power utilities from banks and financial institutions. Although guarantees are in the nature of contingent liabilities and may not have a direct impact on the finances of the states, defaults in the loans, if any, can invoke the state guarantees. This would adversely impact the state government finances (Box II.17). Rationalisation of power tariffs and reduction in distribution losses could be critical in bringing about stability in the finances of SPDUs.

Box II.17

Fiscal Implications of Contingent Liabilities of the States

The fiscal position of the states in terms of key deficits and debt as ratios to GDP has shown improvement in recent years. This, however, may not be as encouraging as it appears if the liabilities of the state public sector undertakings (SPSUs) and contingent liabilities arising out of assistance to them are taken into consideration. Studies have pointed out examples of the financial position of the overall public sector changing due to bailouts of financial and non-financial entities in both the private and the public sector. Although contingent liabilities do not form part of the states' debt obligations, in the event of default by borrowing entities, the states are required to meet the debt service obligations of these defaulting entities. Therefore, contingent liabilities assume importance in the analysis of public finances of the state governments.

In 2001, the Reserve Bank constituted a working group to assess the fiscal risk of state government guarantees. Recognising that a major constraint in analysing the true fiscal position of states was the absence of a consistent and standard pattern of reporting data on guarantees in the state budgets, the group recommended a uniform format to regularly publish data regarding guarantees in the budget. An internal working group on "Information on state government guaranteed advances and bonds" set up in the Reserve Bank in 2003 emphasised that transparency in information disclosure was crucial to enhance market discipline and proper rating of projects guaranteed by the state governments. With an increase in fiscal transparency at the state government level, particularly after the enactment of the respective FRBM Acts, 20 of the 28 states are providing information on contingent liabilities such as outstanding guarantees in their budget documents (statements under fiscal responsibility legislation). However, only 14 states publish it in the prescribed format, of which nine provide information on outstanding risk-weighted guarantees.

The consolidated outstanding guarantees by state governments as a proportion of GDP increased from 6.1 per cent in 1990-91 to 8.0 per cent in 2003-04 but declined

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thereafter to 2.8 per cent as at end-March 2010. As per latest available information, outstanding guarantees for 14 states amounted to ₹1.3 trillion as at end-March 2011. In view of the fiscal implications of guarantees, many states have taken initiatives to place ceilings (statutory or administrative) on guarantees. To contain the fiscal risks associated with the guarantees, Guarantee Redemption Funds have been set up by 10 states.

Although there has been a decline in the total outstanding guarantees extended by state governments, an increase in the share of guarantees to financially ailing SPSUs is an area of concern. Moreover, contingent liabilities of the state governments could be much higher than is evident from their budget documents/finance accounts, if the 'letters of comfort' extended to SPSUs, including power utilities, are included.

Another form of contingent liabilities relates to public private partnership (PPP) at the state government level. The ThFC noted that there are explicit and implicit obligations for the public entity involved in PPP projects. While explicit contingent liabilities in the form of stipulated annuity payments over a multi-year horizon may be spelt out, implicit contingent liabilities are obligations to compensate the private sector partners for contingencies such as changes in specifications, breach of obligations and early termination of contracts, which may be difficult to quantify. As recommended by the ThFC for the central government, there is also a need for the states to quantify expenditure obligations relating to PPP projects in their medium-term fiscal policy statements, with an increasing number of them adopting the PPP mode of project implementation. The governments of Karnataka and Tamil Nadu have included a statement on 'Liabilities in Public Private Partnership' in their budget documents for 2012-13.

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II.5.17 The deviation in the deficit indicators of the central government from the envisaged fiscal consolidation path during 2011-12 was partly contributed by the slowdown in economy which impacted government revenues. The substantial increase in subsidies during 2011-12 on account of high crude oil prices further impacted the deficit of the government. For a credible fiscal consolidation strategy, steps need to be initiated to control subsidies by de-regulating prices of administered petroleum products and fertilisers, re-orienting government expenditure in favour of capital expenditure and speeding up tax reforms to improve overall tax efficiency. Containing the fiscal deficit is necessary for both external stability as well as improving the efficacy of monetary policy.

II.6 EXTERNAL SECTOR

Deterioration in external sector during 2011-12 caused concern

II.6.1 The year 2011-12, especially the second half, was characterised by a burgeoning current account deficit (CAD), subdued equity inflows, depletion of foreign exchange reserves, rising external debt and deteriorating international investment position. These indicators reflect the weakening external sector resilience and thus, present a formidable challenge for policy makers.

II.6.2 After a marked deterioration in Q3 of 2011-12, India's BoP witnessed further stress in Q4, belying the seasonal pattern generally observed in form of lower current account deficit (CAD) in the last quarter . Sharper deceleration in export growth than import growth led to higher trade deficit. This coupled with deceleration in growth of net services exports further widened the CAD-GDP ratio to 4.5 per cent in Q4, taking the full year ratio to an all time high of 4.2 per cent. This has been much higher than the sustainable level of CAD which is assessed to be around 2.5 per cent of GDP with slower growth. This was also reflected in drawdown of foreign exchange reserves during Q4 of 2011-12 as net inflows under capital and finance account were less than adequate to finance CAD.

II.6.3 Going forward, the moderation in global oil prices from the earlier highs and some softening in gold imports if sustained, are likely to have a favourable impact on CAD. Notwithstanding these factors, CAD may still stay wide enough to put strains, especially if capital inflows remain moderate. Risks to India's balance of payments remain from weaker global growth prospects, including that in the US, euro area and China, slowdown in global trade and renewed risk aversion arising from the sovereign debt crisis.

II.6.4 The emergence of external sector weakness during 2011-12 was caused by several factors, both domestic and global. The US dollar appreciated against all major currencies, except the yen. Consequently the Indian rupee, as also many other emerging market currencies, came under considerable pressure. Global commodity prices, especially those of oil and gold, rose. As India's demand for these commodities is relatively inelastic in nature, the current account widened sharply. At the same time, the rising fiscal deficit boosted private consumption with a spill over to increased import demand. While investment climate deteriorated, so did saving, keeping the CAD wide. As a combined impact of these factors, financing of wider CAD became more difficult. This also brought rupee exchange rate under pressure. Furthermore, high domestic inflation led to inflation differential that also contributed to a weaker currency.

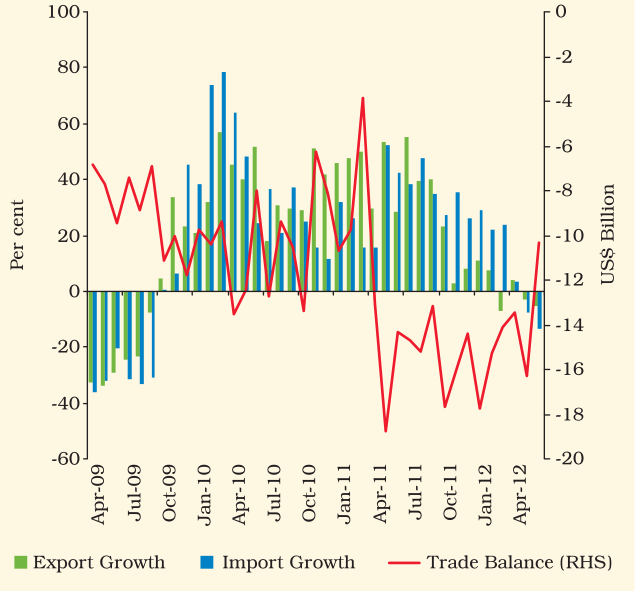
II.6.5 Weakening global economic and financial conditions had adverse spillover impact on India's external sector in 2011-12. Moderate growth in merchandise exports, coupled with robust import growth, widened the trade deficit by 3 percentage points of GDP to an all-time high of 10.0 per cent of GDP in 2011-12. This alongwith sluggish growth in invisibles caused CAD to rise above 4 per cent of GDP. This level of CAD was markedly higher than the CAD/GDP ratio of 3.1 per cent during 1966-67 and 3.0 per cent in 1990-91; the two occasions when the country confronted balance of payments crisis. This time around, the economy weathered the external sector shock without any payments crisis due to better access to international capital markets and exchange rate flexibility. High level of reserves acted as insurance against speculative attacks and possible capital flights and the reserves loss was contained by exchange rate adjustment.

II.6.6 The global financial uncertainty resulted in reduced risk appetite and led to volatile and reduced capital flows to Emerging and Developing Economies (EDEs) beginning third quarter of 2011-12. With moderation in the capital flows, CAD was financed partly by drawing down the foreign exchange reserves. Increase in external debt, contributed by a marked increase in commercial borrowings, export credits and short-term debt further led to a deterioration of external sector vulnerability indicators during 2011-12.

India's trade performance was subdued due to slowdown in exports and imports remaining sticky

II.6.7 Subdued growth conditions in advanced economies began to weaken external demand for exports from emerging market economies in the latter half of 2011-12. India's export growth also showed concomitant moderation (Chart II.38, Appendix Table 17). Trade diversification benefits were also restricted by spillovers that shrunk EME's trade. After recording an average monthly growth rate of 41.0 per cent in the first half of the year, export growth lost its momentum and grew by about 7.6 per cent in the second half of 2011-12. The overall export growth at 21.3 per cent in 2011-12 was nearly of half of that recorded in 2010-11. In contrast, import growth was higher in 2011-12 mainly on account of import of POL and gold & silver.

Chart II.38: Exports and Imports



II.6.8 Despite sharp increases in the international prices of crude oil and gold & silver, their import grew significantly in 2011-12, accounting for 43.1 per cent of merchandise imports (Box II.18). The

Box II.18
Determinant of Gold Demand in India

According to the latest World Gold Council release, inspite of a 17 per cent year-on-year fall in gold consumption, India remained the largest consumer of gold in the world, followed by China. Based on the DGCI&S data, India's gold import is estimated to have grown by 39 per cent during 2011-12. According to the World Gold Council, India's quantum of gold imports accounted for a quarter of the world demand in 2011-12. Over the past decade India witnessed, on an average, an annual growth of 29 per cent and 18 per cent in gold consumption and gold price respectively, outpacing country's real GDP growth and inflation. During 2008-09 to 2011-12, on average, the quantum of gold imports grew by 12 per cent as compared to a decline of 5 per cent during 2005-06 to 2007-08.

Large gold imports reduce the availability of foreign exchange reserves for other imports (including raw material, intermediates and capital equipment) that may have better productivity usage (Vaidyanathan, 1999).

During the recent period gold imports in terms of value as well as in quantity witnessed a sharp rise despite the increase in gold prices (Chart a). India's import of gold is on account of domestic consumption/ investment as well as gold re-exports in the form of jewellery. Based on past trends of gold import content in total gems and jewellery exports, it is estimated that gold re-export was around US$ 7 billion in 2011-12.

Increase in domestic demand for gold in India has stayed strong in view of its characteristic as a safe investment asset that has given good returns, while at the same time serving as a consumption asset that meets the demand for jewellery. Higher real rate of return on gold investment *vis-à-vis* alternative modes of investments, *viz.*, bank deposits and the stock market seems to have boosted gold investment by domestic residents. Further, various schemes mooted by banks to promote gold as an investment asset among individuals is adding to the demand for gold. In the past 11 years, gold has given a compounded annual return of 18.5 per cent per annum.

NBFCs have also promoted gold investments in several ways. Gold demand picked up because of easy availability of gold loans by NBFCs. To examine the trends in demand for gold loans and its impact on gold imports, the Reserve Bank set up a Working Group on Gold Loans by NBFCs in April 2012. The high level of gold import observed during the recent past has become an acute problem in recent times especially against the backdrop of deterioration in the overall external situation. The price inelastic nature exhibited by gold imports in the recent period has put considerable strain on the trade balance and CAD. If the trade balance is adjusted by excluding oil and gold imports, trade deficit would be significantly lower for the last four years (Chart b). Further, the diversion of household financial saving to investment in gold may have impacted the growth of term deposits in recent years (16.7 per cent in 2009-10 to 2011-12 as against 23.1 per cent in 2006-07 to 2008-09). Since such investments in gold do not contribute to capital formation, they are likely to have implications for overall investment and economic growth.

There are very few systematic studies on the sensitivity of demand for gold. Sarma *et al.* (1992) identified gold price, rural surplus, rural income distribution, unaccounted income/ wealth generated mainly in the service sector, rate of return on alternative financing assets and the general price level affecting gold demand in India. Vaidyanathan (1999) found that the price of gold relative to share prices and international gold prices was an important determinant of gold imports.

An empirical analysis using annual data for the period 1998-2012 indicates that real per capita income growth and inflation are the major determinants of gold import in India.

Chart a: Movement of Gold Imports *vis-à-vis* Gold Price

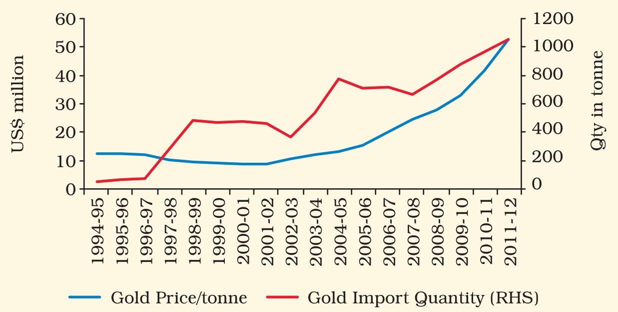
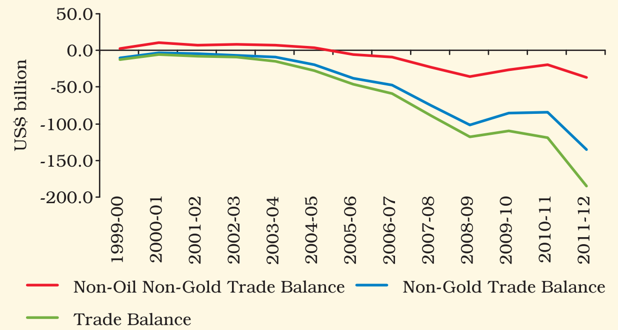


Chart b: India's Merchandise Trade



(Contd...)

The positive and statistically significant coefficient of WPI-inflation possibly indicates that gold may also have been used as a hedge against inflation in India. The regression results do not find support for the negative price-quantity demand relationship, as the coefficient of gold prices was found to be statistically insignificant at the conventional levels. This result is, however, in line with the trend suggested by Chart-a. It is possible that despite high prices, the demand for gold picked up after 2007-08 as a response to macroeconomic uncertainties, especially as retail investors tend to view investments in gold as a safe haven.

Several policy measures have been taken recently to curb gold imports. The government increased the basic customs duty on standard gold imports from 2 per cent to 4 per cent and on non-standard gold from 5 per cent to 10 per cent. Similarly, recognising the rapid increase in exposure of NBFC's to gold loans, the Reserve Bank introduced prudential measures that prescribe NBFCs to maintain a loan-to-value ratio not exceeding 60 per cent for loans granted against the collateral of gold jewellery and disclose in their balance sheet the percentage of such loans to their total assets.

References:

Sarma, A, A. Vasudevan, K. Sabhapathy and Mohua Roy (1992), "Gold Mobilisation as an Instrument of External Adjustment", *DRG Study No.3*, Reserve Bank of India, April.

Vaidyanathan, A. (1999), "Consumption of Gold in India", *Economic and Political Weekly*, February.

World Gold Council (2011), Quarterly Gold Demand Trends (available on http:www.gold.org).

increasing oil intensity of the economy (7.0 per cent of GDP during 2008-12 compared with 4.7 per cent during 2003-07) is reflected in the 35 per cent growth in quantum of net POL imports during 2008-12 over 2003-07. The moderation in non-oil non-gold import growth in 2011-12 may be due to the economic slowdown and the impact of rupee depreciation in the second half of 2011-12. Subdued global growth prospects also impacted the imports of export related items since the beginning of 2011-12. Growth in import of export related items was mainly affected due to contraction in imports of pearl and precious/semi precious stones and decelerated growth in imports of chemicals. However, the import growth in bulk items and capital goods imports increased in 2011-12. Capital goods imports seem to be substituting domestic production of capital goods, which showed a decline of 4.0 per cent in 2011-12.

II.6.9 The exports recorded a decline of 5.1 per cent to US$ 97.6 billion during 2012-13 so far (April-July) as compared with US$ 102.8 billion in the corresponding period of the preceding year largely reflecting the prolonged slowdown in euro area, as also lower growth in US and other emerging market economies. The labour intensive sectors like handicrafts, textiles and gems and jewellery were assessed to be affected severely by the slowdown. Imports also declined by 6.5 per cent to US$ 153.2 billion during the same period from US$ 163.8 billion in the comparable period of previous year mainly reflecting lower domestic demand coupled with subdued exports as some imports are used as inputs in the exports related industries. Going forward, the measures announced by the government in June 2012 in terms of interest subvention and other sector-specific incentives will have an impact on the export performance with a lag.

India's trade exposure to euro area is limited

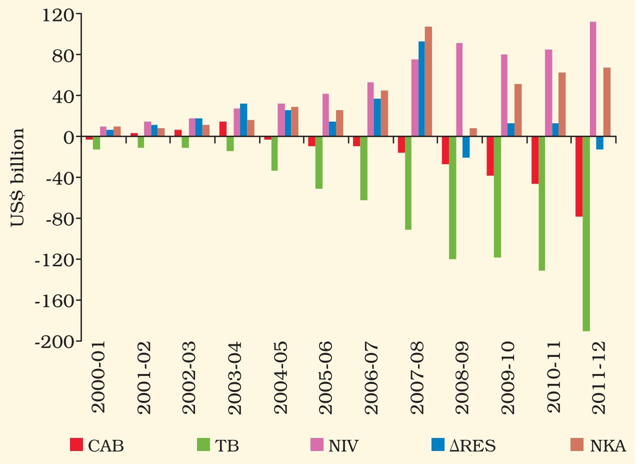
II.6.10 The five troubled euro area countries – Greece, Portugal, Spain, Ireland and Italy – together account for less than 3.5 per cent of India's exports and 1.7 per cent of India's imports. However, global developments during the third quarter of 2011-12 renewed fears that the euro area crisis would escalate. The impact was evident in EDEs including India, though the pattern of spillovers varied across economies depending on the strength of trade and financial linkages, and euro area bank exposures. Reflecting the export diversification policy efforts by the government, the share of developing economies in India's total exports has shown a gradual increase in recent years. However, as the sluggish economic conditions in advanced economies gradually spilled over to other EDEs, export diversification efforts did not yield results similar to those seen in previous years. Destination-wise, moderation in India's export growth during 2011-12 was significant in the case of OPEC economies, European Union and other developing economies, particularly the newly emerging destinations of African and Latin American economies. Global Trade Alert data suggest that protectionist actions announced across advanced and emerging market economies in the third quarter of 2011 were as high as in the worst period of 2009. Recognising the concerns relating to moderation in export growth, the government announced various export boosting measures in June 2012 that *inter alia* include extension of interest subvention and Zero Duty Export Promotion Capital Goods (EPCGs) scheme up to March 2013 and increased coverage under the Focus Market Scheme (FMS), Special FMS Scheme and Focus Product Scheme.

Financing of CAD posed concerns in the second half of 2011-12

II.6.11 The increase in India's CAD in 2011-12 has been largely on account of the worsening trade balance (Appendix Table 18). The merchandise trade deficit was at a historic high of 10.0 per cent of GDP in 2011-12. The trade deficit-led CAD was comfortably financed in the first half, as capital inflows exhibited an uptrend, mainly on account of robust FDI inflows and a rise in external commercial borrowings (ECBs) and trade credit (Appendix Table 19). In the third quarter of 2011-12, however, not only was the CAD significantly higher but capital inflows also moderated as growing global uncertainties impacted the risk appetite of global investors. During 2011-12, CAD was 70.1 per cent higher than the level during 2010-11 (Chart II.39).

II.6.12 On a cumulative basis, CAD stood at 4.2 per cent of GDP during 2011-12. Growth in net services exports was too moderate to fully offset the adverse impact of the high trade deficit on CAD during 2011-12. Growth in exports of services moderated at 7.1 per cent during 2011-12 as against 34.4 per cent during 2010-11 while imports of services declined by 7.3 per cent as against an increase of 39.4 per cent during 2010-11. Despite the slowdown in major export markets, software services receipts, accounting for around 44 per cent of total services exports, continued to show higher growth (Chart II.40).

Chart II.39: Trends in the Major Components of Balance of Payments



CAB: Current Account Balance; TB: Trade Balance
NIV: Net Invisibles; ΔRES: Change in Reserves
NKA: Net Capital Account

Capital inflows moderated in Q2 and Q3 but recovered in Q4

II.6.13 The pattern of capital inflows showed a significant variation during 2011-12 (Chart II.41). Net inflows under the capital and financial account (bifurcation of the erstwhile capital account of

Chart II.40: Growth of Major Components of Invisibles Receipts

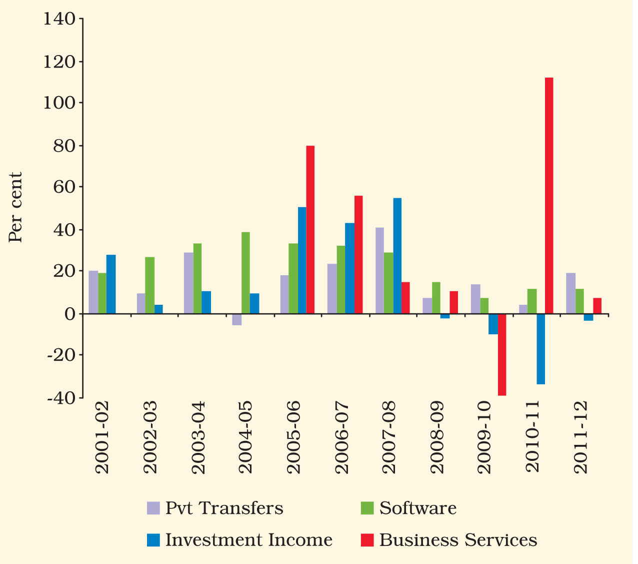
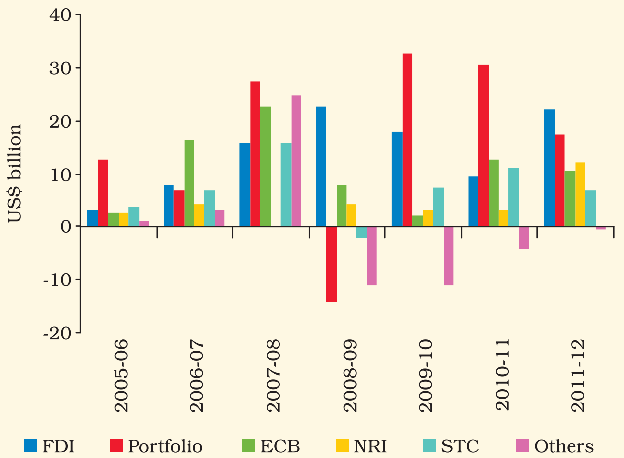


Chart II.41: Trends in Major Components of Capital Flows (Net)



FDI: Foreign Direct Investment; Portfolio: Portfolio Investment; ECB: External Commercial Borrowings; NRI: Non-Resident Indian Deposits: STC: Short Term Credits

Balance of Payments under IMF's sixth edition of Balance of Payment Manual) were buoyant in Q1. Even though moderation in capital inflows began in Q2, it became more pronounced in Q3, mainly led by lower portfolio inflows and net repayments under trade credit. Increased repatriation of inward FDI and higher repayments of overseas borrowings also led to greater outflows. Moderation in capital inflows necessitated the drawdown of foreign exchange reserves to meet the financing needs of CAD in Q3 (Appendix Table 20). Due to a significant drawdown in Q3, the level of foreign exchange reserves (including valuation) declined from US$ 304.8 billion at end-March 2011 to US$ 294.4 billion at end-March 2012.

Deteriorating international investment position and rising short-term debt remain a policy concern

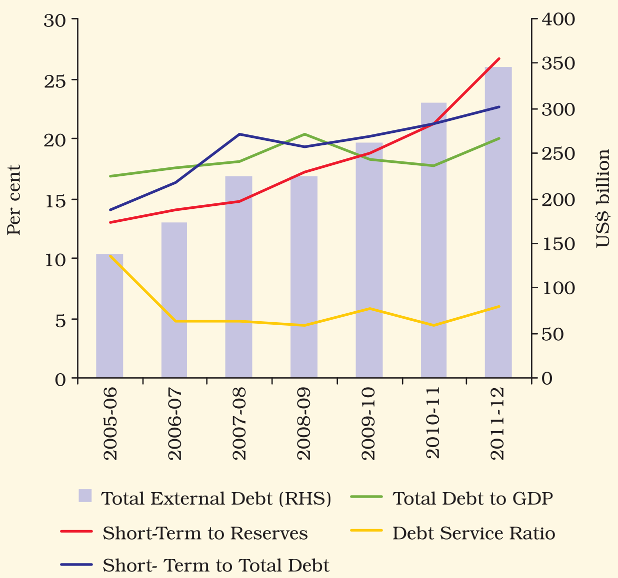
II.6.14 Various policy measures that were undertaken against the backdrop of deteriorating global financial conditions and India's external situation during the course of the year stimulated debt creating flows in the form of investments by FIIs in debt instruments, NRI deposits and external commercial borrowings. Even though such flows augured well for financing of CAD, their implications were evident in the form of India's rising external debt. External commercial borrowings, NRI deposits and trade credit together accounted for 77 per cent of the rise in total external debt at end-March 2012 over the level of end-March 2011 (Appendix Table 21).

II.6.15 With increasing recourse to debt flows and drawdown of reserves to finance CAD, various external sector vulnerability indicators showed considerable deterioration during 2011-12. The reserve cover of imports, the ratio of short-term debt to total external debt, the ratio of foreign exchange reserves to total debt, and the debt service ratio deteriorated during the year (Chart II.42). India's net international investment position also weakened during 2011-12.

Need to augment non-debt creating flows

II.6.16 In view of the higher dependence on debt flows to finance the CAD during 2011-12, there is a need for policy initiatives to augment non-debt creating flows to keep composition of India's external liabilities at a comfortable level. In this context, apart from insurance, reforms in the pension sectors are necessary. There is a need to further improve FDI inflows in sectors such as insurance, retail, aviation and urban infrastructure.

Chart II.42: External Debt Indicators



II.6.17 In this context, the proposal relating to further liberalisation of the Indian organised retail sector by allowing up to 51 per cent of FDI in multi-brand retail and no limits for FDI in single-brand retail was intensively debated during 2011-12. Though the proposal in respect of multi-brand retail has been kept in abeyance following lack of consensus amongst various stakeholders, the government in January 2012 raised the FDI limit in single-brand retailing under the government approval route from 51 per cent to 100 per cent. Apprehensions in case of FDI in multi-brand retailing mainly stem from possible predatory pricing or below-the-cost pricing that can be afforded by large retail chains. Such pricing behaviour can drive out existing small *kirana* stores and end up with creation of monopolistic power in the absence of these small stores. These apprehensions contrast with the international experience that on the whole suggests that allowing FDI in retailing space leads to increased competition. Empirical evidence also suggests that increased competition in retail space results in lower prices which improves consumer welfare, benefitting low income households the most. The FDI in retail may be particularly helpful in improving supply chain management through greater investment in backend infrastructure, including cold storage for farm and poultry products. Several countries in east Asia have benefitted from FDI in retailing over past two decades. Retailing and wholesaling has also emerged as a major sector of FDI inflows in China.

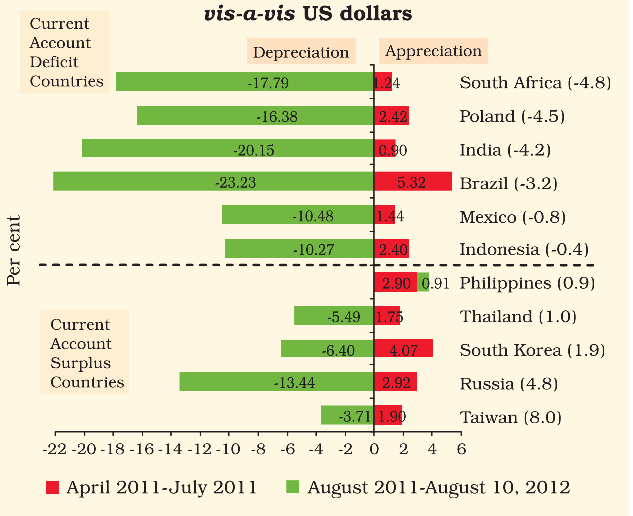
II.6.18 In recent years, outward FDI has increased significantly in line with the trend observed in many other emerging markets. The stock of outward FDI from India reached US$ 112 billion at the end of 2011-12. While, these investments generate benefits in terms of enhanced competitiveness and market access, there is a need to balance the domestic investment interests in the overall FDI policy. Moreover, exponential rise in issuance of guarantees by the Indian companies towards their joint ventures/wholly owned subsidiaries abroad could be a potential concern for banks and for the companies themselves. This needs to be closely monitored.

Rupee depreciation driven by global currency movements, domestic macroeconomic weakness

II.6.19 After being largely range bound in the first four months of the financial year 2011-12, rupee depreciated by about 17 per cent during August to mid-December of 2011 reflecting global uncertainties and domestic macro-economic weakness. The S&P's sovereign rating downgrade of the US economy, deepening euro area crisis and lack of credible resolution mechanisms led to reduced risk appetite in global financial markets and a flight to US dollar considered as a safe asset by investors. With US dollar appreciating as a result, most currencies with a notable exception of yen came under pressure (Chart II.43). In general, current account deficit countries witnessed sharper depreciation as compared to current account surplus countries, with the exception of Russia.

II.6.20 Considering the excessive pressures in the currency markets, the Reserve Bank intervened in the foreign exchange market through dollar sale. It also took several capital account measures to stabilise rupee that included deregulation of interest

Chart II.43: Movements in Major EDEs Currencies *vis-a-vis* US dollars



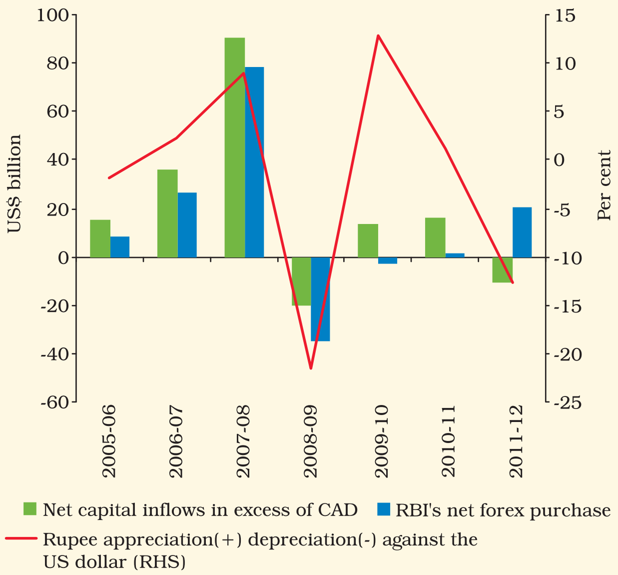
Figures in parenthesis represent WEO's estimated/projected CAD for the year 2012, except in case of India, where actual data point for the period of April 2011 -March 2012 is given.

rates on rupee denominated NRI deposits and enhancing the all-in-cost ceiling for ECBs with average maturity of 3-5 years. The lock-in period of long-term infrastructure bonds for FIIs (up to US$ 5 billion within the overall ceiling of US$ 25 billion) was reduced to one year, and ceilings for FIIs in government securities and corporate bonds were raised by US$ 5 billion each to US$ 20 billion and US$ 45 billion respectively.

II.6.21 Consequent upon the series of measures undertaken to improve dollar supply in the foreign exchange market as also to curb speculation, the rupee appreciated by 11 per cent by early February 2012, before weakening again by over 13 per cent by end-May 2012.

II.6.22 The renewed pressure on rupee was mainly due to widening trade deficit, drying up of capital flows, particularly FII flows and apprehension about the exit of Greece from the euro (Chart II.44). In order to improve the inflows as also to reduce the volatility in the rupee, the Reserve Bank took additional measures in May and June 2012. The measures in May 2012 included increase in interest rate ceiling on FCNR(B) deposits, deregulation of ceiling on interest rate for export credit in foreign currency, and requirement to convert 50 per cent

Chart II.44: Exchange Rate Flexibility in India



of the balances in the EEFC accounts to rupee balances.

II.6.23 In June 2012, additional measures were taken in consultation with the government which included, *inter alia*, allowing ECB for Indian companies for repayment of outstanding rupee loans towards capital expenditure under the approval route, enhancing the limit for FII investment in G-secs by US$ 5 billion to US$ 20 billion, allowing Qualified Foreign Investors (QFIs) to invest in mutual funds that hold at least 25 per cent of their assets in infrastructure under the sub-limit for investment in such mutual funds and broadening the investor base for G-Secs to include certain long term investor classes that include Sovereign Wealth Funds, insurance funds and pension funds. Notwithstanding these measures, during 2012-13 so far (August 14, 2012) rupee depreciated by 8.1 per cent. The REER based on 6-, 30-, and 36- currency baskets also depreciated (Appendix Table 13).

India's foreign exchange reserves contract

II.6.24 The level of reserves moderated during 2011-12 as there was heavy drawdown in the second half of 2011-12. The ratio of foreign exchange reserves to debt also declined. Nonetheless, in terms of adequacy of reserves, India continues to be in comfort zone going by the various alternative norms. In terms of traditional indicators, reserve cover for imports at 7.1 months against the rule of thumb of 3 month imports is comfortable. Likewise, the level of reserves to short-term debt at 377 per cent is much more than the level of 100 per cent as prescribed under the Greenspan-Guidotti rule. In its April 2012 Staff Report, the IMF noted that India's reserve coverage is adequate (1.8 times of the 2011 gross external financing requirement) and external debt, which has remained at about 20 per cent of GDP and compares well with other major emerging markets.

II.6.25 Going forward, the weaker rupee, supplemented by other necessary policy responses can help contain the current account deficit. The external sector scenario, however, needs continuous monitoring so that growth in imports of price insensitive items such as oil and gold, does not impinge upon the trade deficit and CAD stays within the sustainable range and does not act as a drag on India's forex reserves. There is a need for more prudent macroeconomic and external sector policies to keep external sector risks at bay in the near term. This is especially so because debt creating flows have increased over the years, making the economy more vulnerable to external shocks. Since global economic and financial conditions remain highly uncertain, there is no room for complacency. Policymakers need to address vulnerabilities emerging from rising imbalances in India's trade and current account and also create a policy and business environment that boost confidence among foreign investors.

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

III MONETARY POLICY OPERATIONS

Monetary policy in 2011-12 had to address the risk of entrenchment of inflation pressures and unhinged inflation expectations during the first half of the financial year and the significant slowdown in domestic growth even while maintaining its anti-inflationary stance during the second half. Further, with the liquidity deficit remaining above the comfort level due to a mix of structural and frictional factors, the Reserve Bank had to undertake active liquidity management to inject durable primary liquidity. Thus in the evolving growth-inflation dynamics, the monetary policy stance continued to be tight, up to mid-December 2011 but policy rates were kept at a pause mode during the remainder of the year with cuts in cash reserve ratio and OMO operations for supporting liquidity. During 2012-13 so far, on growing evidence of slowdown in the economy, the Reserve Bank using available space to cut policy rates frontloaded the policy action in April 2012, but maintained status quo on rates in June and July 2012 as inflation concerns persisted. The SLR was reduced in July 2012, to provide liquidity to facilitate credit availability to productive sectors.

III.1 The Reserve Bank's monetary policy stance till December 2011 was predominantly guided by the objective of containing inflation and anchoring inflation expectations. However, subsequently as growth decelerated sharply the Reserve Bank had to strike a balance between the objectives of growth stabilisation and low and stable inflation. Liquidity conditions mostly remained within the comfort zone before turning tight during November 2011 - March 2012. Deficit liquidity conditions reflected autonomous factors - both frictional and structural – in the form of sharp turnaround in government cash balances from deficit to surplus, the wedge between the credit and deposit growth, rise in currency in circulation, and drain of rupee liquidity on account of the Reserve Bank's forex market intervention to stem excessive volatility in the rupee exchange rate. The Reserve Bank responded with large scale open market operations and CRR cuts to offset the autonomous drain in liquidity. Reflecting these initiatives, the liquidity deficit condition moved back in the comfort zone in the Q2 of 2012-13 so far (till August 13, 2012).

MONETARY POLICY OPERATIONS: CONTEXT AND RATIONALE

III.2 Monetary policy at the beginning of 2011-12 faced the challenge of a high and persistent inflation. There were signs of further accentuation of the underlying inflationary pressures, posing the risk of firming up inflation expectations further. Monetary policy was, therefore, geared to ensure containment of inflationary pressures, even if it was at the cost of sacrificing some growth in the short-run.

III.3 Headline WPI inflation during April-November 2011 continued to remain at an elevated level of 9.7 per cent on an average, significantly above the comfort zone of the Reserve Bank. Non-food manufacturing inflation, as an indicator of demand pressures, averaged at 7.7 per cent during April-November 2011, as compared with around 4.0 per cent during the last six years. Enduring non-food manufactured products inflation emanated partly from persistent pricing power of producers, wherein they were able to pass on rising commodity input prices and wage costs to consumers on the back of strong demand.

III.4 In response to the prevailing inflationary pressures and anticipated inflation trajectory during April-November 2011, the Reserve Bank raised the policy repo rate five times cumulatively by 175 basis points, with the increase in May and July of the order of 50 basis points each (Table III.1).

III.5 While inflation trajectory indicated some softening of inflationary pressure by December 2011, there were signs of a marked deceleration of domestic growth brought about by the combined impact of a worsening global environment, the cumulative impact of past monetary policy tightening and domestic policy uncertainties. In the light of these developments, the mid-quarter review of December 2011 signalled a pause. In its guidance, the Reserve Bank noted that in light of the growing downside risks to growth, further monetary policy actions would be directed towards a reversal in cycle. However, that was to be contingent upon inflation remaining on its projected downward trajectory.

Table III.1: Movements in Key Policy Variables

(Per cent)

Effective	Repo Rate	Cash Reserve Ratio	Statutory Liquidity Ratio
1	2	3	4
May 3, 2011	7.25 (+0.50)	6.00	24.00
June 16, 2011	7.50 (+0.25)	6.00	24.00
July 26, 2011	8.00 (+0.50)	6.00	24.00
September 16, 2011	8.25 (+0.25)	6.00	24.00
October 25, 2011	8.50 (+0.25)	6.00	24.00
January 28, 2012	8.50	5.50 (-0.50)	24.00
March 10, 2012	8.50	4.75 (-0.75)	24.00
April 17, 2012	8.00 (-0.50)	4.75	24.00
June 18, 2012	8.00	4.75	24.00
August 11, 2012	8.00	4.75	23.00 (-1.00)

Note: 1. Repo indicates injection of liquidity.
2. Figures in parentheses indicate change in policy rate in percentage points.

III.6 From the beginning of the fourth quarter of 2011-12, there were indications of a moderating trend in inflation. However, during this period, the risks to growth increased further resulting in a downward projection of GDP growth for 2011-12 from 7.6 per cent to 7.0 per cent in the third quarter review. A major concern faced by monetary policy at this juncture was the overall liquidity deficit which remained much beyond the comfort zone of the Reserve Bank. Acknowledging that such structural liquidity constraints in the economy, if not addressed, could lead to disruption of credit flow and further exacerbate growth risks, the Reserve Bank reduced CRR in two steps effective January 28, 2012 and March 10, 2012, by a cumulative 125 basis points with the aim of injecting durable primary liquidity into the system. The challenge for monetary policy while undertaking measures aimed at active liquidity intervention was that, inflation was still above the comfort level despite some moderation and there was significant amount of suppressed inflation in the economy.

III.7 By April 2012, there was growing evidence that the economy was slowing down more than what was anticipated earlier. Considering the need to support the growth impulses, the key policy repo rate was reduced by 50 basis points to 8 per cent on April 17, 2012. Even while reducing the policy rate, the Reserve Bank noted that the risks to inflation persisted in the form of high fiscal deficit driven by revenue expenditure, lagged pass-through of administered price increases, crude price uncertainty and structural food demand-supply imbalances. It was noted that these risks could limit the scope for further reduction of rates.

III.8 A marked deterioration in global economic and financial conditions coupled with significant moderation in domestic growth raised several deepening concerns in June 2012. Concomitantly, the headline inflation continued to be above levels consistent with sustainable growth. The Reserve Bank assessed that several factors were responsible for the slowdown in activity, particularly in investment, with the role of interest rates being relatively small. Accordingly, it was viewed that further reduction in the policy interest rate at that juncture, rather than supporting growth, could exacerbate inflationary pressures and accentuate macro-economic risks. In view of these factors, the Reserve Bank decided to keep the CRR as well as policy repo rate unchanged in its mid-quarter monetary policy review in June 2012.

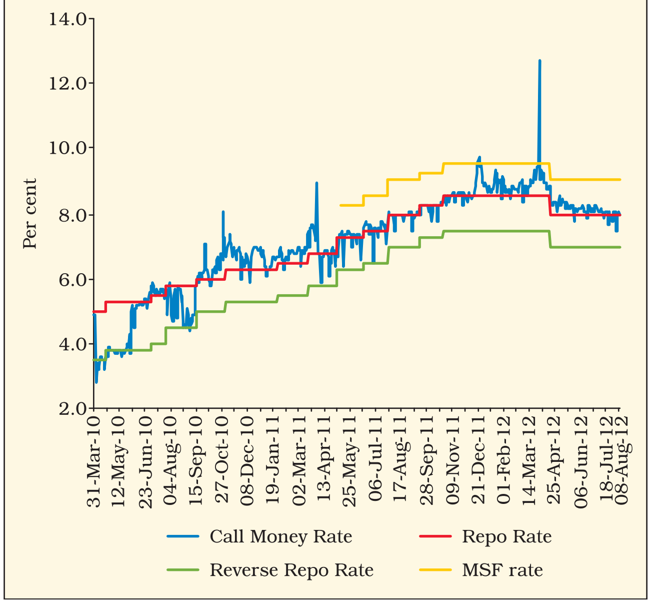
III.9 At the current juncture, the global economy is facing a synchronised slowdown, while domestic macroeconomic situation, particularly slowdown in growth and persistent inflation continues to raise concerns. Against this backdrop, the stance of monetary policy in July 2012 was shaped by considerations of containing inflation and inflationary expectations, supporting a sustainable growth path over the medium-term and continuing to provide liquidity to facilitate credit availability to productive sectors. In line with this policy stance, the Reserve Bank maintained a *status quo* on policy rates but reduced the statutory liquidity ratio (SLR) of SCBs from 24.0 per cent to 23.0 per cent of NDTL with effect from the fortnight beginning August 11, 2012.

III.10 Going forward, reflecting the setback to the global recovery and the resultant continuation of easy global monetary conditions as also weather related adversities in several parts of the world, the outlook for food and commodity prices, especially crude oil, has turned adverse. Risks to headline inflation persist from suppressed inflation and structural gaps between demand and supply of food. Additional risks to food inflation have emerged from the deficient and uneven monsoon. In turn, persistent elevated headline inflation driven by food and fuel price pressures carries the significant risk of unhinging inflation expectations. Further, the lowering of trend rate of growth in post crisis scenario due to sustained deceleration in investment activities and supply bottlenecks on a variety of fronts – infrastructure, energy, minerals and labour - has added to risks of a pick-up in inflation in response to even a moderate growth recovery. Monetary policy in such a scenario has to maintain a fine balance such that while addressing short-term growth concerns, price stability is maintained to ensure sustainable growth over the medium-term.

New Operating Procedure of Monetary Policy

III.11 The Reserve Bank introduced a new operating procedure of monetary policy in May 2011 to have an explicit operating target, a single policy rate and a formal corridor system with a 100 bps spread on either side of the policy rate to replace the earlier system of repo and reverse repo as policy rates without having an explicit target and a fixed-width formal corridor (Please see Box III.2 of Annual Report 2010-11 for details). Following the implementation of the new operating procedure of monetary policy, the call rate stabilised and hovered within the fixed corridor barring a few occasions when the call rate exceeded the upper bound of the corridor owing to tightness of liquidity on account of advance tax outflows (Chart III.1). The implementation of new operating procedure

Chart III.1: Movement of Call Money Rate



has also led to a greater integration of financial market, reflected in the call rate moving closely and in tandem with other money market rates than earlier. Debt market segment has also evidenced a better transmission from the call rate with increasing alignment between rates on debt market instruments and call rate.

Performance of the Base Rate System

III.12 The Base Rate system, which replaced the benchmark prime lending rate (BPLR) system introduced in 2003, and became effective from July 2010, has contributed to improvement in the pricing of loans, enhanced transparency in lending rates and improvement of the assessment of the transmission of monetary policy (Box III.1). This combined with freeing of interest rates on export credit in foreign currency effective May 5, 2012 have resulted in complete deregulation of interest rates on lending by commercial banks.

Deregulation of the Savings Bank Deposit Rate

III.13 As proposed in the Second Quarter Review of Monetary Policy 2010-11, a discussion paper on deregulation of savings bank deposit rate was prepared and placed on the Reserve Bank's website on April 28, 2011 for suggestions/feedback from the general public. Based on the feedback

Box III.1
Base Rate System: An Assessment

In order to address concerns posed by the non-transparent BPLR system, the Base Rate system was introduced on the recommendations of a Working Group (Chairman: Shri Deepak Mohanty) (See Box III.1 of Annual Report 2010-11). Since the inception of the Base Rate system, liquidity in the financial system has remained in deficit mode. During this period, banks have become by and large synchronous and more responsive in their change of Base Rates to changes in the policy rate by the Reserve Bank. This is evident from the fact that as the Reserve Bank progressively increased its Repo Rate, banks also increased their Base Rates. Initially, *i.e.* during July – December 2010, the pace was slower as the system had been migrating from surplus mode to a deficit mode. Reflecting this, Base Rates increased, on average, by 58 bps following the rise in Repo Rate by 75 bps. Thereafter, the momentum picked up and continued till March 2011 (Table).

Thereafter, following gradual moderation in the growth of economic activity and the resultant slowdown in the growth of non-food credit, particularly during the second half of 2011-12, the pace of increase in the Base Rate relative to that of the Repo rate slowed down while the number of days taken to raise the Base Rate also increased. Further, as the Reserve Bank reduced its Repo Rate by 50 bps on April 17, 2012, 24 banks accounting for around 63 per cent of aggregate credit reduced their Base Rates by, on average, 23 bps so far (till July 2012). The pass-through of reduction in Repo Rate and cumulative reduction in CRR to banks' deposit and lending rates was impacted by higher weighted average cost of outstanding deposits, higher government borrowing, increase in NPAs and sustained high inflation.

Overall, however, the transmission of monetary policy has been strengthened under the Base Rate system as compared with the BPLR system.

Table : Extent of Increase in both Deposit Rate and Base Rate and Time Taken by Public/Private Sector Banks

Period (Month over Month)	Change in Repo Rate (bps)	Change in Cash Reserve Ratio (CRR) (bps)	Change in Deposit Rate (bps)	Average change in Base Rate (bps)	Average no. of days taken to change the Base Rate*	No. of Banks changed the Base Rate	Share of Credit of banks that changed their Base Rate (%)#
1	2	3	4	5	6	7	8
Jul-Dec 10	75	-	25-325	58	141	41	93.1
Dec10-Mar 11	50	-	25-450	73	96	47	96.5
Mar-May 11	50	-	10-275	55	85	38	89.0
May-Oct 11	125	-	05-425	95	129	46	94.5
Oct 11-Mar 12	-	-125	05-500	29	93	13	9.7
Mar-Jul 12	-50	-	(-25)-(-400)	-23	247	24	62.6

- : Indicates no change. * : Since the date of last change in Base Rate. # : As at end-point.

received and after examining the pros and cons of such deregulation, on balance, the Reserve Bank decided to deregulate the savings bank deposit interest rate, effective October 25, 2011 (Box III.2).

Box III.2

Deregulation of Savings Bank Deposit Interest Rate – Rationale and Impact

The process of interest rate deregulation, which began in the early 1990s, was largely completed by 1997. On the liability side, apart from the interest rate on current account, the only interest rate that continued to remain regulated was the savings deposit interest rate until October 25, 2011. The discussion paper on deregulation of savings bank deposit rate delineated both the pros and cons of deregulation of savings bank deposit rate as under:

Pros

a) Deregulation of the interest rate on savings deposit will make the rate flexible along with other interest rates depending on the market conditions.

b) Regulation of savings deposit interest rate not only reduced its relative attractiveness, it also adversely affected the transmission of monetary policy.

c) Savings deposits constitute a large proportion of total deposits. However, owing to regulation of interest rate, there was hardly any competition in this segment with both banks and depositors acting passively. This inhibited product innovations.

Cons

a) Savings deposits have been a source of cheap funds for banks. In addition, banks treat a large portion of savings deposits as 'core' deposits, which are used to finance long-term assets. This, combined with skewed distribution of savings deposits, often raised the concern that deregulation might lead to an unhealthy competition resulting in a large shift of deposits from some banks exposing them to a serious risk of asset-liability mismatch.

b) Should unhealthy competition result in increase in interest rate and the overall cost of funds, banks might be discouraged from maintaining savings deposits with small amounts due to the associated high transaction costs.

c) In the event, if savings deposit interest rates decline markedly, income flow to small savers/pensioners may get affected adversely.

d) Following deregulation, some banks may introduce some complex products, which may not be so easily understood by savers. These strategies may result in increase in the mis-selling of savings bank products.

Deregulation and its Impact

The discussion paper evoked wide-ranging responses from a cross-section of stakeholders, ranging from the suggestion that savings bank deposit interest rate should not be deregulated at all to the suggestion that it should be deregulated completely. The Reserve Bank examined the suggestions. On balance, it was felt that the time was appropriate to move forward and complete the process of deregulation of rupee interest rates. Accordingly, it was decided to deregulate the savings bank deposit interest rate effective October 25, 2011 (announced in the Second Quarter Review of Monetary Policy 2011-12), subject to the following two conditions:

- First, each bank will have to offer a uniform interest rate on savings bank balance up to ₹100 thousand, irrespective of the amount in the account within this limit.
- Second, for savings bank balance over ₹100 thousand, a bank may provide differential rates of interest, if it so chooses. However, there should not be any discrimination from customer to customer on interest rates for similar amount.

Since the deregulation of savings deposit interest rate, five private sector banks, ten foreign banks and one co-operative bank have increased their savings deposit interest rate in the range of 100-500 basis points during the period so far. So far, none of the public sector banks has increased its savings deposit interest rate.

Any unhealthy competition has not been seen amongst banks so far. This is because 15 SCBs, which have raised saving deposit rate, account for only 4.2 per cent of aggregate deposits. However, these 15 banks witnessed above-average growth in their savings deposits during the period so far. As a result, the share of these banks to total savings bank deposits of the banking system increased from 1.8 per cent to 2.1 per cent in the post-deregulation period so far up to July 2012 and their contribution to the total growth of savings bank deposits stood at around 5 per cent during this period.

With regard to both free and chargeable services as admissible to savings bank account holders during the pre- and post-deregulation period, a quick survey of 11 banks comprising public sector, private sector and foreign banks reveals that banks that raised savings deposits interest rates have not changed their non-interest charges during post-deregulation period so far. However, in contrast, while two major private sector banks have made upward revisions in their non-interest charges, one public sector bank reduced such charges during the post-deregulation period. Since majority of banks are yet to change their savings deposits interest rates, the change in non-interest charges is yet to gather momentum.

Box III.3
Bank Rate Alignment with the MSF Rate

Section 49 of the Reserve Bank of India Act, 1934 requires the Reserve Bank to make public (from time to time) the standard rate at which it is prepared to buy or re-discount bills of exchange or other commercial papers eligible for purchase under that Act. Since discounting/rediscounting by the Reserve Bank has remained in disuse, the Bank Rate has not been active. Moreover, even for the conduct of monetary policy, instead of changing the Bank Rate, monetary policy signalling was done through modulations in the reverse repo rate and the repo rate under the Liquidity Adjustment Facility (LAF) (till May 3, 2011) and the policy repo rate under the revised operating procedure of monetary policy (from May 3, 2011 onwards). As a result, the Bank Rate had remained unchanged at 6 per cent since April 2003. Under the revised operating procedure, the marginal standing facility (MSF), instituted at 100 basis points above the policy repo rate, serves the purpose of the Bank Rate. Being the discount rate, the Bank Rate should technically be higher than the policy repo rate. The Reserve Bank consulted various organisations/ stakeholders relying on the Bank Rate as a reference rate and based on the feedback received, it was determined that the Bank Rate should normally stay aligned to the MSF rate. Accordingly, it was decided that with effect from the close of business on February 13, 2012, the Bank Rate will stand aligned with the MSF rate with the one-time technical adjustment. All penal interest rates on shortfall in reserve requirements, which are specifically linked to the Bank Rate, also stand revised accordingly.

Bank Rate - One-time Technical Adjustment

III.14 Effective from February 13, 2012, the Bank Rate has been aligned with the MSF rate through a one-time technical adjustment (Box III.3). This decision was based on a review of the relevance of the Bank Rate in the context of the current operating framework of monetary policy and it was clarified that the one-time adjustment should not be seen as a monetary policy action.

Liquidity Management

III.15 The Reserve Bank, like many other central banks keeps the systemic liquidity in deficit mode in order to enhance the transmission of monetary policy. Consistent with this objective, liquidity conditions generally remained in deficit mode throughout 2011-12. However, the deficit exceeded the indicative comfort level of one per cent of net demand and time liabilities (NDTL) of SCBs from the beginning of November 2011 due to both structural and frictional factors(Please see discussion on liquidity conditions in Part II.3: Money and Credit).

III.16 In order to ease the liquidity situation, the Reserve Bank undertook several measures (Box III.4).

Box III.4
Liquidity Management Operations

Liquidity conditions changed course significantly during 2011-12 on account of both structural and frictional factors. Liquidity conditions remained in surplus mode during early April 2011, turned into deficit but mostly remained within comfort zone up to October and subsequently turned into excessive deficit mode during the remainder of the year.

On April 8, 2011, the Reserve Bank had preemptively extended the additional liquidity support to SCBs under the LAF to the extent of up to one per cent of their NDTL till May 6, 2011. Moreover, the second LAF (SLAF) on a daily basis was also extended, synchronously. Following the introduction of MSF on May 9, 2011, as a part of the Modified Operating Procedures of Monetary Policy announced in the Annual Monetary Policy Statement 2011-12, the second LAF was discontinued.

While repo auction under LAF continued to be conducted between 9.30 am and 10.30 am, the Reserve Bank shifted the reverse repo auction under LAF to the afternoon time slot of 4.30 pm to 5.00 pm on all working days with effect from August 16, 2011. The prime reason for shifting the reverse repo window to the afternoon slot was to encourage the market participants to trade amongst themselves and to park any surplus with the Reserve Bank only after exhausting all other avenues to deploy the funds in the money market. Comfortable liquidity conditions during first half (H1) of 2011-12 were reflected in the access to MSF only on two occasions, *viz.*, ₹1 billion on June 10 and ₹41.05 billion on July 15, 2011.

During the second half (H2) of 2011-12, liquidity conditions tightened reflecting the decline in the level of WMA/OD, rise

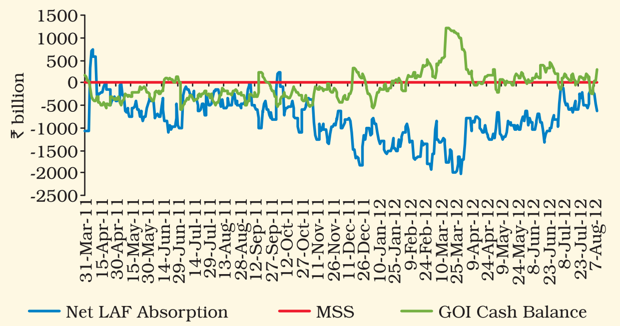
(Contd....)

in currency in circulation due to festive season currency demand and forex market operations by the Reserve Bank. As soon as the liquidity deficit exceeded the Reserve Bank's indicative comfort zone of (+/-) 1 per cent of NDTL from the second week of November 2011, the Reserve Bank began conducting OMO purchase auctions of Government securities from November 24, 2011. Reflecting quarterly advance tax outflows and forex market operations by the Reserve Bank, the average daily net liquidity injection under the LAF increased further to around ₹1,170 billion in December 2011 from around ₹920 billion in November 2011 (Chart 1). MSF was availed on six occasions during December 2011.

With a view to providing flexibility to SCBs in their liquidity management, the Reserve Bank conducted additional repo operation under LAF on December 16, 2011, over and above the existing LAF and MSF arrangements. Furthermore, keeping in view the prevailing overall liquidity conditions, the Reserve Bank permitted banks on December 21, 2011 to avail funds on overnight basis under the MSF against their excess SLR holdings in addition to the existing facility where they were already allowed to avail themselves of funds on overnight basis below the stipulated SLR, up to one per cent of their respective NDTL.

As the liquidity stress persisted through January 2012 partly reflecting forex market operations by the Reserve Bank, the Reserve Bank reduced the CRR of scheduled banks by 50 bps to 5.5 per cent of their NDTL, effective January 28, 2012. With a view to providing flexibility to market participants in their liquidity management, the Reserve Bank re-introduced additional Repo under LAF (second LAF Repo) on reporting Fridays, effective February 10, 2012. The average daily LAF injection rose further to around ₹1,405 billion in February 2012 from around ₹1,290 billion in January 2012, partly reflecting the build-up of the centre's surplus balance.

Chart 1: Liquidity Conditions



Liquidity conditions tightened significantly during March 2012. The Reserve Bank pro-actively reduced the CRR by 75 bps effective March 10, 2012. The average daily net outstanding LAF injection reached around ₹1,570 billion in March 2012. The net liquidity injection through the LAF escalated to an all-time high on March 30, 2012 (₹2,028 billion) as banks tried to shore-up their balance sheets and front-load cash reserves. Banks availed MSF on nine occasions during the month.

With a view to providing flexibility to SCBs in their liquidity management, the Reserve Bank conducted additional LAF-Repo on March 30, 2012, and LAF and MSF on March 31, 2012.

The liquidity conditions continued to remain in deficit mode in April 2012, *albeit*, on a lower scale, reflecting seasonal draw-down of government cash balances. Subsequently, however, there has been an easing of the liquidity stress in the system brought about by the Reserve Bank's active management of liquidity through LAF and OMOs. The narrowing of the wedge between credit and deposit growth rates also helped in restricting the liquidity deficit in the situation. In order to provide greater liquidity cushion, the Reserve Bank also undertook several measures. In April 2012, the borrowing limit of SCBs under the MSF was raised from one per cent to two per cent of their NDTL. Further, the eligible limit of the Export Credit Refinance (ECR) facility for scheduled banks (excluding RRBs) was enhanced from 15 per cent of the outstanding export credit eligible for refinance to 50 per cent, effective fortnight beginning June 30, 2012. This was estimated to provide additional liquidity support to banks of over ₹300 billion. In response to suggestions received from the market participants for extending the timings of evening LAF, the Reserve Bank decided to conduct reverse repo auction under LAF and MSF operation between 4.45 pm and 5.15 pm with effect from July 16, 2012. The statutory liquidity ratio (SLR)of SCBs was reduced from 24.0 per cent to 23.0 per cent of NDTL with effect from the fortnight beginning August 11, 2012, with a view to providing additional liquidity to facilitate credit availability to productive sectors. This is expected to release additional liquidity to the tune of ₹680 billion.

III.17 Reflecting these measures, combined with decline in government cash balances, the liquidity stress has eased in Q2 of 2012-13 so far (till August 13, 2012) and the extent of deficit has remained close to the Reserve Bank's comfort level of one per cent of NDTL.

Overall Assessment

III.18 During April - November 2011, monetary policy was directed towards 'management of inflation' in response to an inflationary process that remained at a level much above the comfort zone of the Reserve Bank for almost two years. Monetary policy in this scenario was guided by the consideration that persistent high inflation is inimical to sustained long-run growth as it harms both financial saving and investment by creating uncertainty. Hence, the objective of regaining price stability even at the cost of sacrificing some growth in the short-run, gained precedence. Towards the last quarter of the financial year, however, there were strong signals of a slowdown in growth to below post-crisis trend levels. Inflation started moderating since December 2011. Keeping in view the growth slowdown the Reserve Bank front loaded the policy rate reduction in April 2012 and adjusted the policy rates to levels consistent with the growth moderation. Nevertheless, with significant risk of inflation persisting, monetary policy had to maintain a fine balance between supporting growth impulses while at the same time anchoring inflation expectations and preventing any resurgence in inflationary pressures. Monetary policy, during the course of the year, also had to address structural liquidity constraints and actively manage liquidity to ensure that it remained in moderate deficit, consistent with effective monetary transmission. This further posed a challenge to communication, in trying to distinguish between liquidity easing measures from the monetary policy stance.

IV CREDIT DELIVERY AND FINANCIAL INCLUSION

Improving credit delivery and financial inclusion have remained key priorities of the Reserve Bank. In this direction, one major step was the introduction of biometric smart card system for the kisan credit card (KCC), to be used in ATMs and hand held devices. The Financial Inclusion Plan (FIP), under which the commercial banks set their targets for financial inclusion activities, has been making substantial progress. The Reserve Bank has recently issued guidelines on the implementation of Electronic Benefit Transfer (EBT) and its convergence with FIP. This simple and convenient model is expected to further boost financial inclusion efforts. The Reserve Bank's own outreach programmes have also been helpful in spreading awareness and improving financial literacy. However, in view of the colossal task of financial inclusion, there is a need for the banks to upscale and mainstream their financial inclusion efforts.

IV.1 Financial inclusion has been accorded high importance by the Reserve Bank to aid the inclusive growth process for the economy. There have been formidable challenges in this area such as bringing sections of society that are financially excluded within the ambit of the formal financial system, providing financial literacy and strengthening credit delivery mechanisms. Apart from the priority sector lending policy which has been in existence for a long time, a host of initiatives have been taken in recent years which include the rollout of Financial Inclusion Plans and expanding the scope of the Business Correspondent (BC) model, improving credit delivery procedures for the micro and small enterprises (MSE) sectors and encouraging the adoption of Information and Communication Technology (ICT) solutions.

IV.2 The focus of the present chapter is two-fold: one, analysing the progress of credit delivey and financial inclusion and two, providing a snapshot of Reserve Bank's policy initiatives in these areas. The present chapter is divided in three parts: credit delivery, financial inclusion and financial literacy. The credit delivery section is further divided into priority sector lending, lead banks scheme, North-East region special dispensation scheme, rural co-operative banks and regional rural banks.

CREDIT DELIVERY

Priority Sector Lending

IV.3 Priority sector lending aims at encouraging and enhancing credit availability to sectors of the economy that would otherwise find it difficult to get credit from banks. Agriculture and micro and small enterprises (MSE) are two major sectors that receive priority sector lending apart from education, housing *etc.* Presently, the target for aggregate advances to the priority sector is 40 per cent of the ANBC or the credit equivalent of OBE, whichever is higher for domestic banks and 32 per cent for foreign banks (Table IV.1). A need was felt to revisit the guidlines relating to priority sector lending in view of the recomendations of Malegam Committee on Micro-Finance Institutions (MFIs) and similar requests from other stakeholders. The Reserve Bank constituted a committee in this respect, which submitted its report in February 2012. The report of the committee was placed on the Reserve Bank's web-site for comments and suggestions (Box IV.1). Based on the interaction with various stakeholders and in the light of comments/

Table IV.1: Priority Sector Lending by SCBs

(Amount in ₹ billion)

As on the Last Reporting Friday of March	Public Sector Banks	Private Sector Banks	Foreign Banks
1	2	3	4
2011	10,215	2,491	667
	(41.0)	(46.7)	(39.7)
2012	11,299	2,864	805
	(37.4)	(39.4)	(40.8)

Notes: 1. Figures in parentheses are percentages to ANBC or credit equivalent of off balance sheet exposure (OBE), whichever is higher, in the respective groups.
2. Data for 2012 is provisional.

Box IV.1
Committee on Priority Sector Lending

The sub-committee of the Central Board of Directors of the Reserve Bank to study issues and concerns in the micro finance sector (Malegam Committee) recommended that the existing guidelines on bank lending to the priority sector be revisited. There were also requests from various quarters to have a relook at the definition of the priority sector, especially where bank finance was being routed through other agencies. Against this backdrop, the Monetary Policy Statement 2011-12 announced that "a committee to re-examine the existing classification and suggest revised guidelines with regard to priority sector lending classification would be appointed". Accordingly, a committee under the chairmanship of Shri M. V. Nair was appointed which submitted its report on February 21, 2012.

The Report of the Committee was placed on the Reserve Bank's website, seeking views and comments from banks, non-bank financial institutions, other institutions and members of the public.

The major recommendations of the Committee were as follows:

Targets for Domestic Banks

- The overall priority sector lending target may be retained at 40 per cent of Adjusted Net Bank Credit (ANBC) for domestic banks. Agriculture, MSE, micro credit, education, housing, off-grid energy solutions for households and export credit (for foreign banks only) may form part of the priority sector.
- Lending to the agriculture sector may cover the entire spectrum of 'agriculture & allied activities' without any distinction between direct and indirect agriculture lending and 18 per cent of ANBC may be retained as target for the agriculture sector.
- A focused sub-target of 9 per cent of ANBC may be fixed for loans extended by banks to small and marginal farmers, to be achieved in stages, by 2015-16 at the latest.
- A similar, focused sub-target of 7 per cent of ANBC may be fixed for loans extended by banks to micro enterprises, to be achieved in stages by 2013-14 at the latest.

Targets for Foreign Banks

- For foreign banks, the Committee recommended a target of 40 per cent for the entire priority sector, and a 15 per cent target each for MSE and export credit. Export credit up to a limit of ₹ 100 million may qualify for the purpose of reckoning under priority sector.
- In addition, a focused priority sector target, equivalent to 7 per cent of ANBC, is recommended for micro enterprises.

Off-grid Energy Solutions for Households

- Loans given to individuals to set up off-grid solar and other renewable energy solutions for households may be classified as priority sector.

Weaker Sections

- Priority sector loans to individual women and housing loans to economically weaker sections and lower income group segments may be considered as loans to weaker sections in addition to the existing categories of beneficiaries. The existing target level of 10 per cent of ANBC may be retained for weaker sections. Achievement of not more than 6 per cent of ANBC may be reckoned under lending to (a) eligible small and marginal farmers and (b) eligible village and cottage industries and artisans put together.

Differential Rate of Interest Scheme

- The differential rate of interest (DRI) scheme may be discontinued since other government sponsored schemes with better features target similar beneficiaries.

Loans to Non-Bank Financial Intermediaries

- Bank loans sanctioned to non-bank financial intermediaries for on-lending to specified segments may be reckoned for classification under the priority sector up to a maximum of 5 per cent of ANBC.

Priority Sector Lending Certificates

- Non-tradable Priority Sector Lending Certificates (PSLCs) may be allowed on a pilot basis with domestic scheduled commercial banks (SCBs), regional rural banks (RRBs) and foreign banks as market players.

Agriculture Credit Risk Guarantee Scheme

- The establishment of an Agriculture Credit Risk Guarantee Fund for small and marginal farmers, similar to Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE), is recommended as an efficient mechanism to address the risk in lending to agriculture sector.

suggetions received from the central government, banks, financial institutions, NBFCs, associations of industries, public and Indian Banks' Association, revised guidlines on priority sector lending were issued on July 20, 2012. Under the new guidelines, overall target under priority sector is retained at 40 per cent and the targets for both direct and indirect agricultural lending have also been kept unchanged.

Foreign banks having 20 or more branches in the country are being brought on par with domestic banks for priority sector targets in a phased manner over a five year period starting from April 1, 2013.

Flow of Credit to Agriculture Sector

IV.4 A target of ₹4,750 billion for agricultural credit in 2011-12 was announced in the Union Budget. Against this target banks including co-operative banks and RRBs disbursed ₹5,110 billion forming 108 per cent of the target as at the end-March 2012. For the year 2012-13, the government has fixed a target of ₹5,750 billion for disbursement to agriculture by all agencies. Banks have been asked to step up direct lending to agriculture and credit to small and marginal farmers.

Recovery of Direct Agriculture Advances

IV.5 The data for the last three years (up to June 2011) indicate marginal decline in recovery of direct agriculture advances (Table IV.2).

Kisan Credit Card Scheme

IV.6 The Kisan Credit Card (KCC) is an effective instrument for making agricultural credit available to farmers. The Union Budget 2011-12 announced that the KCC scheme would be modified to introduce smart cards that could be used at ATMs. To simplify and align the KCC scheme with current requirements and to facilitate the issuing of electronic KCC, a working group (Chairman: Shri T. M. Bhasin, CMD, Indian Bank) was constituted. The working group made recommendations about introducing standardised KCCs and specified technical details to make the biometric smart card compatible for use in ATMs and hand-held swipe machines and capable of storing adequate information on farmers' identity, assets, land holdings and credit profile. The recommendations of the working group, were accepted by the government and subsequently the KCC Scheme was revised by the Reserve Bank.

Table IV.2: Recovery of Direct Agriculture Advances

(₹ in billion)

Year ended June	Demand	Recovery	Overdues	Per cent of recovery to demand
1	2	3	4	5
2009	1,190	907	284	76.1
2010	1,244	922	322	74.1
2011*	1,282	945	332	73.7

*Provisional data.

Interest Rate Subvention Scheme

IV.7 The Union Budget 2011-12 increased the rate of interest subvention for short-term production credit up to ₹0.3 million to 2 per cent from 1.5 per cent while the additional interest subvention for farmers who paid promptly was increased to 3 per cent from 2 per cent, reducing the effective interest rate charged to such farmers to 4 per cent per annum.

Agricultural Debt Waiver and Debt Relief Scheme

IV.8 Under the agricultural debt waiver and debt relief scheme, 2008, the government has been reimbursing lending institutions in a staggered manner (Table IV.3).

Table IV.3: Amount Reimbursed by the Central Government to Lending Institutions

(₹ in billion)

Lending Institutions	1st instalment Sept 2008	2nd instalment July 2009	3rd instalment January 2011	4th instalment November 2011	5th instalment March 2012
1	2	3	4	5	6
RRBs and Co-operatives	175.0	105.0	12.4	0.4	0.0
SCBs, UCBs and LABs	75.0	45.0	101.0	10.4	1.0
Total	**250.0**	**150.0**	**113.4**	**10.8**	**1.0**

Note: Data based on the current provisional estimates.

IV.9 The government has so far sanctioned and disbursed ₹525 billion in five instalments. Of this, ₹293 billion was passed on to NABARD for reimbursement to RRBs and co-operative credit institutions. The remaining amount of ₹232 billion was reimbursed to SCBs, local area banks (LABs) and urban co-operative banks (UCBs).

Flow of credit to Micro, Small and Medium Enterprises

IV.10 Credit to the MSE sector by SCBs registered a sharp deceleration in 2011-12 (Table IV.4).

Rural Infrastructure Development Fund

IV.11 Domestic SCBs, both in the public and private sector, that fail to achieve the priority sector targets/ sub-targets, are required to deposit the shortfall to the extent of corpus of funds announced by the central government into the Rural Infrastructure Development Fund (RIDF) set up with the National Bank for Agriculture and Rural Development (NABARD) and other funds set up with the Small Industries Development Bank of India (SIDBI) and the National Housing Bank (NHB). Foreign banks operating in India, that fail to achieve the priority sector targets/ sub-targets, are also required to deposit the shortfall to the extent of corpus of funds announced by the central government into certain funds set up with SIDBI or other financial institutions, as decided by the Reserve Bank.

Table IV.4 : Credit to MSE sector by SCBs

As on last Friday of March	Outstanding Credit to MSE sector		MSE credit as per cent of ANBC
	Number of accounts (in million)	Amount outstanding (₹ billion)	
1	2	3	4
2011	9.3 (9.4)	4785.3 (32.1)	15.0
2012	9.9 (6.45)	5,286.2 (10.47)	13.4

Note: 1. Data for 2012 are provisional.
2. Figure in parentheses indicate y-o-y change in per cent.

IV.12 The Union Finance Minister in his Budget Speech for the year 2012-13 announced that RIDF XVIII, with a corpus of ₹200 billion, including a separate window under RIDF for financing warehouse infrastructure with a corpus of ₹50 billion, would be set up with NABARD. In addition, an MSME (Refinance) Fund with a corpus of ₹50 billion, a Short-Term Co-operative Rural Credit (STCRC) (Refinance) Fund with a corpus of ₹100 billion and a Rural Housing Fund with a corpus of ₹40 billion, would be set up with SIDBI, NABARD and NHB, respectively. The Union Finance Minister has also announced a plan of setting up two new funds *viz*., the Short Term RRB Credit Re-Finance Fund and the India Opportunities Venture Fund in the year 2012-13 with a corpus of ₹100 billion and ₹20 billion, respectively.

Lead Bank Scheme

Roadmap for Opening Banking Outlets in Unbanked Villages

IV.13 In pursuance of the announcement made in the Monetary Policy Statement of April 2010, the roadmap to provide banking services in every village with a population above 2,000 was finalised by state level bankers' committees (SLBCs). Under the roadmap, 74,414 villages with population above 2,000 were identified as unbanked, which were allocated to various banks, including RRBs for providing banking services by March 2012. Banks have covered 74,199 (99.7 per cent) of these unbanked villages. Now the challenge is to cover all the unbanked villages of the country. Accordingly, SLBCs have been mandated to prepare a roadmap covering all unbanked villages of population less than 2,000 and notionally allot these villages to banks for providing banking services in a time-bound manner.

State Level Bankers' Committee (SLBC) Meetings

IV.14 During the year SLBC convener banks were advised to prepare an annual calendar for the year 2012 to ensure that their offices blocked the dates of senior functionaries who were expected to attend the four meetings. A mechanism has been put in place to continuously monitor holding of SLBC meetings.

IV.15 In order to make web-site an effective communication channel, banks have been advised that the SLBC websites of various states should at least contain standardised information and data which may be updated regularly.

Lead Bank Responsibility for Districts

IV.16 The number of districts assigned to lead banks increased from 625 in March 2011 to 630 in March 2012. Punjab National Bank was assigned lead bank responsibility in two new districts in Punjab and one new district in Uttar Pradesh, while lead bank responsibility for two new districts in Uttar Pradesh was assigned to Syndicate Bank.

North East Region- Special Dispensation Scheme

IV.17 During the year 2008, the Reserve Bank devised a Special Dispensation Scheme (SDS) to encourage banks to open branches at commercially unviable centres in the North-East Region. Under the scheme, the Reserve Bank would bear a one-time capital cost and the recurring expenses for a period of five years while the state government would provide premises, security for the branch and rental accommodation for the bank staff. SLBCs in consultation with the state government identified 42 ‘agreed centres’ in five North-East states. Up to June 2012, branches had been opened at 34 of these centres.

IV.18 The SDS was introduced on the premise that banks have not been able to expand their network in North-East region, mainly due to the cost factor, and if the Reserve Bank bears the cost, it will lead to large scale expansion of bank branches in the unbanked areas. The trends in opening of branches under the SDS clearly indicate that rather than cost, it is the lack of basic infrastructure like roads and digital connectivity that impedes the expansion of the banking network in these parts. Thus, expansion of the banking network depends on efforts by the respective state governments to provide basic infrastructure.

IV.19 In view of above factors and the fact that dispensation scheme cannot continue indefinitely, banks were advised to open branches in the allotted agreed centres, latest by June 30, 2012 so as to avail the benefits of reimbursement of the cost by Reserve Bank.

Rural Co-operatives

Revival of Rural Co-operative Credit Structure

IV.20 Based on the recommendations of the Task Force on Revival of Rural Co-operative Credit Institutions (Chairman: Prof. A. Vaidyanathan) and in consultation with state governments, the Government of India had approved a package for revival of the Short-Term Rural Cooperative Credit Structure (STCCS). The package sought to provide financial assistance to improve the health of the system, introduce legal and institutional reforms necessary for its democratic, self reliant and efficient functioning and take measures to improve the quality of management. The states willing to participate were required to enter into a Memorandum of Understanding (MoU) with the central government and NABARD. In all, 25 states have executed MoUs with the central government and the NABARD as envisaged under the package. This covered more than 96 per cent of the STCCS units in the country. Twenty one states have amended their respective State Cooperative Societies Act through legislative process.

IV.21 An aggregate amount of ₹90 billion has been released by NABARD up to March 31, 2012 as central government’s share for recapitalisation of PACS in seventeen states, while the state governments have also released ₹9 billion as their share. The National Implementing and Monitoring Committee, set up by the central government, is guiding and monitoring the implementation of the revival package on an all-India basis.

Regional Rural Banks

IV.22 RRBs have been established primarily for the purpose of developing the rural economy by providing credit and other facilities particularly to the economically weaker / disadvantaged sections of the society such as small and marginal farmers, agricultural labourers, artisans and small entrepreneurs. Thus, they occupy a special place in the multi-agency approach adopted to provide agricultural and rural credit.

Status of CBS Implementation

IV.23 In order to prepare RRBs to adopt appropriate technology and migrate to Core Banking Solutions (CBS) for better customer services, a Working Group was constituted by Reserve Bank (Chairman: Shri G. Srinivasan) for technology upgradation of RRBs. The report *inter alia,* set September 2011 as the target date for all RRBs to move towards CBS. It has also stipulated that all branches of RRBs opened after September 2009 should be CBS compliant from day one. Presently, 82 RRBs are operating in the country. As on March 31, 2012, CBS has been implemented in 80 RRBs covering 16,741 branches. Two RRBs namely, Kshetriya Kisan Gramin Bank and Jammu and Kashmir Grameen Bank are yet to migrate to the CBS platform.

FINANCIAL INCLUSION

IV.24 A financial inclusion survey was conducted by World Bank team in India between April-June, 2011 which included face to face interviews of 3,518 respondents. The sample excluded the north-eastern states and remote islands representing approximately 10 per cent of the total adult population. The results of the survey suggest that India lags behind developing countries in opening bank accounts, but is much closer to the global average when it comes to borrowing from formal institutions. In India, 35 per cent of people had formal accounts *versus* the global average of 50 per cent and the average of 41 per cent in developing economies (Table IV.5) . The survey also points to the ‘slow growth of mobile money in India, where only 4 per cent of adults in the Global Findex sample report having used a mobile phone in the past 12 months to pay bills or send or receive money’.

IV.25 Keeping in view the goal of bringing banking services to identified 74,414 villages with population above 2,000 by March 2012, and thereafter progressively to all villages over a period of time, the Reserve Bank advised commercial banks that while preparing their Annual Branch Expansion Plan (ABEP), they should allocate at least 25 per cent of the total number of branches proposed to be opened during the year in unbanked rural centres (unbanked rural centres are Tier 5 and Tier 6 centres that do not have a brick and mortar structure of any SCB for customer based banking transaction).

IV.26 To provide enhanced banking services in Tier 2 centres, the general permission available to domestic SCBs, for opening of branches in Tier 3 to Tier 6 centres, has been extended to Tier 2 centres (with population 50,000 to 99,999 as per Census 2001).

Table IV.5: Key Statistics on Financial Inclusion in India: A Survey

(Per cent)

	Share with an account at a formal financial institution			Adults saving in the past year		Adults originating a new loan in the past year		Adults with a credit card	Adults with an outstanding mortgage	Adults paying personally for health insurance	Adults using mobile money in the past year
	All adults	Poorest income quintile	Women	Using a formal account	Using a community-based method	From a formal financial institution	From family or friends				
1	2	3	4	5	6	7	8	9	10	11	12
India	35	21	26	12	3	8	20	2	2	7	4
World	50	38	47	22	5	9	23	15	7	17	7

Source: Asli Demirguc - Kunt and Klapper, L. (2012): ‘Measuring Financial Inclusion’, *Policy Research Working Paper,* 6025, World Bank, April.

IV.27 In order to further facilitate financial inclusion, interoperability was permitted at the retail outlets or sub-agents of BCs (*i.e.* at the point of customer interface), subject to certain conditions, provided the technology available with the bank, which has appointed the BC, supported interoperability. However the BC or its retail outlet or sub-agent at the point of customer interface would continue to represent the bank, which has appointed the BC.

IV.28 Based on the announcement made in the Budget Speech of the Finance Minister for 2012-13 as well as the Annual Monetary Policy of the Reserve Bank for the year 2012-13, banks have been advised that they may set up intermediate brick and mortar structures (in rural centres) between the present base branch and BC locations, so as to provide support to a cluster of BCs (about 8-10 BCs) units at a reasonable distance of about 3-4 kilometres. Such branches should have minimum infrastructure, such as a Core Banking Solution (CBS) terminal linked to a pass book printer and a safe for cash retention for operating large customer transactions and would have to be managed full time by bank's own officers/ employees. It is expected that such an arrangement would lead to efficiency in cash management, documentation, redressal of customer grievances and close supervision of BC operations.

Financial Inclusion Plan of banks

IV.29 The Reserve Bank had advised all public and private sector banks to prepare and submit their board approved financial inclusion plans (FIPs) to be rolled out in 3 years from April 2010 to March 2013. These FIPs contained self-set targets in respect of opening of rural brick and mortar branches, deployment of business correspondents (BCs), coverage of unbanked villages through various modes, opening of no-frills accounts, Kisan Credit Cards (KCCs) and General Credit Cards (GCCs) to be issued *etc*.

IV.30 The progress by commercial banks (excluding RRBs) since the launch of FIPs clearly indicate that banks are progressing in areas like deploying BCs, opening of banking outlets, opening of no-frills accounts, grant of credit through KCCs and GCCs (Table IV.6). The penetration of banks in rural areas has increased sharply in two years of the FIP implementation. With a view to

Table IV.6: Progress of SCBs in Financial Inclusion Plan (excluding RRBs)

(Amount in ₹ billion)

Particulars	March 2010	March 2011	March 2012	Variation March 2012 over March 2010
1	2	3	4	5
No. of BCs/BC Agents deployed	33,042	57,329	95,767	62,725
Number of banking outlets in villages with population above 2,000	27,353	54,246	82,300	54,947
Number of banking outlets in villages with population less than 2,000	26,905	45,937	65,234	38,329
Total number of banking outlets in villages	**54,258**	**1,00,183**	**1,47,534**	**93,276**
Of which				
a) Through branches	21,475	22,662	24,701	3,226
b) Through BCs	32,684	77,138	1,20,355	87,671
c) Through Other Modes	99	383	2,478	2,379
Urban Locations covered through BCs	433	3,757	5,875	5,442
No-Frill accounts				
Number (millions)	50.3	75.4	105.5	55.2
Amount (₹ billions)	42.6	57.0	93.3	50.7
Overdraft availed in No - Frill Accounts				
Number (millions)	0.1	0.5	1.5	1.4
Amount (₹ billions)	0.1	0.2	0.6	0.5
Kisan Credit Card (KCC)				
Number of Accounts (millions)	15.9	18.2	20.3	4.4
Outstanding amount (₹ billions)	940.1	1237.4	1651.5	711.4
General Purpose Credit Card (GCC)				
Number of Accounts (millions)	0.9	1.0	1.3	0.4
Outstanding amount (₹ billions)	25.8	21.9	27.3	1.6
ICT Based Accounts through BCs				
Number of Accounts (millions)	12.6	29.6	52.1	39.5
Number of transactions during the year (millions)	18.7	64.6	119.3	183.9

encouraging transactions in no-frill accounts, banks were advised to provide small overdrafts (ODs) in such accounts, which helped in a strong growth of such accounts. The impact of Information and Communication Technology (ICT) based BC model in facilitating door step delivery of services can be seen from the ascending trends of transactions.

IV.31 The number of transactions through ICT based BC outlets, though encouraging, are still very low as compared to the manifold increase in the number of banking outlets. The focus of monitoring is now more on the number and value of transactions in no-frills accounts and also on the credit disbursed through ICT based BC outlets. In this direction, banks have been advised that FIPs prepared by their head offices may be disaggregated at the respective controlling offices and further at branch level and its progress may be monitored periodically.

IV.32 The Electronic Benefit Transfer (EBT) had been implemented on a pilot basis in select districts under the "One District – One Bank" Model. The experience gained suggested that the "One District – One Bank" Model had not been able to achieve the objective of financial inclusion. This issue was raised in various fora by the state governments and banks. As part of the financial inclusion initiative, the penetration of banks in rural areas has increased manifold. Hence a need was felt to scale up EBT implementation throughout the country by ensuring convergence of EBT implementation with the financial inclusion plan of banks. For clearer conceptual understanding and based on detailed consultative meetings and interface with stake holders, "Operational guidelines on implementation of Electronic Benefit Transfer and its convergence with Financial Inclusion Plan" has been formulated. Under these guidelines 'one district-many banks-one leader bank model' has been recommended so as to give a fillip to financial inclusion efforts (Box IV.2).

Box IV. 2

Electronic Benefit Transfer (EBT) and its convergence with Financial Inclusion Plan (FIP)

In accordance with its vision of inclusive growth, the Reserve Bank has been pursuing the objective of providing access to efficient banking services at an affordable cost to the hitherto unbanked population of the country. For this purpose, a technology based "bank-led" model of financial inclusion was adopted. In view of the effort taken by banks in spreading the banking network to the hitherto unbanked villages of the country under the financial inclusion plan, a need was felt to further scale up the EBT initiatives and thereby ensure a convergence between the EBT implementation and the FIP of banks. In this direction, the Reserve Bank, on August 12, 2011, issued "Operational guidelines for implementation of Electronic Benefit Transfer and its convergence with Financial Inclusion Plan". The Reserve Bank has advocated use of the "One District – Many Banks – One Leader Bank Model" for EBT implementation.

In this model, all the banks present in the district would participate in EBT, though for administrative convenience the state government is required to deal only with one leader bank. State government shall designate the leader bank, in consultation with the regional office of the Reserve Bank and the SLBC, who will obtain the funds from the state government and in turn will arrange to transfer funds through inter-bank transfer to other banks for credit to the accounts of ultimate beneficiaries. State government shall designate a nodal department for administration of each of the social benefit schemes. The nodal department shall provide the list of beneficiaries and banks shall arrange for enrolment and creation of their bank accounts. The nodal department shall maintain a savings account in its name with the leader bank. The department's account in the bank will be credited with a consolidated amount by the treasury bank of the state government. The department will send instructions to the leader bank each month containing the updated list of beneficiaries in electronic form. The bank will then debit the savings bank account of the nodal department and arrange for crediting the accounts of beneficiaries. The management information system as required by the state governments will be strengthened automatically as payment information will flow electronically and seamlessly from end to end so that a data-base is created for generating various types of reports.

As EBT scheme is a part of the overall FIP, EBT account holders will also be provided whole range of permissible banking services *viz.,* a saving account with in-built overdraft, remittance and entrepreneurial credit products in the form of GCC/KCC. Thus, EBT implementation will enable the beneficiaries to get the social security benefits directly credited to their accounts and at the same time it will relieve the government functionaries of the cost and time involved in manually administering the high volume and low value payments.

FINANCIAL LITERACY INITIATIVES

IV.33 Financial Literacy is considered an important adjunct for promoting financial inclusion, consumer protection and ultimately financial stability. Financial inclusion and financial literacy need to go hand in hand to enable the common man to understand the need and benefits of the products and services offered by formal financial institutions. In India, the need for financial literacy is even greater considering the low levels of literacy and the large section of the population that are still out of the formal financial set-up. Financial literacy has assumed greater importance in recent years as financial markets have become increasingly complex and the common man finds it very difficult to make informed decisions. Further, in view of higher percentage of household savings in our country, financial literacy can play a significant role in the efficient allocation of household savings and the ability of individuals to meet their financial goals. The outreach programmes by the Reserve Bank has helped in spreading awareness and improving financial literacy in recent years (Box IV.3).

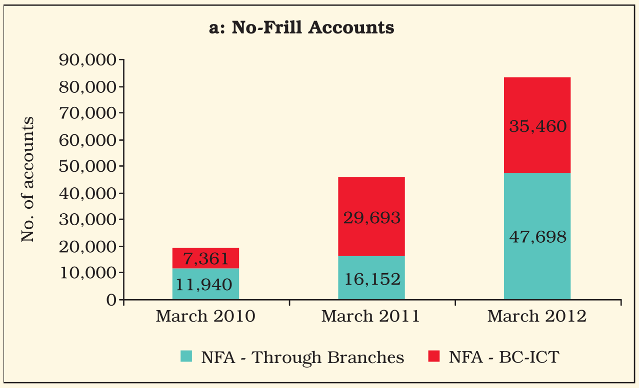
IV.34 Financial literacy is being promoted by various stakeholders as an important demand side input towards achieving the goal of financial inclusion. In order to ensure effective coordination of the efforts made by all the financial regulators and other stakeholders, a Technical Group on Financial Inclusion and Financial Literacy has been

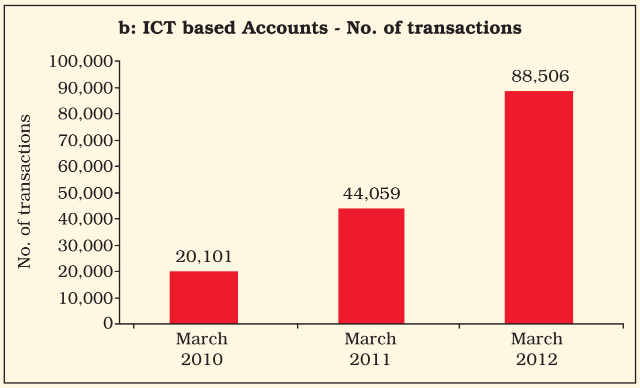
Box IV.3
Outreach Programme of the Reserve Bank

The outreach programme of the Reserve Bank involves top management - Governor, Deputy Governors and Executive Directors who visit villages across the country. They encourage banks, financial institutions and local government to boost economic activities by involving rural masses in particular. They interact with the villagers to understand their problems and expectations, at the same time they also tell them about Reserve Bank's policy initiatives and what they can expect of the Reserve Bank. During the outreach visits, messages on advantages of being linked to formal banking sector and functions and working of Reserve Bank are disseminated through lectures, skits, posters, short films, pamphlets, distribution of comic books on financial literacy (Raju and the Money Tree, Money Kumar *etc.*), quiz competitions and essay competitions for school children, kiosk at the venue where besides providing information, notes and coins are exchanged. The target groups included students, Self-Help Group (SHG) members, villagers, farmers, NGOs, bankers, government employees, senior citizens, housewives, panchayat members, daily wage earners and defense personnel.

During last 3 years, outreach visits have been undertaken by Reserve Bank's top executives in 115 villages spread throughout the country. An analysis of the progress of financial inclusion in these villages indicates 73 per cent of the villages are getting banking services through ICT based BC model whereas remaining villages are covered through brick and mortar branches. The number of accounts, especially no-frill accounts has increased multifold (Chart 1). The transactions are being done through business correspondent in user friendly way by using smart cards on hand held devices. The social benefits are getting credited directly to their bank accounts. The outreach programmes of the Reserve Bank have thus helped in improving the overall welfare in many small villages.

Chart 1: Progress in Villages Covered under Outreach Programme





constituted under the aegis of Financial Stability and Development Council, having representations from the Reserve Bank, SEBI, PFRDA, IRDA, Government of India, State Governments and Central Education Board *etc*. The group meets at quarterly interval with the first meeting held in November 2011, followed by two more meetings in February and May 2012. The group is in dialogue with NCERT, CBSE and state education boards for inclusion of financial literacy in school curriculum.

IV.35 A national strategy on financial education has been prepared and the document has been placed on the Reserve Bank's web-site for wider consultation. The strategy will cater to all sections of the population. Since the challenge is to link large number of financially excluded people to the formal financial system, the focus of the strategy at the base level will be to create awareness about basic financial products. For the purpose, the financial literacy efforts would primarily be directed towards dissemination of simple messages of financial prudence in vernacular language through large campaigns across the country combined with vigorous roll out of financial inclusion plans by banks, insurance, pension funds and others. For the financially included, *viz*., the lower and middle income groups and high net-worth individuals, financial literacy is about enhancing their knowledge about the market and various new products. The objectives of the strategy include providing knowledge through awareness and education on access to financial services, availability of various types of products and their features. It also aims at changing attitudes to translate knowledge into behaviour and making customers understand their rights and responsibilities as clients of financial services.

Financial Literacy Centres (FLC)

IV.36 Reserve Bank had advised banks in February 2009 to set up Financial Literacy and Credit Counseling Centres (FLCCs) to provide free financial literacy, education and credit counseling. Under the scheme, up to March 2012, 429 FLCCs were set up. Since the scheme had been in operation for about 3 years, it was decided to evaluate the efficacy of this scheme and its impact on the spread of financial literacy in the country. Accordingly, a study on the functioning of the FLCC was conducted through a nationwide sample survey. The study covering 30 FLCCs spread over 16 states revealed various shortcomings and limitations in the FLCC scheme like concentration of these centres in urban and semi urban areas rather than rural areas, serving only walk-in clients instead of outdoor literacy drives, FLCCs effectively functioning at the behest of sponsor banks instead of maintaining arms-length relationship *etc*. Based on the findings of the study and with the objective of scaling up financial literacy efforts manifold, the existing scheme has been revised and banks have been advised to set up Financial Literacy Centres (FLCs) in more than 630 offices of the lead district managers (LDMs). Further, 35,000 plus rural branches of SCBs including RRBs would also undertake financial literacy activities. The FLCs, including all existing FLCCs will now be termed as financial literacy centres. Banks are also advised to set up FLCs in other location as per requirement. The FLCs are expected to impart financial literacy in the form of simple messages like why save with banks, why borrow from banks, why borrow as far as possible for income generating activities, why repay in time, why insure yourself, why save for your retirement *etc*. The FLCs and rural branches of the banks are also required to conduct outdoor financial literacy camps with focus on financially excluded people at least once a month. As the focus of the FLCs is on simple messages of financial literacy, no risks of mis-selling are expected.

IV.37 The Reserve Bank has taken several steps to promote financial inclusion with a view to extending the benefits of banking to those who do not have access to these services. However, the task is gigantic and the progress lags behind necessity. As such upscaling and mainstreaming this programme would be needed.

V DEVELOPMENT AND REGULATION OF FINANCIAL MARKETS

The Indian financial markets, particularly the foreign exchange market, turned volatile against the backdrop of weakening domestic macroeconomic fundamentals and the euro area sovereign debt crisis, since August 2011. The Reserve Bank took a slew of measures to contain the volatility in the forex market as also to encourage foreign inflows. The Reserve Bank also continued with its efforts to impart liquidity to the secondary G-sec market and to develop the corporate bond market further by providing for risk transfers.

V.1 The Reserve Bank has systematically focussed on developing and regulating the financial markets in view of the cross-linkages with other sectors of the economy. Further, a healthy, robust and vibrant financial market is crucial for stronger monetary policy transmission. To enable the smooth functioning of the market and to contain systemic risks that can adversely impact the real economy, the Reserve Bank continues to play a strategic role.

GOVERNMENT SECURITIES MARKET

V.2 During 2010-11, the Reserve Bank undertook various measures related to the development of the government securities (G-sec) market. In particular, a working group was set up to examine ways to enhance liquidity in the G-sec and interest rate derivatives markets.

Change in Auction Timing of G-secs

V.3 To improve the efficiency of the auction process of G-secs, *viz.,* Government of India dated securities, treasury bills (T-bills), cash management bills, and state development loans, the timings for primary auction under competitive bidding have been revised from 10.30 am-12.30 pm to 10.30 am-12.00 noon from April 13, 2012. This will permit more time for secondary market transactions for the securities auctioned on that day.

Extension of DvP-III facility to Gilt Account Holders

V.4 To extend the benefits of net settlement of securities and funds in the G-sec market to gilt account holders (GAHs), the D*v*P III facility was extended in July 2011, to all transactions undertaken by GAHs, except those undertaken between GAHs of the same custodian.

Revised Guidelines for Authorisation of PDs

V.5 To make the primary dealer (PD) authorisation policy more transparent and ensure that new PDs have sound capital and adequate experience/expertise in the G-sec market, the PD authorisation guidelines were revised in August 2011. The applicant entity is required to be registered as an NBFC and should have exposure in the securities business, in particular to the G-sec market, for at least one year prior to the submission of an application for undertaking PD business.

Working Group on Enhancing Liquidity in the G-sec and Interest Rate Derivatives Markets

V.6 Considering the important role of the G-sec market and the prominence of G-sec in the investment portfolio of financial institutions, particularly banks, the Reserve Bank has been constantly reviewing the developments to further broaden and deepen this market. Despite the developments in the G-sec market in the past two decades, it was deemed necessary to promote liquidity in the secondary market for G-secs, especially across the yield curve. As part of this endeavour, the Reserve Bank set up a working group (Chairman: Shri R. Gandhi) in December 2011, comprising various stakeholders, to examine and suggest ways to enhance secondary market liquidity in the G-sec and interest rate derivatives (IRDs) markets (Box V.1). The group submitted its Report on August 10, 2012.

Direct Access to Negotiated Dealing System-Order Matching (NDS-OM)

V.7 In November 2011, direct access to NDS-OM was extended to licensed urban co-operative

Box V.1
Working Group on Enhancing Liquidity in the G-Sec and Interest Rate Derivatives Markets

Deeper and broader financial markets play a critical role in improving the efficiency of capital allocation within the economy with benefits accruing to the issuers, (*i.e.*, the central and state governments) as well as the investors (*i.e.*, banks, financial institutions, corporates, individual investors, *etc.*). However, liquidity in the secondary market in G-sec is restricted to a handful of securities. Further, the market for IRDs too has not taken off despite the reintroduction of interest rate futures (IRFs), both physical as well as cash-settled. The market for interest rate swaps (IRS) has been active but is not broad-based and is primarily dominated by banks, especially foreign banks.

A working group comprising internal and external experts, was constituted by the Reserve Bank with the following terms of reference:

- Analyse the evolution of the market for G-sec and IRDs;
- Study the determining and influencing factors on liquidity of G-sec and IRD from the perspective of the primary, secondary, and IRD markets and other factors;
- Examine factors that enable/ inhibit secondary G-sec market liquidity, especially across the sovereign yield curve, and suggest ways to strengthen/ address them;
- Examine factors that enable/ inhibit the growth of the IRD market and suggest ways to strengthen/ address them;
- Suggest measures to promote retail participation in the G-sec market; and
- Examine related issues.

Some of the recommendations of the working group are:

a) **G-Sec Market**

- Consolidation of the outstanding G-sec, for which a framework may be prepared for the next 3-4 years, beginning with the issuance of securities at various maturity points in conjunction with steps such as issuance of benchmark securities over a longer term horizon, buybacks and switches;
- A roadmap to gradually bring down the upper-limit on the HTM portfolio. While doing so, the possible impact of reduction in the limit on HTM classification on the balance sheet of banks/PDs and any measure aimed to address this issue should be calibrated appropriately to make it non-disruptive to the entities and other stakeholders;
- Allocation of specific securities to each PD for market making in them and if required, rotate the stock of securities among the PDs, by turn at periodic intervals;
- Increase the investment limit for FIIs in G-secs in gradual steps. This can be reviewed every year, keeping in view the country's overall external debt position, current account deficit, size of the central government borrowing programme, *etc.*;
- Simplified access for investors like trusts, corporates, *etc.* to the G-sec market. Long-term gilt funds may be encouraged through appropriate incentives (such as tax-breaks, liquidity support, *etc.*); and
- The restrictions on selling/repo of securities acquired under market repo may be reviewed to promote the term-repo market with suitable restrictions on 'leverage' and consider introducing an appropriate tripartite repo in G-sec.

b) **Improving retail in G-sec**

- Utilising the services of banks (and post offices if possible at a later stage and in consultation with the central government) as a distribution channel and nodal point for interface with individual investors;
- A centralised market maker for retail participants in G-sec in the long-term, who would quote two-way G-sec prices for retail/ individual investors; and
- Simplified operational procedures for seamless movement between SGL and de-mat formats.

c) **IRD market**

- An electronic swap execution facility (electronic trading platform) for the IRS market, and consider introducing a CCP who may provide guaranteed settlement of trades executed through the electronic platform;
- Introduction of futures contracts that have high probability of attracting participant interest subject to regulatory approval. To begin with IRF based on overnight call borrowing rate can be considered; and
- Permitting cash-settled 10-year IRF subject to appropriate regulations such as restricted participation, entity-based open position limit, price band, *etc.* Also to consider fine tuning the existing product design of the delivery-based 10-year IRF by permitting single-bond contracts, larger contract sizes, *etc.*

banks and systemically important non-deposit taking non-banking financial companies (NBFC-ND-SIs) that fall under the purview of Section 45-I (c) (ii) of the Reserve Bank of India Act, 1934, subject to compliance with the stipulated financial norms and procurement of an NOC from the respective regulatory departments.

Introduction of a Web-based System for Access to NDS-Auction and NDS-OM

V.8 To facilitate direct participation by retail and mid-segment investors in G-sec auctions, the Reserve Bank has allowed web-based access to the negotiated dealing system (NDS)-auction developed by the Clearing Corporation of India Ltd. (CCIL). The system allows GAHs to directly place their bids in the G-sec auction through a primary member's portal, as against the earlier practice wherein the primary member used to combine bids of all constituents and bid in the market on their behalf. A similar web-based access to the NDS-OM system for secondary market transactions has been permitted since June 2012.

Extension of Short Sale Period from Five Days to Three Months

V.9 Short selling plays an important role in price discovery, promoting liquidity and better risk management. With the re-introduction of IRFs on exchanges, there was a need to revisit the guidelines on short selling to ensure parity between the cash and futures market *vis-à-vis* short selling. Accordingly, the period of short sale was extended from five days to three months from February 1, 2012. This is expected to give a fillip to the IRF market by helping participants to hedge/ arbitrage more effectively, and to develop the term repo market.

FOREIGN EXCHANGE MARKET

V.10 During 2011-12, the primary concern of the Reserve Bank was to stem the volatility in the forex market. The policy initiatives in this area were directed towards rationalising and simplifying procedures, and providing incentives to encourage foreign inflows, aside from sustaining the liberalisation process.

Foreign Investment

Foreign Direct Investment (FDI)

V.11 In May 2011, authorised dealers (ADs) were permitted to open non-interest bearing escrow accounts in Indian rupee, towards payment of share purchase consideration or for keeping securities to facilitate FDI transactions without prior approval from the Reserve Bank. This measure aimed at providing operational flexibility and easing the procedures for such transactions. Further, AD banks were permitted to pledge shares acquired under the FDI route for loans for genuine business purpose in India or overseas. In November 2011, the transfer of shares under the FDI scheme of Indian companies in the financial sector and/ or where the relevant SEBI pricing guidelines were met, was allowed without the prior approval of the Reserve Bank. Foreign investment through issue/ transfer of 'participating interest/ right' in oil fields by Indian companies to a non-resident will be treated as FDI.

V.12 With prior approval from the FIPB, capitalisation of import payables and pre-incorporation expenses under the FDI scheme, and also up to 100 per cent FDI in single-brand retail trade has been allowed.

Foreign Portfolio Investment

V.13 Various measures were taken during 2011-12, to further simplify, rationalise and liberalise the regulations governing foreign portfolio investment in India. Qualified foreign investors (QFIs) were allowed to invest in units of mutual funds (MFs), listed equity shares and listed corporate debts, in order to widen the universe of foreign portfolio investors into India and consequently create an environment for more stable portfolio capital inflows into India. Non-resident long term investors (SWFs, endowment funds, insurance funds, pension funds, multilateral agencies), FIIs and NRIs were allowed to invest in infrastructure debt funds (IDFs) set up as MFs or NBFCs in India so as to provide an avenue for long-term foreign investors to access the debt markets in India as well as to channelise foreign capital flows in to the vital infrastructure sector in India.

V.14 FVCIs were allowed to invest by way of third party private arrangements as well as to invest in listed securities subject to relevant SEBI guidelines.

FII Flows in G-secs and Corporate Bonds

V.15 To encourage FII flows in the G-sec and corporate bond markets, the limits on investment in such instruments were enhanced to US$ 20 billion and US$ 45 billion, respectively, during 2011-12. It was also decided to expand the universe of non-resident investors in G-secs in June 2012, by allowing long term investors to also invest in G-secs for the entire limit of US$ 20 billion.

V.16 The terms and conditions for the FII investment scheme in infrastructure debt and non-resident investment scheme in IDFs were further rationalised in terms of the lock-in period and residual maturity. QFIs were allowed to also invest in MF debt schemes that hold at least 25 per cent of their assets (either in debt or equity) in the infrastructure sector under the current US$ 3 billion sub-limit for investment in mutual funds related to infrastructure.

V.17 Further, NBFCs categorised as infrastructure finance companies (IFCs) by the Reserve Bank and IDFs were deemed eligible to issue bonds for the purpose of investment by FIIs under the corporate debt long-term infrastructure category.

Liberalised Remittance Scheme

V.18 In terms of extant instructions, a resident individual is eligible to remit up to US$ 200,000 per financial year for any permissible capital or current account transactions under liberalised remittance scheme (LRS). During 2011-12, resident individuals were permitted to lend or make a gift in rupees to close NRI relatives within the overall limit.

Report of the Committee to Review the Facilities for Individuals under the Foreign Exchange Management Act (FEMA), 1999

V.19 Following the announcement in the Monetary Policy Statement for 2011-12, and recognising the need to facilitate genuine foreign exchange transactions by individuals – residents/ NRIs and persons of Indian origin (PIOs) – under the current regulatory framework of FEMA, the Reserve Bank constituted a committee (Chairperson: Smt. K.J. Udeshi) to review the current regulatory framework under FEMA for individuals and recommend measures to further streamline and simplify the procedures.

V.20 Some important recommendations of the committee implemented by the Reserve Bank include: an increase in the limit for foreign exchange remittance for miscellaneous purposes without documentation formalities from US$ 5,000 to US$ 25,000; permitting residents to gift/ lend in rupees to/ repay loans of close relatives of NRIs (within the overall limit of US$ 200,000 per financial year as permitted under the LRS); permitting residents to gift shares/ securities/ convertible debentures *etc.* up to US$ 50, 000 subject to the conditions on a resident foreign currency account/ exchange earners foreign currency (EEFC) account/ resident bank account with a close NRI relative as the joint holder with the resident, and permitting a resident to bear medical expenses of visiting close NRI/ PIO relative. An NRI/ PIO can transfer funds from an NRO account to an NRE account within the overall ceiling of US$ 1 million per financial year.

V.21 General permission was granted to resident individuals to acquire qualification shares/ shares in consideration of professional services to an overseas company for holding the post of a director. Resident Indian employees or directors were permitted to accept shares offered through an ESOP scheme globally, on a uniform basis, in a foreign company that has an equity stake, directly or indirectly, in the Indian company. Banks were allowed to freely determine interest rates on both savings and term deposits of maturity of one year and above under NRE deposits and savings deposits under NRO accounts.

Administrative Measures to Curb Volatility in the Indian Forex Market

V.22 In view of the excessive volatility in the Indian forex market during H2 of 2011-12, the Reserve Bank initiated various administrative steps to curb speculation, such as withdrawing the facility of cancellation and rebooking of contracts available under contracted exposure to residents and FIIs; reducing the limit under past performance facility for importers to 25 percent of the current limit available; making the past performance facility available to exporters and importers only on a delivery basis, mandating that all cash/ tom/ spot transactions by ADs on behalf of clients were to be undertaken for actual remittances/ delivery only and could not be cancelled/ cash settled; reducing the net overnight open position limit (NOOPL) of ADs across the board; and mandating that the intra-day position/ daylight limit of ADs should not exceed the existing NOOPL approved by the Reserve Bank.

V.23 The taking of position by banks, in the currency futures segment, was also curbed, because it was rampantly used for arbitrage between the OTC and the currency futures, which exacerbated the volatility in the forex market. Accordingly, the following was decided: the current NOOPL of banks as applicable to the positions involving the rupee as one of the currencies should not include the positions undertaken in the currency futures/options segment in the exchanges; the positions in the exchanges (both futures and options) cannot be netted / offset by undertaking positions in the OTC market and *vice-versa*; the positions initiated in the exchanges should be liquidated/ closed only in the exchanges; the position limit for the trading member AD category-I bank, in the exchanges for trading currency futures and options, should be US$ 100 million or 15 per cent of the outstanding open interest, whichever is lower. In order to provide some operational flexibility to the exporters, they have been allowed since July 31, 2012, to cancel and rebook 25 per cent of the total contracts booked for hedging their export exposure.

V.24 The EEFC scheme is intended to enable exchange earners to save on conversion and transaction costs while undertaking forex transactions. It is not intended to enable exchange earners to maintain assets in foreign currency, as India is still not fully convertible on capital account. In view of recent developments in the forex market, it was decided that: 50 per cent of the balances in the EEFC accounts would be converted into rupee balances and credited to the rupee accounts according to the directions of the account holder within a fortnight from May 10, 2012. For all future forex earnings, an exchange earner is eligible to retain 50 per cent (as against the previous limit of 100 per cent) in non-interest bearing EEFC account. The remaining 50 per cent should be surrendered for conversion to rupee balances.

V.25 For operational convenience, the regulations were reviewed on July 31, 2012 and it was decided to restore erstwhile stipulation of allowing credit of 100 per cent foreign exchange earnings to the EEFC account subject to the condition that the sum of the total accruals in the account during a calendar month should be converted into rupees on or before the last day of the succeeding calendar month after adjusting for utilisation of balances for the approved purposes or forward commitments.

Measures and Challenges in Regard to ECBs

V.26 One of the challenges regarding external commercial borrowings (ECBs) is the ever increasing demand to liberal*is*e their terms of end-use and eligibility *vis-a-vis* the sustainability of the external debt.

V.27 During 2011-12, the annual limit for ECBs under the automatic route was enhance for companies in manufacturing, infrastructure sector, service sector companies in hotel, hospital and software and NGOs engaged in micro-finance activities. Besides, micro-finance institutions (MFIs) were permitted to raise ECBs for onward lending to micro-finance activities. Moreover, eligible borrowers were permitted to avail of ECBs designated in Indian rupee from foreign equity holders. To facilitate this non-residents were allowed to hedge their currency risk in ECBs denominated in Indian rupee. Companies in the manufacturing and infrastructure sector that have foreign exchange earnings were also permitted to avail of ECBs under the approval route to repay rupee loan(s) availed from the domestic banking system and/or for fresh rupee capital expenditure.

V.28 The universe of non-resident entities eligible to provide credit enhancement under the automatic route was expanded to include foreign equity holders.

V.29 In view of the tight liquidity conditions and widening of credit spreads due to recent developments in international financial markets, the all-in-cost ceiling of trade credit and ECBs was enhanced. Refinancing of existing ECBs at a higher all-in-cost was permitted under the approval route. Simultaneously, borrowers were instructed to repatriate immediately the proceeds of the ECBs raised abroad that were intended for rupee expenditure in India and credit them to the borrowers' rupee accounts with banks in India.

V.30 Liberalisation in ECB policies also aimed at channelising more external funds to the infrastructure sector. The important infrastructure specific measures introduced during 2011-12 allow: 25 per cent of the fresh ECBs raised by corporates to be used to repay their rupee loan/s from the domestic banking system for completed infrastructure projects, with 40 per cent being allowed for the power sector; ECBs in renminbi (RMB) up to an annual cap of US$ 1 billion; interest payment during construction (IDC) as a permissible end-use; the facility of short-term credit (including buyers'/ suppliers' credit) as 'bridge-finance' to import capital goods (to be replaced with an ECB at a later date); and developers of national manufacturing investment zone (NMIZ) to avail of ECBs for providing infrastructure facilities within the NMIZ.

Measures Relating to Foreign Currency Convertible Bonds (FCCBs)

V.31 The global financial crisis and consequent decline in equity prices led to FCCBs not getting converted into equity and a resultant redemption pressure on Indian companies. The immediate challenge for Indian corporates is to meet the redemption obligations of FCCBs that fall due in the next couple of years. The other challenge is to rekindle the appetite for FCCBs which has been receiving lukewarm response from investors. To mitigate the hardship faced by issuers in redeeming their FCCBs, Indian companies have been allowed to raise fresh ECB/ FCCB to refinance their outstanding FCCBs according to the ECB guidelines under the automatic route. Proposals for restructuring FCCBs that do not involve a change in conversion price are considered under the approval route.

Swap Arrangement for SAARC Member Countries

V.32 To strengthen regional financial and economic cooperation, the SAARC swap arrangement was announced at the 24th SAARCFINANCE Governors' Meeting held on May 16, 2012. Under the arrangement, the Reserve Bank will offer a swap facility of US$ 2 billion both in foreign currency and Indian rupee to all SAARC member countries, *viz.*, Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, Pakistan and Sri Lanka. India will contribute the entire fund. The swap will be offered in US dollar, euro or Indian rupee against the domestic currency or domestic currency denominated G-sec of the requesting country. The requesting member countries can access US dollar, euro or Indian rupee in multiple tranches. Each drawal will be of three months tenor and can be rolled over twice. The swap arrangement is intended to provide a back stop line of funding for SAARC member countries to meet any balance of payments and liquidity crises, until longer-term arrangements are made, or if there is a need for short-term liquidity due to market turbulence.

Overseas investment – Major Policy Changes

V.33 To provide greater operational flexibility in overseas investments by Indian corporates, the regulations for overseas direct investment were further liberalised/ rationalised during 2011-12.

Management of Foreign Exchange Reserves

V.34 The guiding objectives of foreign exchange reserves management in India continued to be safety, liquidity and returns in line with general international practices. The level of foreign exchange reserves has traditionally been the outcome of the Reserve Bank's intervention in the foreign exchange market to contain excessive exchange rate volatility and valuation changes due to movement in the prices of securities and of the US dollar against other currencies. Moreover, the reserves, which are mainly built up from volatile capital flows, do not represent surplus earnings through international trade as in the case of some other countries and hence, are required to be held as a buffer during periods of sudden stops and reversal in capital flows. The Reserve Bank of India Act, 1934 provides the legal framework for deployment of the Reserve Bank's foreign currency assets.

DERIVATIVES MARKET

Issuance of Final Guidelines on Credit Default Swaps (CDS)

V.35 Based on the recommendations of the internal working group on introducing plain vanilla over-the-counter (OTC) single-name CDS for corporate bonds for resident entities, guidelines on CDS were issued after considering the feedback and suggestions from market participants (see Annual Report 2010-11: Box V.1). CDS was notified as a derivative for the purpose of Chapter IIID of the Reserve Bank of India Act, 1934 on October 19, 2011. Guidelines for capital adequacy and exposure norms for banks and PDs were issued in November 2011. With the necessary infrastructure that included trade repository, documentation, publication of the CDS curve for valuation, standardisation of contracts, *etc.*, in place, participants were permitted to enter into CDS from December 1, 2011. The reporting of CDS transactions on the CCIL's platform by market-makers was also made mandatory. FIMMDA has been conducting workshops to create awareness about the product among market participants and help prepare policies for their CDS.

V.36 A trade repository - CCIL online reporting engine (CORE) – has been set up for reporting CDS trades. Value-free transfer of securities has also been permitted to meet margin requirements.

Introduction of 2-year and 5-year Cash Settled IRF

V.37 The second quarter review of Monetary Policy 2010-11 (November 2010) indicated that exchange traded IRFs on 2-year and 5-year notional coupon bearing G-secs and 91-day T-bills would be introduced after taking into account the experiences of cash-settled IRF regimes in other countries. The guidelines on 91-day T-bill IRFs were issued on March 7, 2011. Further, the guidelines for cash-settled 2-year and 5-year IRFs were issued on December 30, 2011.

VI REGULATION, SUPERVISION AND FINANCIAL STABILITY

Effective and non-disruptive regulation and supervision of the financial system in general and banking sector in particular, is key to ensuring systemic financial stability. The Reserve Bank continued to maintain high standards of regulation and supervision in line with the international norms. Adoption of Basel III norms, which envisages complete implementation by commercial banks by end-March 2018 is one of the major steps in this direction. Under these guidelines, the banks would be required to gradually increase their capital base over a period of time. The banking sector remained robust with high capital adequacy, even though rising NPA levels emerged as a concern. The NPAs, however, are pro-cyclical in nature and a rise in the same may be a reflection of overall slowdown in the economy. The Reserve Bank has undertaken several initiatives like faster grievances redressal mechanism, facilitating better banking experience for the disabled and intra-bank transfer of deposit facility to benefit the common man.

VI.1 In the aftermath of the financial crisis, most of the analytical reports and empirical research pointed out absence of stringent regulation and supervision of financial system as one of the major factors which led to the crisis. Given the highly interdependent and globalised nature of the modern financial structure, problems which emanate in one country soon turn into systemic crisis, which are global in nature. In response to this experience, the regulators have become proactive in adopting regulations which ensure greater transparency, better governance practices, larger role for central banks in supervision and restricting growth of 'too-big-to-fail' financial institutions. In the case of India, the Reserve Bank, even before the outbreak of the global financial crisis, has been proactively implementing the prudential regulation policies. This regulatory stance has been vindicated by the recent developments. The Reserve Bank continued with its policy of adopting the best international regulatory policies, at the same time ensured that excessive regulation does not hinder the natural growth of the financial system, thereby putting constraints to the growth aspirations of the economy.

FINANCIAL STABILITY ASSESSMENT

VI.2 Pursuit of financial stability remained an integral element of the Reserve Bank's macrofinancial policy framework. The Reserve Bank continued its efforts towards putting in place a robust surveillance framework for the assessment of systemic risks and in this direction, a series of systemic risk assessment projects are under way. These projects combine elements aimed at the identification of contemporaneous developments in a number of risk factors in different segments of the financial system with forward looking elements.

Major findings of the Financial Stability Report (FSR)

VI.3 The Financial Stability Report published in June 2012 reiterated that the financial system of the country remains robust. Risks to stability are, however, elevated due to global factors and domestic macroeconomic factors. The Reserve Bank has been conducting periodic Systemic Risk Surveys and, the findings of these Surveys reveal that financial system stakeholders retain their confidence in the stability of the system.

VI.4 Risks from the global developments – growth slowdown, continuing instability in the euro area, uncertain capital flows and the impact of deleveraging by banks – will be accentuated by domestic macroeconomic risks. Domestic growth has slowed down. Savings and investment rates are also lower. Inflation has moderated but risks remain. Risks are also posed by the high levels of current account and fiscal deficits. However, the intrinsic resilience of the domestic economy is high.

VI.5 Financial intermediaries remain robust. Banks continued to be well capitalised and profitable. Asset quality deteriorated but is not a cause for systemic concern. Credit and deposit growth in the banking sector has decelerated and banks' reliance on borrowed funds has increased. Banks remained resilient to credit, market and liquidity risks and would be able to withstand macroeconomic shocks, given their comfortable capital adequacy positions. However, distress dependencies between banks rose, warranting closer monitoring.

Financial Stability Development Council

VI.6 The Financial Stability and Development Council (FSDC) was set up in December 2010 with a view to providing focused attention on financial stability. The Council's remit also includes inter-regulatory co-ordination, macroprudential supervision of the economy, monitoring of financial conglomerates, financial inclusion and financial literacy. The sub-committee of the FSDC, headed by the Reserve Bank Governor, has evolved as the active operative arm of the Council since its establishment. In line with the mandate of the FSDC, the sub-committee, during the year, reviewed potential threats to the stability of the financial system, deliberated on issues requiring co-ordination between the financial sector regulators and various government departments and discussed measures for taking forward initiatives towards greater financial inclusion and literacy.

VI.7 The sub-committee of the FSDC was, during the year, assisted by two technical groups – a Technical Group on Financial Inclusion and Financial Literacy and an Inter Regulatory Technical Group. The sub-committee and its Technical Groups deliberated upon a host of issues during the year including a) the modalities for the introduction of infrastructure development funds (IDFs); b) development of the corporate bond market including the market for repo in corporate bonds and the market for credit default swaps; c) regulatory issues relating to wealth management/private banking undertaken by banks; d) concerns arising out of regulatory gaps in the non-banking finance companies (NBFC) sector and regulation of government sponsored NBFCs; e) impending risks from foreign currency convertible bonds and potential policy mitigants; f) implementing uniform KYC norms in different segments of the financial system and across the entire financial system; and g) putting in place a national strategy for financial education.

VI.8 With a view to institutionalising the framework for supervision of financial conglomerates (FCs) and monitoring and management of systemic risks emanating from the activities of FCs, the sub-committee of the FSDC has approved the creation of an Inter Regulatory Forum under the chairmanship of the Deputy Governor-in-charge of banking supervision at the Reserve Bank with Executive Director level membership from other peer regulatory/supervisory agencies. The Inter Regulatory Forum, would have responsibility for framing policies for the FCs (like identification, group-wide risk management, group-wide capital adequacy, corporate governance, *etc.*) as well as for conducting high level supervision of FCs. The Forum would also seek to strengthen the supervisory co-ordination/cooperation mechanism amongst the domestic supervisors for effective supervision of FCs.

ASSESSMENT OF THE BANKING SECTOR

Core Financial Soundness Indicators (FSIs) of SCBs

VI.9 SCBs remained well capitalised, as both CRAR (14.3 per cent) and core CRAR (10.4 per cent) under Basel-II stood much above the regulatory prescriptions (Table VI.1). Asset quality of SCBs, which recorded improvement during 2010-11, witnessed a deterioration during 2011-12. In absolute terms, the gross NPAs of SCBs, especially Public Sector Banks (PSBs), increased significantly during 2011-12 (Table VI.2). With decline in income from securities trading and due to higher risk provisioning, SCBs recorded a lower growth of 15.5 per cent in their net profit during FY 2011-12.

Table VI.1: Select Financial Indicators

(Per cent)

Item	End-March	Scheduled Commercial Banks	Scheduled Urban Co-operative Banks	All India Financial Institutions	Primary Dealers	Non-Banking Financial Companies-D	NBFCs-ND-SI
1	2	3	4	5	6	7	8
CRAR	2011	14.2	12.5	22.0	46.2	22.5	32.8
	2012	14.3	12.8	21.0	53.8	20.4	27.5
Core CRAR	2011	10.0	N.A.	N.A.	N.A.	17.2	30.5
	2012	10.4	N.A.	N.A.	N.A.	16.8	24.6
Gross NPAs to Gross Advances	2011	2.4	5.7	0.3	N.A.	0.9	1.9
	2012	2.9	5.2	0.4	N.A.	2.7	3.1
Net NPAs to Net Advances	2011	0.9	1.0	0.1	N.A.	#	0.8
	2012	1.2	1.4	0.1	N.A.	0.8	1.8
Return on Total Assets	2011	1.1	0.9	1.0	1.1	2.7	2.3
	2012	1.1	1.0	1.0	0.8	N.A.	1.8
Return on Equity	2011	13.7	N.A.	11.0	5.1	16.6	8.5
	2012	13.6	N.A.	12.0	4.4	N.A.	7.0
Efficiency (Cost/Income Ratio)	2011	46.2	49.9	24.0	36.1	72.0	68.7
	2012	45.3	52.0	18.0	44.1	N.A.	77.7
Interest Spread (per cent)	2011	3.1	N.A.	2.0	N.A.	3.5	1.9
	2012	3.1	N.A.	2.0	N.A.	N.A.	2.3
Liquid Asset to total assets	2011	29.8	N.A.	N.A.	N.A.	N.A.	N.A.
	2012	28.9	N.A.	N.A.	N.A.	N.A.	N.A.

N.A.: Not Available. #: Provisions exceed NPAs.

Note: 1. Data for 2012 is unaudited and provisional.
2. Data for SCBs is excluding LABs.
3. Data for SCBs covers domestic operations, except for CRAR.
4. Data for CRAR of SCBs is pertaining to Basel II norms.
5. Data on Scheduled UCBs exclude Madhavpura Mercantile Co-operative Bank Ltd.
6. For NBFCs-D data for 2012 pertain to the period ended December 2011.
7. For NBFCs-ND-SI data in respect of CRAR, gross NPA and Net NPA for 2012 pertain to the period ended December 2011.

Source: 1. SCBs: Off-site supervisory returns.
2. UCBs: Off-site surveillance returns.
3. NBFCs: Off-site supervisory returns.

Table VI.2: Bank Group wise NPA Ratios

Bank Group	End March	Gross NPAs to Gross Advances	Net NPAs to Net Advances	Restructured Standard Advance to Total Standard Advances
1	2	3	4	5
Public Sector Banks	2010	2.28	1.09	5.07
	2011	2.32	1.04	4.30
	2012	3.17	1.47	5.92
Foreign Banks	2010	4.26	1.82	0.54
	2011	2.54	0.66	0.23
	2012	2.68	0.61	0.14
New Private Sector Banks	2010	3.22	1.18	1.68
	2011	2.62	0.60	0.65
	2012	2.18	0.44	1.08
Old Private Sector Banks	2010	2.31	0.82	3.62
	2011	1.97	0.53	2.95
	2012	1.80	0.59	3.49

Accordingly, ROE of SCBs recorded a decline. Also, NIM decreased from 3.14 per cent to 3.07 per cent for the same period. The ratio of liquid assets to total assets had also come down during 2011-12 and stood at 28.9 per cent at end March 2012 as compared to 29.8 per cent as at end March 2011.

VI.10 In the case of scheduled UCBs an improvement in CRAR is observed. The gross NPA to gross advances ratio has declined indicating improvement in asset quality. On the other side however, the efficiency ratio deteriorated indicating an increase in cost relative to income.

VI.11 Even though the NPA ratio of SCBs showed an increase in 2012, an analysis using quarterly data since June 2000 brings out the cyclicality in asset quality of Indian banks (Box VI.1).

Box VI.1
NPAs and Credit Cycle

Asset quality is the key to understanding the financial health and soundness of the banking system. The literature identifies credit cycles as an important determinant of banks' asset quality. Cyclicality/pro-cyclicality has been defined as "dynamic interactions (positive feedback mechanisms) between the financial and real sectors of the economy" (FSF, 2009). Financial institutions tend to over-stretch their lending portfolio during economic booms and tend to retrench the same during economic downturns. It has been argued that an expansion in credit growth is associated with the deterioration in asset quality because when banks over-expand their lending, they tend to lower their credit standards. This behaviour translates itself into greater slippages in asset quality at matured stages of the credit cycle. The literature identifies various reasons for such pro-cyclical risk-taking behaviour of banks, *viz.*, "herd behaviour" (Rajan, 2005), "principal-agent problem" between shareholders and managers (Borio *et al*, 2001), "disaster myopia" or short-sightedness in underestimating the likelihood of high-loss low-probability events (Guttentag and Herring, 1986), among others.

Asset quality has surfaced as an important concern for the Indian banking sector in the recent years. In the period immediately following the global financial crisis, when asset quality of banks in most advanced and emerging economies took a beating, the asset quality of Indian banks was largely maintained, partly on account of the policy of loan restructuring. However, between March 2009 and March 2012, the gross NPAs ratio has shown an increasing trend *albeit* a fall in 2010-11 (Table 1).

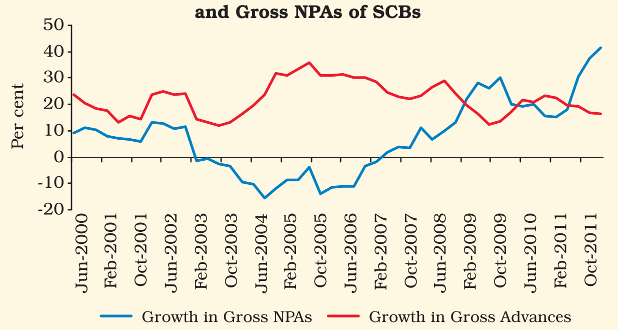
Table 1: Trends in gross and net NPAs ratio

Item	Mar 2008	Mar 2009	Mar 2010	Mar 2011	Mar 2012
Gross NPAs ratio (per cent)	2.39	2.45	2.51	2.36	2.94
Net NPAs ratio (per cent)	1.07	1.13	1.12	0.93	1.24

Source: RBI Supervisory returns.

A cursory look at the growth in bank credit and gross NPAs reveals a cyclical pattern (Chart 1). An empirical analysis to model asset quality of Indian banks as illustrated in equation (I), taking quarterly data from June 2000, suggests a lagged statistically significant positive relation between deviations from trend in credit to GDP (C-GDP) ratio (worked out using Hodrick-Prescott filter) and growth in gross NPAs for the second lag.[1] The deviations from trend in C-GDP ratio has been recommended as a principle guide by the Basel

Chart 1: Trends in Growth of Gross Advances and Gross NPAs of SCBs



Committee on Banking Supervision (BCBS) for determining economic and financial cycles under its Basel III framework (BIS, 2010).

$$\text{NPA growth} = 0.678 + \underset{(4.93)^{*}}{736.58}\,\text{C-GDP}_{-2} \qquad \text{(I)}$$

*Significant at 1 per cent level.

This exercise brings out the cyclicality in the behaviour of asset quality of Indian banks. Further, it justifies the counter-cyclical prudential regulatory policy, as pursued by the Reserve Bank, and corroborates the need to further strengthen such a policy by basing it on a more systematic and rule-based footing to effectively address the concern of asset quality.

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[1] The model did not yield statistically significant coefficients for any shorter and longer lags than that given in equation I.

Sensitivity Analysis

VI.12 Banking system is subjected to sensitivity tests to ascertain the resilience of banks to plausible shocks likely to emanate from interest rate risk and credit risk. This is then related to the overall capital adequacy of commercial banks in withstanding the applied shocks. The analysis is carried out both at the aggregate level as well as at the individual bank level based on supervisory data.

VI.13 Sensitivity analysis for interest rate risk of 81 SCBs was carried out for the year ended March 31, 2012. Under interest rate risk sensitivity analysis, CRAR of SCBs under Basel-II, went down to 11.9 per cent (from the existing 14.1 per cent) when measured under an assumed rise in yields by 150 bps, reflecting manageable financial leverage. The impact of credit risk sensitivity analysis on CRAR is also found to be manageable at the system level. If existing NPAs are assumed to increase by 150 per cent at the system level, the CRAR would decline from 14.1 per cent to 11.5 per cent and if only retail NPAs are assumed to increase by 150 per cent at the system level, the CRAR of the system would decline to 13.5 per cent.

MAJOR DECISIONS TAKEN BY BOARD FOR FINANCIAL SUPERVISION

VI.14 The Board for Financial Supervision (BFS), constituted in November 1994, has been the chief guiding force behind the Reserve Bank's supervisory and regulatory initiatives. During 2011-12, the BFS was reconstituted on account of reconstitution of the Central Board of the Reserve Bank. The BFS now has Shri Y.H. Malegam, Dr. Ela Bhatt, Dr. Rajeev Gowda and Shri Kiran Karnik as Director-members.

VI.15 The BFS had ten meetings during the year. The BFS reviewed, *inter alia*, the performance and the financial position of banks and financial institutions during 2009-10 to 2010-11. It reviewed memoranda on 88 inspection reports of banks/FIs (26 reports of public sector banks, 23 of private sector banks, 33 of foreign banks, 4 of local area banks, and 2 of financial institutions). Of these, while 6 reports were based on the financial position as on March 31, 2010, 82 reports were based on the financial position as on March 31, 2011.

VI.16 During the period, the BFS also reviewed 16 summaries of inspection reports pertaining to scheduled urban co-operative banks (UCBs), 4 summaries of financial highlights pertaining to scheduled UCBs classified in Grade I/II and 22 summaries of financial highlights pertaining to scheduled UCBs rated between A+ and B-.

VI.17 As directed by BFS, a committee was formed to revise the annual financial inspection (AFI) report format to make it more focused. Based on the recommendations of the committee, a revised format has been implemented from the inspection cycle in 2012. The revised format and the new guidelines would result in optimal utilisation of supervisory resources besides reduction in the time taken for inspection and issuance of crisp inspection reports.

VI.18 While deliberating on the financial inspections of All India Financial Institutions, the BFS decided to alter the periodicity of their inspection from annual to once in two years, as these entities do not pose any systemic risks and their performance is supervised by the Reserve Bank on continuous basis through off-site surveillance mechanism.

VI.19 The compensation practices, especially of large financial institutions, were one of the important factors which contributed to the recent global financial crisis. Employees were too often rewarded for increasing the short-term profit without adequate recognition of the risks and long-term consequences that their activities posed to the organisations. These perverse incentives amplified the excessive risk taking that severely threatened the global financial system. As desired by the BFS, based on the principles and standards issued by FSB, draft guidelines on compensation of whole time directors /Chief Executive Officers/other Risk takers and Control function staff were issued. Taking into account the comments received on the draft guidelines from public as also stipulations suggested by BCBS, the final guidelines on compensation to private banks and foreign banks were issued in

January 2012. These guidelines would require banks to have effective governance of compensation, to reduce incentives towards excessive risk taking, alignment of compensation with prudent risk taking and stakeholder engagement in compensation.

VI.20 While discussing the parameters considered by a private housing development corporation for sanction of housing loans, the BFS observed that since the stamp duty registration and other documentation charges are not realisable, these should not be reckoned for arriving at the eligible bank finance. Accordingly a revised circular was issued advising banks not to include stamp duty, registration and other documentation charges in the cost of the housing project. BFS also observed that it was not appropriate for banks to accept the valuation of the properties without counter checking it from the available market sources. Accordingly, a circular has been issued to all banks.

VI.21 After obtaining approval from the BFS, the license of the Madhavpura Mercantile cooperative Bank Ltd., Ahmedabad was cancelled with effect from the close of business on June 04, 2012 and the Central Registrar of Co-operative Societies, New Delhi (CRCS) was also requested to issue an order for winding up the co-operative bank and appoint a liquidator.

VI.22 While considering issues relating to unlicensed StCBs/DCCBs, BFS directed, *inter alia*, that 43 unlicensed banks (StCB-1, DCCBs-42), be prohibited from accepting fresh deposits, immediately. Apart from other directions, the BFS has also directed that the unlicensed StCBs/DCCBs will be given extension of time for six months to comply with the licensing requirements. Accordingly, directions were issued to 43 unlicensed banks.

COMMERCIAL BANKS

Regulatory Initiatives

Implementation of Basel III Capital Regulations

VI.23 In December 2010, the Basel Committee on Banking Supervision (BCBS) issued Basel III capital regulations as a response to the lessons learnt from the financial crisis. Accordingly, the Reserve Bank issued final guidelines on the capital regulations on May 2, 2012 after due consideration of the comments / suggestions received from various stakeholders on the draft guidelines. These guidelines would become operational from January 1, 2013. However, the minimum capital requirement including capital conservation buffers will be introduced in a phased manner and will be fully implemented by March 31, 2018.

VI.24 Under Basel III, total capital of a bank in India must be at least 9 per cent of risk weighted assets (RWAs) (the BCBS requirement is minimum 8 per cent of RWAs). Tier 1 capital must be at least 7 per cent of RWAs (6 per cent as specified by the BCBS); and Common Equity Tier 1 (CET1) capital must be at least 5.5 per cent of RWAs (4.5 per cent as specified by BCBS). Due to the transitional arrangements the capital requirements of banks may be lower during the initial periods and higher during later years. Therefore, banks have been advised to do their capital planning accordingly.

VI.25 In addition to the minimum requirements as indicated above, a capital conservation buffer (CCB) in the form of common equity of 2.5 per cent of RWAs is required to be maintained by banks. Total capital with CCB will be 11.5 per cent (9 per cent CRAR+2.5 per cent CCB) of RWAs. Under the Basel III rules, total capital with CCB has been fixed at 10.5 per cent (8 per cent CRAR +2.5 per cent CCB).

VI.26 Under Basel III, a simple, transparent, non-risk based leverage ratio has been introduced. The Basel Committee will test a minimum Tier 1 leverage ratio of 3 per cent during the parallel run period from January 1, 2013 to January 1, 2017. Reserve Bank has prescribed that during this parallel run period, banks should strive to maintain their existing level of leverage ratio but, in no case the leverage ratio should fall below 4.5 per cent. Banks having leverage below 4.5 per cent should strive to achieve the target as early as possible. The leverage ratio requirement will be finalised taking into account the final proposal of the Basel Committee.

Dynamic Provisioning Guidelines

VI.27 At present, banks generally make two types of provisions *viz.*, general provisions on standard assets and specific provisions on non-performing assets (NPAs). Since the level of NPAs varies through the economic cycle, the resultant level of specific provisions also behaves cyclically. Consequently, lower provisioning during upturns, and higher provisions during downturns have procyclical effect on the real economy.

VI.28 To address pro-cyclicality of capital and provisioning, efforts at international level are being made to introduce countercyclical capital and provisioning buffers. Reserve Bank accordingly prepared a discussion paper on countercyclical (dynamic) provisioning framework.

VI.29 The Dynamic Provisioning (DP) framework is based on the concept of expected loss (EL). The average level of losses a bank can reasonably expect to experience is referred to as EL and is the cost of doing business. It is generally covered by provisioning and pricing. The objective of DP is to smoothen the impact of incurred losses on the P&L through the cycle, and not to provide general provisioning cushion for expected losses. More specifically, the DP created during a year will be the difference between long run average expected loss of the portfolio for one year and the incremental specific provisions made during the year.

VI.30 The parameters of the model suggested in the discussion paper are calibrated based on data of Indian Banks. Banks having capability to calibrate their own parameters may, with the prior approval of Reserve Bank, introduce DP framework using the theoretical model indicated by Reserve Bank. Other banks would have to use the standardised calibration arrived at by the Reserve Bank.

Proprietary Trading by Banks

VI.31 In the aftermath of the financial crisis, Dodd-Frank Wall Street Reform and Consumer Protection Act was enacted in July 2010, with a view to bringing about significant reforms in the US financial system. This law aims to improve transparency to ensure better consumer protection, eliminate loopholes that allow risky and abusive practices to go on unnoticed and unregulated, introduce stringent rules for credit rating agencies and impose tough new capital and leverage requirements on financial firms that make it undesirable to get too big. One of the later additions to the Dodd-Frank Wall street reform is the Volcker Rule, which restricts banks' ability to undertake proprietary trading. These set of reforms may increase borrowing costs in the short run but in the long run would result in a more robust financial system (Box VI.2).

Box VI.2

Impact of Volcker Rule on India

The Volcker rule is part of the Dodd–Frank Wall Street Reform and Consumer Protection Act, which was signed into a law in the aftermath of the global financial crisis in 2007-2008. The most discussed section of the rule is the restrictions on proprietary trading by the nation's largest banks. In other words, a bank cannot trade in the investment markets with the intent of making money, unless it is done on behalf of a customer. A bank can serve as a middleman, but not as a trader for its own benefit. The rule requires federal banking agencies, the Securities Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC) to issue regulation to prohibit insured deposit taking institutions and their affiliates from engaging in "proprietary trading" and investing in, sponsoring or having certain business relationship with hedge fund or private equity fund (limiting a bank's investments in proprietary trading to no more than 3 per cent of the Tier 1 capital).

It has been argued that the rule, if implemented in India, would reduce trading in bond markets, including government bond markets, and increase borrowing costs for governments, investors and companies; deter banks from breaking into new markets by substantially curtailing their risk-taking abilities. Concerns are also expressed that short-term foreign exchange swaps would also be subject to the restrictions and such restrictions could squeeze USD funding significantly outside the US and could accelerate the deleveraging of European banks by liquidating foreign assets. The rule, however, is expected to be useful in reinforcing financial stability.

Supervisory Initiatives

High Level Steering Committee to review the Supervisory Policies, Procedures and Processes for commercial banks

VI.32 Though the banking sector in India has witnessed considerable changes in recent years with sizeable growth in size, number and complexities of banks' businesses, the supervisory processes at the Reserve Bank have, remained largely unchanged. With a view to improving the quality of it's supervisory processes/techniques and benchmarking them with the global best practices, Reserve Bank had set up a High Level Steering Committee (HLSC) under the Chairmanship of Deputy Governor, Dr. K. C. Chakrabarty, comprising experienced supervisors, practicing /retired bankers and an academician as members. The HLSC has sought to transform the extant supervisory approach of examining the past performance through a transaction-testing based (CAMELS) framework to using trend analysis to find risk drivers and predicting the path and passage of risks in the banks' books. The Committee is of the view that the supervisory apparatus should not just focus on regulatory compliance or solvency of a bank but also on assessing the riskiness of a bank, its preparedness to take on various risks *vis-a-vis* the risk mitigation strategies. The Committee intends to drive the banks towards adopting a risk based business conduct within an indicative time-frame through a system of incentives and disincentives. The Committee has submitted its report on June 11, 2012. The recommendations of the committee are being examined for implementation.

Bilateral Memorandum of Understanding (MoU) with its Overseas Counterparts on Cross Border Supervision and Cooperation

VI.33 The Reserve Bank has been entering into bilateral MoUs with overseas supervisors for effective cross border supervision and cooperation in accordance with the extant domestic legal provisions and the Basel Committee on Banking Supervision (BCBS) Principles. Six such MoUs have been signed with China Banking Regulatory Commission (CBRC) South African Reserve Bank (SARB), Dubai Financial Services Authority (DFSA), Qatar Financial Centre Regulatory Authority (QFCRA) Qatar Central Bank (QCB), and Central Bank of Oman as on June 30, 2012. Subsequently MoUs have been signed with Jersey Financial Services Commission (JFSC), FSA of UK, FSA of Norway and Central Bank of the Russian Federation (CBRF).

VI.34 The Reserve Bank has also been attending the Supervisory College meetings of the major foreign banks having presence in India. This has proved to be a useful and effective channel for sharing /exchanging supervisory information and establishing contacts with overseas supervisors. RBI is preparing to host Supervisory Colleges in respect of some of the bigger Indian banks with significant cross-border and cross-sector presence.

Thematic Reviews

VI.35 While general deficiencies are identified in the Annual Financial Inspections (AFI) process, certain observations having a bearing on the efficiency of the banking system need to be studied separately in a focused manner either through a thematic review or through special audits. The objective of these reviews is to evaluate the systems followed by the select banks and to gain deeper insight into the risk faced / practices followed by different banks, with a view to assessing regulatory/ supervisory concerns and systemic risk if any. The Reserve Bank has already initiated such a process and so far carried out two thematic reviews - on KYC and AML compliance in banks and real estate exposures of banks.

Inspection of Overseas Branches of Indian Banks

VI.36 The inspection of select overseas branches of Indian banks was undertaken in the month of May 2012. The last inspection of the overseas branches was conducted in May 2008. The present inspection covered select branches of Indian banks located in the regions of USA, UK, Hong Kong SAR, Singapore and Bahrain and accounting for 59 per cent of assets of overseas operations of Indian banks as on end-March 2012. The purpose of the inspection was to get first hand assessment of the processes at the overseas branches, supervisory insight into the overseas operations of Indian banks, concerns, if any, on the risky exposures to products and process, especially in areas not permitted within the Indian jurisdiction and assessing the adequacy of risk management system and oversight of the Head Office on such overseas operations.

Sanctions Imposed on Banks/Financial Institutions for KYC/AML/CFT Violations

VI.37 Financial Action Task Force (FATF) is an inter-governmental body which sets international standards on anti-money laundering/combating financing of terrorism (AML/CFT). In 2009, the FATF along with Asia-Pacific Group on Money Laundering (APG) conducted an evaluation of India's AML/CFT framework and identified some gaps. An AML/CFT Regulatory Framework Assessment Committee was constituted by the central government in 2010 to examine the effectiveness and consistency of AML/CFT regulatory framework in the country and make recommendations in the areas where gaps were found. Among other things, it was recommended by the Committee that the statistics on sanctions imposed on regulated entities for violation of AML/CFT guidelines may be included in Annual Reports of the regulators (Table VI.3).

CUSTOMER SERVICE

Complaints received and disposed

VI.38 Banking Ombudsman Scheme 2006 introduced and administered by the Reserve Bank is a cost free apex level grievance redressal mechanism for bank customers. During the year 2011-12 fifteen offices of the banking ombudsman (OBOs), situated across the country received 72,889 complaints about deficiency in banking services. Taking into account 4,618 complaints pending at the beginning of the year, OBOs handled 77,507 complaints in the year. OBOs disposed of 72,885 complaints during the year clocking the disposal rate of 94 per cent. As on June 30, 2012, 4,622 complaints were pending at OBOs.

VI.39 The Appellate Authority appointed under the Banking Ombudsman Scheme 2006 receives appeals against the award issued or decision given by the Banking Ombudsman. During the year 2011-12 the Appellate Authority received 351 appeals. Out of these, 304 appeals were non-maintainable. Of the remaining 47 maintainable appeals 19 were disposed in favour of customers and 16 in favour of banks. As on June 30, 2012, 12 appeals were pending.

Table VI.3: Actions Against AML/KYC/CFT Violations

Entities	Advisory notices issued*	Show cause notices	Letters of warning **	Entities penalised***	Penalty amount in ₹ millions
1	2	3	4	5	6
Scheduled Commercial Banks	1	2	1	1	2.5
Urban Co-operative Banks	67	43	46	35	9.2
District Central Co-operative Banks	-	-	-	2	1.0
Regional Rural Banks	-	-	-	-	-
Authorised Persons	-	-	-	-	-
Money Transfer Service Scheme	-	6	1	-	-
Authorised Money Changers	-	-	-	-	-
Authorised Card Payment Networks	-	-	-	-	-
Non Banking Finance Companies	-	-	-	-	-

* : Advisory notice: After calling for explanation of the bank, when the committee of senior officers decides to issue an advisory letter to the bank and issue of show cause notice (SCN) is not considered necessary.

** : Warning letter: After receipt of reply to the SCN, the Committee of senior officers decides to issue a warning letter and not to impose monetary penalty

*** : Penalised: When monetary penalty is imposed

Position of Applications and Appeals Received under RTI Act, 2005

VI.40 During the year 2011-12 fifteen offices of the Banking Ombudsman (OBOs) received 740 applications and 171 appeals under RTI Act out of which 703 applications and 157 appeals were disposed during the year.

Damodaran Committee Report Implementation

VI.41 The Committee on Customer Service in Banks (Damodaran Committee) which submitted its report in July 2011, had made a total of 232 recommendations. Out of these, 107 recommendations have since been implemented and Indian Banks Association (IBA) has issued operating guidelines to the member banks in this regard. The Reserve Bank has had two rounds of discussions with the IBA and representatives of BCSBI, Institute for Development and Research in Banking Technology (IDRBT), National Payment Corporation of India (NPCI) to work out the modalities for taking forward the implementation task of the remaining recommendations made by the Damodaran Committee. The IBA has constituted a sub-group to prepare its response in this regard by referring to the relevant international standards and best practices. Some of the main issues under discussion include charges on non-home branch transactions; penalty for cheques returned; onus on banks to prove customers' negligence in fraudulent internet / ATM transactions; compensation policy for protecting customers in case of unauthorised / fraudulent transactions through internet banking / card products and appointment of chief customer service officer.

Reserve Bank and Common Man

VI.42 The Reserve Bank is a public institution serving the public interest. The Reserve Bank has taken several steps which directly or indirectly benefit the common person in recent times.

Display of Information by Banks

VI.43 The Reserve Bank asked the banks to ensure that accountholders have detailed information on the availability and the cost of various banking services offered to start a banking relationship. Banks have been advised to display information in comprehensive Notice Board in bank premises on various key aspects such as service charges, interest rates, services offered, product information, time norms for various banking transactions *etc.* This display enables customers to take informed decision regarding products and services of the bank and be aware of their rights as also the obligations of the banks to provide certain essential services.

Banking Facilities for Disabled

VI.44 Banks have been advised to ensure that all the banking facilities such as cheque book facility including third party cheques, ATM facility, internet banking facility, locker facility, retail loans, credit cards *etc.*, are invariably offered to the visually challenged without any discrimination. Banks have been advised to make at least one third of new ATMs installed as talking ATMs with Braille keypads and ensure that at least one talking ATM with Braille keypad is generally available in each locality for catering to needs of visually impaired persons.

Unclaimed Deposits/ Inoperative Accounts in Banks

VI.45 Keeping in view the public interest, detailed instructions have been issued to banks on dealing with unclaimed deposits / inoperative accounts and to find the whereabouts of the customers and their legal heirs. These instructions, *inter alia*, include annual review of accounts in which there are no operations, allowing operations in such accounts after due diligence and no charge to be levied for activation of inoperative accounts. Further, banks have been advised to display the list of unclaimed deposits/inoperative accounts which are inactive / inoperative for ten years or more on their respective websites.

Officially Valid Documents

VI.46 Letters issued by the Unique Identification Authority of India containing details of name, address and Aadhar number are now accepted as 'officially valid document' for opening all types of accounts in banks. Documents like income tax return in the name of the sole proprietor and utility bills in the name of proprietary concern are also to be accepted for opening accounts of sole proprietary concerns.

Grievances Redressal by Banks

VI.47 To strengthen the grievances redressal mechanism (GRM) banks have been advised that they should: i) ensure that the principal nodal officer appointed under the Banking Ombudsman Scheme is of a sufficiently senior level, not below the rank of a General Manager, ii) Contact details of the principal nodal officer to be prominently displayed on the first page of the web-site so that the aggrieved customer can approach the bank with a sense of satisfaction arising from being attended at a senior level, iii) GRM should be made simpler even if it is linked to call centre of customer care unit without customers facing hassle of proving identity, account details, *etc*., and iv) adequate and wider publicity are also required to be given by the respective financial service provider.

Clarification on Nomination Rules

VI.48 It was observed that some banks were insisting attestation of signatures of customers on various forms filled by them. Clarification was issued to banks reiterating that only thumb impressions and not signatures made on various forms are required to be attested.

Intra-bank Deposit Account Portability

VI.49 It was observed that some banks were insisting on opening fresh accounts when customers approach them for transferring their account from one branch to another branch of the same bank, causing inconvenience to the customers. Banks were, therefore, advised that KYC once done by a branch of the bank should be valid for transfer of the account within the bank.

Abolition of Foreclosure Charges / Prepayment Penalty on Home Loans

VI.50 The Damodaran Committee had viewed foreclosure charges on flexible interest rate home loans as a restrictive practice deterring the borrowers from switching over to cheaper available source. It was therefore decided that banks will not be permitted to charge foreclosure charges / pre-payment penalties on home loans on floating interest rate basis, with immediate effect. It is felt that the removal of foreclosure charges/prepayment penalty on home loans will lead to a reduction in the discrimination between existing and new borrowers and the competition among banks will result in finer pricing of home loans with floating rate.

Unique Customer Identification Code for Banks' Customers in India

VI.51 It was observed that while some of the Indian banks had developed Unique Customer Identification Code (UCIC), there was no unique number to identify a single customer across the organisation in many banks. The UCIC will help banks to identify a customer, track the facilities availed, monitor financial transactions in various accounts, improve risk profiling, take a holistic view of customer profile and smoothen banking operations for the customer. While such a system for the entire financial system is desirable, it is likely to take quite some time for a complete roll out. As a first step in this direction banks were advised to initiate steps to allot UCIC number to all their customers while entering into any new relationships in the case of all individual customers to begin with. Banks were also advised that the existing individual customers may also be allotted UCIC by end-April 2013.

BANKING CODES AND STANDARDS BOARD OF INDIA

VI.52 The membership of Banking Codes and Standards Board of India (BCSBI) has grown from 67 banks in 2006 to 121 banks as of May 2012 and membership of 10 more banks is under process. The objective of setting up the BCSBI as an independent and autonomous body to ensure fair treatment to customers will be achieved only when the provisions of the codes are adhered to in letter and spirit by member banks. BCSBI continued to monitor compliance with the provisions of the codes through an annual statement of compliance from members as also survey of select bank branches. During the year, BCSBI undertook survey of 2,083 branches and processing centres spread over 47 cities in India. The survey revealed perceptible improvement in compliance. BCSBI also continued its efforts to spread awareness of the organisation and the codes among the public by carrying out publicity campaigns through TV, radio and posters on bus panels. BCSBI officials also addressed gatherings of customers and bankers in customer meets and participated in town hall events conducted by the Reserve Bank as also in select outreach programmes of Banking Ombudsmen. BCSBI also arranged seminars of micro and small enterprises (MSE) borrowers and MSE trade and industry associations.

URBAN CO-OPERATIVE BANKS

Internet Banking

VI.53 Scheduled UCBs having minimum net worth of ₹ 1 billion, CRAR of at least 10 per cent, net NPA less than 5 per cent and have earned net profit continuously in the last three financial years were permitted to offer internet banking facility to their customers with prior approval of the Reserve Bank.

Revision in Limits of Housing Loans and Repayment Period

VI.54 The individual housing loan limits for UCBs were revised and UCBs in Tier-I category were permitted to extend individual housing loans up to a maximum of ₹3 million per beneficiary of dwelling unit and that in Tier- II up to a maximum of ₹7 million per beneficiary of a dwelling unit subject to extant prudential exposure limits. The maximum repayment period of housing loans granted by UCBs was revised from 15 years to 20 years.

Interest Rates on Rupee Export Credit

VI.55 AD category 1 UCBs were advised to extend interest subvention of 2 per cent on pre-shipment and post-shipment rupee export credit to specified sectors up to March 31, 2013.

Payment of Cheques/Drafts/ Pay Orders/ Banker's Cheques

VI.56 UCBs were advised not to make payment of cheques/drafts/pay orders/ banker's cheques, if they are presented beyond the period of three months from the date of such instrument with effect from April 1, 2012.

Access to NDS-OM

VI.57 UCBs fulfilling certain eligibility criteria such as minimum CRAR of 9 per cent, net NPA less than 5 per cent, minimum net worth of ₹ 250 million *etc*. were allowed direct access to Negotiated Dealing System- Order Matching (NDS-OM) with the prior approval of the Reserve Bank.

Dissemination of Credit Information of Suit-Filed Accounts

VI.58 UCBs were advised to submit quarterly a list of suit filed accounts of ₹ 10 million and above classified as doubtful or loss and a list of suit filed accounts of willful defaulters of ₹ 2.5 million and above to CIBIL and/or any other credit information company which has obtained CoR from the Reserve Bank and of which the bank is a member.

Supervisory Action Framework

VI.59 A revised supervisory action framework was introduced for UCBs with effect from March 1, 2012. The framework envisages, in the initial stage of deterioration in the financial position, self corrective action by the management of the UCBs themselves and supervisory action by the Reserve Bank in case the financial position of the bank does not improve.

Convergence of IAS with IFRS

VI.60 As announced in the Annual Policy Statement 2010-11, UCBs having net worth in excess of ₹ 3 billion were advised to take necessary steps to ensure that they are in readiness to adopt the International Financial Reporting Standards (IFRS) converged with the Indian Accounting Standards (IAS) from April 1, 2013 and those with net worth in excess of ₹2 billion but not exceeding ₹3 billion from April 1, 2014.

Restricted Letters of Credit (LC)

VI.61 UCBs were advised that in case of bills drawn under LCs restricted to a particular UCB, and if the beneficiary of the LC is not a borrower who has been granted regular credit facility by that UCB, the UCB concerned may, as per their discretion and based on their perception about the credit worthiness of the LC issuing bank, negotiate such LCs, subject to the condition that the proceeds will be remitted to the regular banker of the beneficiary of the LC. UCBs would have to adhere to the instructions of the Reserve Bank / RCS or CRCS regarding share linking to borrowing and provisions of Co-operative Societies Act on membership while negotiating restricted LCs.

Exposure to Housing, Real Estate and Commercial Real Estate

VI.62 UCBs' exposure to housing, real estate and commercial real estate loans were limited to 10 per cent of their total assets which could be exceeded by an additional 5 per cent of total assets for housing loans to individuals up to ₹1.5 million. With effect from April 26, 2012, UCBs have been allowed to utilise the additional limit of 5 per cent of total assets, for grant of housing loans to individuals up to ₹2.5 million, which is covered under the priority sector.

Merger and Amalgamation

VI.63 The consolidation of the UCBs through the process of merger of weak entities with stronger ones was set in motion through transparent and objective guidelines issued in February 2005. In January 2009 the Reserve Bank issued another set of guidelines for merger/acquisition of UCBs having negative net worth as on March 31, 2007. The process of merger/amalgamation requires the acquirer bank to submit the proposal along with some specified information to RCS / CRCS and the Reserve Bank. Pursuant to the issue of guidelines on merger of UCBs, the Reserve Bank received 168 proposals for merger upto March 2012 and issued NOCs to 125 proposals of which notifications have been issued for 107 mergers by respective RCs/CRCs (Table VI.4).

Table VI.4: Year-wise Progress in Mergers/acquisitions as on March 31, 2012

Financial year	Proposals received by the Reserve Bank	NOCs issued by the Reserve Bank	Merger effected (Notified by RCS)
1	2	3	4
2005-06	24	13	5
2006-07	32	17	18
2007-08	42	28	24
2008-09	16	26	22
2009-10	26	17	12
2010-11	17	13	13
2011-12	11	11	13
Total	**168**	**125**	**107**

VI.64 Maximum number of mergers took place in the State of Maharashtra, followed by Gujarat and Andhra Pradesh (Table VI.5).

Table VI.5: State-wise Progress in Mergers/Acquisition of UCBs

States	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	Total
1	2	3	4	5	6	7	8	9
Maharashtra	2	12	14	16	6	7	8	65
Gujarat	3	4	5	1	1	2	4	20
Andhra Pradesh	-	1	3	1	3	1	-	09
Karnataka	-	-	1	2	-	-	-	03
Punjab	-	1	-	-	-	-	-	1
Uttarakhand	-	-	1	1	-	-	-	2
Chhattisgarh	-	-	-	1	-	1	-	2
Rajasthan	-	-	-	-	2	1	1	4
Madhya Pradesh	-	-	-	-	-	1	-	1
Total	**5**	**18**	**24**	**22**	**12**	**13**	**13**	**107**

RURAL CO-OPERATIVES

Developments in Rural Cooperative Credit Structure

Position of unlicensed StCBs/DCCBs

VI.65 The Reserve Bank on October 14, 2009 had issued guidelines for granting licence to those State Co-operative Banks (StCBs) and District Central Co-operative Banks (DCCBs) that had CRAR of 4 per cent and above, subject to condition that there is no default in maintenance of CRR/SLR during the last one year (default up to two occasions permitted). Accordingly, the Reserve Bank has been issuing licences to StCBs/DCCBs which satisfy the above relaxed conditions recommended by NABARD and periodical review of the unlicensed StCBs/DCCBs is being done in consultation with NABARD from time to time. After considering NABARD's recommendations with respect to inspections/quick scrutiny, 43 banks (StCB-1, DCCBs-42) have remained unlicensed as on March 31, 2012. Subsequently, two banks (Assam StCB and Giridih DCCB) have been licensed after they fulfilled the licensing norms. Currently, out of 43 banks, 41 DCCBs are unlicensed and continue to be under directions.

VI.66 A task force to monitor the progress of implementation of monitorable action plan (MAP) by the unlicenced DCCBs has been formed at respective Regional Offices (ROs) of the Reserve Bank with a view to ensuring that these banks attain the eligibility for issue of a licence in the shortest possible time. The task force would also examine alternative formal channels of credit in the regions where these banks are currently functioning so as to ensure that the banking services in these regions are not adversely affected. An 'Expert Committee' to review the STCCS has been constituted to make an in-depth analysis of STCCS. The committee is headed by Dr. Prakash Bakshi, Chairman NABARD and includes professionals in co-operatives.

Developments in Regional Rural Banks

Scheduling of RRBs

VI.67 Out of 82 RRBs, 2 amalgamated RRBs are yet to be included in the second schedule of the RBI Act, 1934.

Recapitalisation of RRBs

VI.68 The central government had, in September 2009, constituted a committee (Chairman: Dr. K.C. Chakrabarty) to study the current level of CRAR of RRBs and to suggest a roadmap for enhancing the same to 9 per cent level by March 31, 2012. The committee submitted its report to the government on April 30, 2010. The committee has assessed that 40 RRBs (out of 82) will require capital infusion to the extent of ₹22 billion. The reports received from NABARD show that as on June 6, 2012, 16 RRBs have been recapitalised fully whereas in 11 RRBs, the recapitalisation process is underway. To complete the process, the recapitalisation scheme has been extended up to 2013-14.

DEPOSIT INSURANCE AND CREDIT GUARANTEE CORPORATION

VI.69 Deposit Insurance and Credit Guarantee Corporation (DICGC) is a wholly owned subsidiary of the Reserve Bank. Deposit insurance extended by DICGC covers all commercial banks, including Local Area Banks (LABs) and Regional Rural Banks (RRBs) in all the States and Union Territories (UTs). All co-operative banks across the country are also covered by deposit insurance. The number of registered insured banks as on March 31, 2012 stood at 2,199 comprising 87 commercial banks, 82 RRBs, 4 LABs and 2,026 co-operative banks. With the present limit of deposit insurance in India at ₹0.1 million, the number of fully protected accounts (996 million) as on March 31, 2012 constituted 92.8 per cent of the total number of accounts (1,073 million) as against the international benchmark[2] of 80 per cent. Amount-wise, insured deposits at ₹19,043 billion constituted 33.0 per cent

[2] Accepted as a Rule of Thumb at the First Annual Conference of the International Association of Deposit Insurers (IADI) in Basel, Switzerland in May 2002

of assessable deposits at ₹57,674 billion against the international benchmark of 20 to 40 per cent. At the current level, the insurance cover works out to 1.64 times per capita GDP as on March 31, 2012. The Corporation builds up its deposit insurance fund (DIF) through transfer of its surplus, *i.e.*, excess of income (mainly comprising premia received from insured banks, interest income from investments and cash recovery out of assets of failed banks) over expenditure each year, net of taxes. This fund is used for settlement of claims of depositors of banks taken into liquidation / reconstruction / amalgamation *etc.* During the year 2011-12, the Corporation settled aggregate claims for ₹2,873 million in respect of 58 co-operative banks (18 main claims and 40 supplementary claims) as compared with claims for ₹ 3,790 million during the previous year. The size of the DIF stood at ₹300 billion as on March 31, 2012, yielding a reserve ratio (DIF/Insured Deposits) of 1.6 per cent.

VI.70 The Financial Stability Board (FSB) undertook a peer review of deposit insurance systems among its member institutions based on the BCBS-IADI 'Core Principles for Effective Deposit Insurance Systems' and the assessment methodology. The peer review report observes that the global financial crisis has illustrated the importance of effective depositor compensation arrangements. The crisis resulted in greater convergence in practices across jurisdictions and emerging consensus about appropriate design features that include higher coverage levels, elimination of co-insurance, improvements in the payout process, greater depositor awareness, adoption of *ex-ante* funding by more jurisdictions, and strengthening of information sharing and coordination with other safety net participants.

VI.71 Some of the recommendations given in the peer review report are especially relevant for India in the context of (i) review of coverage levels to ensure that it strikes an appropriate balance between depositor protection and market discipline; (ii) prompt depositor reimbursement in situations when payout is the only choice to deal with a bank failure; this needs to be supported by comprehensive and prompt access to bank data, early information access via a single customer view, and robust information technology infrastructure; (iii) strengthening of degree of co-ordination between the deposit insurance agency and other safety net players to ensure effective resolution planning and prompt depositor payment; (iv) unambiguous and immediate access to reliable funding sources (including any back-up funding options) to meet the financing requirements.

VI.72 As part of its Golden Jubilee celebrations, DICGC hosted an international conference in collaboration with International Association of Deposit Insurers (IADI) on 'Role of Deposit Insurance in Bank Resolution Framework-Lessons from the Financial Crisis' in November 2011. The theme of the conference reflected the evolving thinking on the various elements of financial safety net framework in post-financial crisis period wherein need was felt for a well-defined resolution framework for banks and closer integration of the deposit insurance agency with other players in the safety net.

NON-BANKING FINANCIAL COMPANIES

Creation of New Categories of NBFCs

VI.73 During 2011-12 two new categories of NBFCs, *viz.*, Infrastructure Debt Funds-NBFC (NBFC-IDF) and the Micro Finance Institution (NBFC-MFI) were created and brought under separate regulatory frameworks. Detailed guidelines have been prescribed on the entry point norms, prudential norms for capital adequacy, asset classification and provisioning for both the categories of the NBFCs (Box VI.3 and VI.4).

Miscellaneous Instructions

VI.74 NBFCs have been allowed to participate in Credit Default Swap (CDS) market only as users and hence not permitted to sell protection and or enter into short positions in the CDS contracts.

Box VI.3
NBFCs - Infrastructure Debt Fund

In an emerging economy like India, garnering adequate resources for infrastructure projects, which typically have long gestation lags, is a major challenge. While infrastructure development is crucial for giving fillip to the growth impulses of the economy, traditional modes of bank finance are usually constrained by asset-liability mismatch considerations, given the long-term requirements of infrastructure finance. Against this backdrop, the Union Budget 2010-11 announced the setting up Infrastructure Debt Funds (IDFs) as a company structure (IDF-NBFC) and as a Trust structure (IDF-MF) to be regulated by the Reserve Bank and SEBI respectively, and which can provide long-term funding and refinance to infrastructure projects. IDFs will be investing only in public private partnerships (PPP) infrastructure projects which have completed one year of satisfactory commercial operations (COD) with a credit enhancement provided by the project authority (such as NHAI).

While all NBFCs would be eligible to sponsor IDF-MFs under certain conditions, only banks and infrastructure finance companies can sponsor IDF-NBFC with prior approval of the Reserve Bank. Regulation of the IDF-NBFC will be similar to that of IFCs except that certain regulatory concessions in the form of lower risk weights and higher exposure norms have been allowed in keeping with the low risk assets held by them. The IDF-NBFCs would raise resources through issue of either rupee or dollar denominated bonds of minimum 5 year maturity. The investors would be primarily domestic and off-shore institutional investors, especially insurance and pension funds which would have long term resources.

VI.75 Fixed deposits by NBFCs cannot be treated as financial assets. Consequently, interest income on fixed deposits with banks will also not be treated as income from financial assets.

VI.76 NBFCs were advised that if they fail to commence NBFI business within a period of six months from the date of issue of Certificate of Registration (CoR), their registration will stand withdrawn automatically.

VI.77 NBFCs were advised not to change the ownership prior to the commencement of business and regularisation of their CoR.

Box VI.4
NBFC-Micro Finance Institutions

In the initial years of development the microfinance sector was essentially an extension of the formal banking channel led by the bank-SHG model and was aimed at developing the habit of thrift as also bringing the borrowers under the formal credit delivery channel. Gradually, the Micro Finance Institutions (MFIs) moved towards a more formal, profit oriented approach and into company structures. Banks too found that MFIs enabled them to fulfil priority sector targets. In the recent years, the sector has become dominated by for-profit companies registered as NBFCs and regulated by the Reserve Bank. Further, not-for-profit companies established under section 25 of the Companies Act fulfilling certain criteria have been exempted from the Reserve Bank regulation.

There was an uneasy relationship existing between the for-profit MFIs registered as NBFCs and the state governments in the southern part of the country where the MFIs were concentrated on issues relating to multiple lending, over indebtedness of the borrower, higher rate of interest charged and coercive recovery practices. The above concerns were amplified by the perception that the MFI sector was disproportionately benefitting the private shareholders, including PE funds and other foreign investors at the expense of poor borrowers. The huge valuations attracted by SKS Microfinance in their initial public offering (IPO) and corporate governance issues in the company reaffirmed these perceptions.

Consequently, the Andhra Pradesh (AP) government promulgated the Andhra Pradesh Microfinance Institutions (Regulation of Money Lending) Act in October 2010 to regulate the functioning of microfinance entities in the state. Provisions of the act were onerous to comply with and resulted in bringing all MFI activities, including lending and collection activities by NBFCs to a complete halt.

In response, the Reserve Bank appointed the Malegam Committee to study the issues and concerns in the sector. Based on the recommendations of the Malegam Committee Report, the Reserve Bank issued regulatory guidelines for MFIs in December 2011. The guidelines address issues like eligibility parameters for classification as NBFC-MFI in the form of qualifying assets, entry point norms for NBFC-

(Contd...)

MFI, prudential norms, including capital adequacy and provisioning norms, pricing of credit, transparency in interest rates, multiple lending, over borrowing, ghost-borrowing, fair practices in lending, coercive methods of recovery, corporate governance.

The sector, however, in particular AP based NBFCs, plunged into severe crisis, as the entire AP based portfolios of the NBFCs had either to be provided for or written off, adversely affecting their NOF and capital adequacy.

In recognition of difficulties being faced by the MFI Sector, the Bank has modified the directions to MFI to enable them to register immediately with the Reserve Bank as NBFC-MFI so that funding by banks and lending to the sector is resumed. The modifications entail, *inter alia*, phasing out compliance to entry point capital by March 2014; redefining qualifying assets as those created on or after January 01, 2012; removal of 26 per cent cap on interest rate to allow for operational flexibilities and putting in place margin caps of 10 per cent for large NBFC-MFI (with asset size of ₹1 billion and above) and 12 per cent for others. In addition, the provisioning made towards AP portfolio as on March 2013 would be added back notionally over a period of five years till March 2017 for the purpose of ensuring compliance to NOF and CRAR. A revised Fair Practices Code has also been put in place taking into account the specific business model of the MFIs. The Reserve Bank is also in favour of putting in place SRO mechanism to ensure effective monitoring of sector.

Recently, the central government has introduced a Micro Finance Institutions (Development and Regulation) Bill 2012, which proposes to bring all MFI structures under the regulatory purview of the Reserve Bank. The bill, however, is yet to be enacted.

VI.78 As Core Investment Companies (CICs) may be required to issue guarantees or take on other contingent liabilities on behalf of their group entities, it was advised in May 2012 that CICs which are exempt from registration requirement must be able to meet these obligation without recourse to public funds, in case the liability devolves.

VI.79 In keeping with the central government's 'green' initiative, NBFCs were requested to take proactive steps in increasing the use of electronic payment systems, elimination of post-dated cheques and gradual phase-out of cheques in their day to day business transactions which would result in more cost-effective transactions and faster and accurate settlements.

VI.80 In the normal course of their business, NBFCs are exposed to credit and market risks in view of asset-liability transformation. Off-balance sheet exposures of NBFCs have increased with participation in the designated currency options and futures and interest rate futures as clients for the purpose of hedging their underlying exposures. Hence, the off-balance sheet regulatory framework has been expanded to introduce greater granularity in the risk weights and credit conversion factors for different types of off balance sheet items, including market related and non-market related.

VI.81 The extant guidelines on classification of frauds, approach towards monitoring of and reporting system for frauds for deposit taking NBFCs have been extended to NBFCs-ND-SIs as well, besides having to report the same in their balance sheets.

VI.82 NBFCs that are predominantly engaged in lending against the collateral of gold jewellery and face inherent concentration risk, besides facing operational risks in their functioning have been directed by the Reserve Bank to limit Loan to Value (LTV) to 60 per cent and raise Tier I capital to 12 per cent by April 01, 2014. They have also been prohibited from granting loans against bullion or primary gold and gold coins. Further, banks have been advised to reduce their exposure ceiling on a single NBFC, having gold loans to the extent of 50 per cent or more of its total financial assets, from the existing 10 per cent to 7.5 per cent of banks' capital funds, with certain concessions to the infrastructure sector. In addition, in order to strengthen the internal controls, such NBFCs have been directed to put in place a board approved policy for lending, encapsulating proper adherence to KYC norms, storage and insurance of gold received as collateral and fair and transparent auction procedures.

VI.83 The central government has notified the Factoring Regulation Act, 2011 on January 22, 2012 to regulate factors and assignment of receivables in favour of factors, as also delineate the rights and obligations of parties to assignment of receivables. The Resave Bank has since issued detailed guidelines on registration and regulation of factors including placing prudential regulation and reporting discipline on them. The banks and government companies are however exempt from registration under the Act. Factors seeking registration, need to fulfill minimum NOF of ₹5 crore; principal business criteria of factoring assets and income from such assets to be not less than 75 per cent of total assets and income respectively. Factors dealing in export / import factoring will need to also comply with FEMA regulation.

Issues and Concerns in the NBFC Sector

VI.84 In the light of the international concerns on shadow banking and potential threats to the financial system as well as to reduce the regulatory gaps that might exist between the NBFC sector and the rest of the financial system, the Reserve Bank set up a Working group on the Issues and Concerns in the NBFC Sector (Box VI.5). The working group examined the issue of non-financial

Box VI.5
Recommendations of the Working Group on the Issues and Concerns in the NBFC Sector

The NBFC sector in India has undergone a significant transformation in the past few years, with significant growth of non-deposit taking systemically important NBFCs (NBFC-ND-SI). The recent global financial crisis has also highlighted the risks arising from regulatory gaps, arbitrage and systemic inter-connectedness of the financial system. The Reserve Bank constituted a Working Group (Chairperson: Smt. Usha Thorat) to reflect on the broad principles that underpin the regulatory architecture for NBFCs keeping in view the economic role and heterogeneity of this sector and the recent international experience. The key recommendations of the Working Group are:

1. There is a need to raise the entry point norms for NBFCs to a minimum asset size of ₹50 crore for registration and that the twin-criterion for determining the principal business of an NBFC should be increased to 75 per cent of the total asset and total income, respectively, from the present 50:50 criteria;
2. NBFCs not accessing public funds may be exempted from registration provided their assets are below ₹10 billion;
3. Any transfer of shareholding, direct or indirect, of 25 per cent and above, change in control, merger or acquisition should have prior approval of the Reserve Bank;
4. To address concentration, the group recommended Tier I capital to be raised to 12 per cent, introduction of a liquidity ratio and alignment of prudential norms with those of banks.
5. NBFCs may be subject to regulations while undertaking margin financing, similar to banks while lending to stock brokers and merchant banks and as specified by the Securities and Exchange Board of India (SEBI) to stock brokers. Board approved limits for bank's exposure to real estate may be made applicable for the bank group as a whole, where there is an NBFC in the group. The risk weights for stand-alone NBFCs may be raised to 150 per cent for capital market exposures and 125 per cent for Commercial Real Estate (CRE) exposures. In case of bank sponsored NBFCs, the risk weights for Capital Market Exposures (CME) and CRE may be the same as specified for banks;
6. Financial conglomerate approach may be adopted for supervision of larger NBFCs that have stock brokers and merchant bankers in the group and government owned NBFCs may comply with the regulatory framework applicable to NBFCs at the earliest.
7. NBFCs may be given the benefits under SARFAESI Act, 2002;
8. Captive NBFCs, financing parent company's products, may maintain Tier I capital at 12 per cent and supervisory risk assessment of such companies should take into account the risk of the parent company;
9. For the purpose of applicability of registration and supervision, the total assets of all NBFCs in a group should be taken together to determine the cut off limit of ₹1 billion;
10. Disclosure norms needs to be strengthened for NBFCs with asset size of ₹10 billion. Such companies whether listed or not, should be required to comply with Clause 49 of SEBI Listing Agreements; and
11. Supervision of NBFCs with assets of ₹10 billion and above should be strengthened including stress tests to ascertain their vulnerability.

Box VI.6
Non-Financial Activities of NBFCs

One of the issues examined by Working Group on issues and concerns in the NBFC sector the principal business criteria under which a company is identified as an NBFC both, if its financial assets are more than 50 per cent of its total assets and income from financial assets comprise 50 per cent of the total income. Hence, unlike in the case of banks, NBFCs are allowed to conduct multiplicity of activities including non-financial activities not regulated by the Reserve Bank. A study was conducted to gauge the non-financial activities of NBFCs-ND-SI and the risks, if any, to them from such activities. The analysis revealed the following trends:

a) The non-financial activities undertaken by NBFCs include *(i)* Fee-based: distribution of financial and insurance products, remittance services, consultancy and advisory services, portfolio management, trademark fees (ii) Service oriented activities such as leasing of premises, computer training, BPO services, business support, charter services, travel and ticketing, maintenance services, tea packing (iii) trading, manufacturing, windmill-power generation, development of software, selling of computers, cloths or garments, agriculture and real estate, *etc.*

b) Only around 17 per cent of NBFCs-ND-SI are engaged in non-financial activities, hence not significant, both in terms of percentage of non-financial assets to total assets and/ or non-financial income to total income.

c) The extent of non-financial assets to the total assets of the NBFCs engaged in non-financial activities varied from 0.02 to 29.5 per cent. The non-financial income to gross income ranged from 0.01 to 86 per cent.

d) Most of the non-financial activity was in fee-based business or services. Activities such as trading, distribution of products or manufacturing activities were confined to only a few NBFCs-ND-SI.

The Working Group has recommended raising the threshold percentage of financial asset and financial income from 50:50 to 75:75 so that the primary content of the business reflects financial activity and the company focuses primarily on financial business.

activities of NBFCs and in the light of its recommendation on principal business of NBFCs, a study was conducted to gauge the non-financial activities of NBFCs-ND-SI (Box VI.6).

VII PUBLIC DEBT MANAGEMENT

As in the previous year, management of the large market borrowing programme of both the central as well as the state governments in an inflationary situation posed a major challenge for the Reserve Bank. This was compounded by tightness in liquidity and slowing growth, particularly in the second half of 2011-12. As inflationary expectations remained high, the Reserve Bank successively hiked policy rates. There was pressure on the yield curve, particularly at the shorter end. During the year, the Reserve Bank deftly pursued debt management objectives along with liquidity and monetary management through OMOs and issuance of long-dated securities, effectively containing the rise in the cost of borrowing of the government to a modest level.

VII.1 With continuing inflationary pressure in 2011-12, the Reserve Bank hiked policy rates by 175 basis points in five stages. Liquidity conditions remained tight with a worsening in the last four months of the financial year, while there was an increase in government borrowing. The Reserve Bank conducted the market borrowing programme with the objective of minimising the cost of borrowing for the government while pursuing debt maturity profiles that posed a low rollover risk. In 2011-12, the net amount raised by the central government through dated securities and 364-day treasury bills was higher by around 48 per cent over the previous year. The increase in net market borrowing during the year was necessitated by the shortfall in financing from other sources (such as small savings, disinvestment proceeds, *etc.*) and accelerated expenditure on account of two supplementary demands for grants.

VII.2 Even though inflationary pressures and the hikes in policy rates resulted in hardening of yields in 2011-12, the increase in the cost of market borrowings was contained by following appropriate strategy. The OMO purchases through auction route helped in injection of liquidity in the system.

DEBT MANAGEMENT OF THE CENTRAL GOVERNMENT

Market Borrowings

VII.3 The gross amount raised through dated securities and 364-day treasury bills in 2011-12 was higher by around 25 per cent than in the previous year (Table VII.1). The increase in actual market borrowing compared to the budget estimate was higher for the central government compared to the previous year. The central government's gross market borrowing through dated securities was budgeted at ₹4,171 billion, which was increased in two stages (September and December 2011) to ₹5,100 billion (net ₹4,364 billion) during 2011-12 as against ₹4,370 billion (net ₹3,254 billion) in 2010-11. This enhanced market borrowing coupled with the additional net borrowing through treasury bills of ₹1,322 billion posed challenge for the debt management operations of the Reserve Bank. The revised market borrowing was, however, successfully completed. An amount of ₹121.1 billion worth of securities devolved on primary dealers during 2011-12 compared with ₹57.7 billion in the previous year.

VII.4 Reflecting the impact of the Reserve Bank rate actions, the weighted average yield of dated securities issued during the year rose by 60 basis points in 2011-12, though the weighted average coupon on the outstanding stock of dated securities rose only marginally by 7 basis points to 7.88 per cent as on March 31, 2012 (Table VII.2). The yield curve turned increasingly flat during 2011-12 as reflected in the significant decline in yield spreads. A large volume of long dated securities was issued during the year in view of this flatness. As a result, the average maturity of debt issuances increased to 12.66 years from 11.62 years in 2010-11. The

Table VII.1: Gross and Net Market Borrowings of the Central Government#

(₹ billion)

Item	2010-11			2011-12			2012-13	
	Budget Estimate	Revised Estimate	Actual	Budget Estimate	Revised Estimate	Actual	Budget Estimate	Actual@
1	2	3	4	5	6	7	8	9
Gross Borrowing	4,986.3	4,885.9	4,794.8	4,697.4	6,003.7	6,003.8	6,739.9	3,093.8
Net Borrowing	3,450.1	3,355.1	3,263.9	3,531.3	4,843.1	4,843.2	4,930.0	2,055.6
(i) Dated securities	3,450.1	3,354.1	3,254.1	3,430.0	4,364.1	4,364.2	4,790.0	1,893.8
(ii) 364-day treasury bills	0	1.0	9.8	101.3	479.0	479.0	140.0	161.8

#: Dated securities and 364-day treasury bills. @: Up to August 9, 2012.

weighted average maturity of the outstanding stock (based on residual maturity), however, decreased marginally to 9.74 years as on March 31, 2012. In 2011-12, about 26.4 per cent of the market borrowing was through issuance of dated securities of more than 15 years maturity compared with about 25.2 per cent in 2010-11 (Table VII.3).

VII.5 As per the union budget for 2012-13, the gross market borrowing of the centre through dated securities is estimated at ₹5,696 billion (net ₹4,790 billion). The issuance calendar for dated securities for the first half of 2012-13 was issued in consultation with the central government on March 27, 2012. An amount of ₹3,700 billion is scheduled to be raised during the first half of 2012-13, ₹1,200 billion more than the amount raised during the corresponding period of the previous year. The gross and the net market borrowings through dated securities for 2012-13 are budgeted to be higher than the previous year (RE) by 11.7 per cent and 9.8 per cent, respectively. The central government raised about 46.3 per cent of the total borrowing for 2012-13 by August 9, 2012, with the weighted average yield of dated securities issued being higher at 8.50 per cent compared with 8.39 per cent during the corresponding period of the previous year.

Cash Management

VII.6 The government started the year 2011-12 with a modest surplus cash balance of ₹165 billion, but soon took recourse to WMA on April 5, 2011 due to its expenditure commitments (Chart VII.1). During the year, the government was in WMA for 263 days and availed OD on 15 occasions (74 days), compared with WMA for 57 days and OD for two days in the previous year. During 2011-12, cash management bills (CMBs) worth ₹930 billion (face value) were issued in 14 tranches with maturities of 35-77 days to meet temporary mismatches in

Table VII.2: Central Government's Market Loans – A Profile#

(Yield in per cent, Maturity in years)

Year	Range of YTMs at Primary Issues			Issues during the Year			Outstanding Stock (As at end-March)	
	Under 5 years	5-10 years	Over 10 years	Weighted Average Yield	Tenor of securities	Weighted Average Maturity	Weighted Average Coupon	Weighted Average Maturity
1	2	3	4	5	6	7	8	9
2008-09	7.71-8.42	7.69-8.77	7.77-8.81	7.69	6-30	13.8	8.23	10.45
2009-10	6.09-7.25	6.07-7.77	6.85-8.43	7.23	5-15	11.16	7.89	9.82
2010-11	5.98-8.67	7.17-8.19	7.64-8.63	7.92	5-30	11.62	7.81	9.78
2011-12	8.21-8.49	7.80-10.01	8.25-9.28	8.52	7-30	12.66	7.88	9.74

#: Excludes issuances under MSS. YTM: Yield to Maturity.

Table VII.3: Issuance of GoI Dated Securities – Maturity Pattern

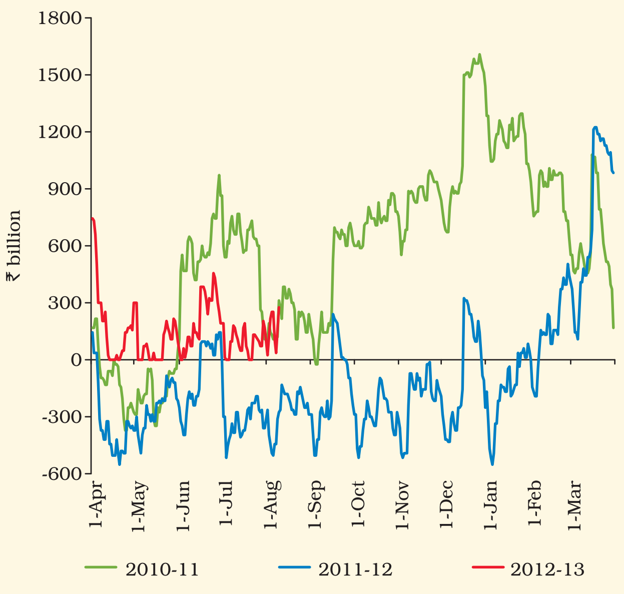
(₹ billion)

Residual Maturity	2009-10		2010-11		2011-12	
	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	520	12.4	110	2.5	180	3.5
5 -9.99 years	1,800	43.1	1,520	34.8	2,340	45.9
10-14.99	910	21.8	1,640	37.5	1,230	24.1
15 -19.99 years	390	9.3	540	12.4	650	12.7
20 years and above	560	13.4	560	12.8	700	13.7
Total	**4,180**	**100.0**	**4,370**	**100.0**	**5,100**	**100.0**

the cash position of the central government posing a challenge to the market borrowing programme. During 2011-12, the net issuances (inclusive of non-competitive bids) of 91-day, 182-day and 364-day treasury bills were ₹543 billion, ₹300 billion and ₹479 billion, respectively. The total net issuance of treasury bills amounted to ₹1,322 billion compared with ₹3 billion in 2010-11.

VII.7 The initial WMA limit fixed at ₹300 billion for the first half of 2011-12, was revised to ₹450 billion for the first quarter of the year (from April 21, 2011). Similarly, the WMA limit fixed at ₹100 billion for the second half was revised to ₹200 billion for the third quarter of the year. In consultation with the central government, the WMA limit was fixed at ₹500 billion for the first quarter of 2012-13 and ₹450 billion for the second quarter.

Chart VII.1: Cash Balance of the Central Government



DEBT MANAGEMENT OF STATE GOVERNMENTS

Market Borrowings

VII.8 Despite a significant increase in the amount, the gross market borrowing of the state governments was conducted smoothly during 2011-12. The net allocation under the market borrowing programme for state governments for 2011-12 was ₹1,459 billion. Taking into account the repayments of ₹220 billion and additional allocation of ₹157 billion, the gross allocation amounted to ₹1,835 billion [gross sanctions under Article 293(3) amounted to ₹1,634 billion]. The state governments raised a gross amount of ₹1,586 billion in 2011-12 as against ₹1,040 billion in the previous year (Table VII.4). Assam, Chhattisgarh and Odisha did not participate in the market borrowing programme in 2011-12 as against four states (*viz.*, Arunachal Pradesh, Chhattisgarh, Odisha and Sikkim) in 2010-11. There were some instances of under-subscription in State Development Loan (SDL) auctions during the year due to the bunching of issuances towards the close of the financial year. The Reserve Bank issued the quarterly indicative quantum for the July-September quarter in July 2012, which would enable orderly conduct of market borrowing programmes of the state governments. Fourteen states did not raise their full sanctions in 2011-12 as against four states in the previous year.

Table VII. 4 : States Market Borrowing

(₹ billion)

Item	2010-11	2011-12
1	2	3
Net allocation	1,421.6	1,458.6
Additional allocation	59.7	156.7
Maturities during the year	156.4	219.9
Gross allocation	1,637.7	1,835.2
Gross sanctions under Article 293 (3)	1,090.6	1,633.9
Gross amount raised during the year	1,040.4	1,586.3
Net amount raised during the year	884.0	1,366.4
Amount raised during the year as a per cent of total sanctions	95.4	97.1

VII.9 The weighted average yield of state government securities issued during 2011-12 was higher at 8.79 per cent, compared with 8.39 per cent during the previous year. The weighted average spread (*i.e.,* the difference between the weighted average primary market yield of SDL on the day of auction and the secondary market yield of corresponding maturity central government dated security on the same day) marginally declined to 44 basis points during the year (45 basis points in 2010-11). Since 2005-06, states issue 10-year securities only (Table VII.5).

Table VII.5: Residual Maturity Profile of Outstanding State Development Loans and Power Bonds (as at end-March 2012)

(₹ billion)

Year of Maturity	State Development Loans	Power Bonds	Total
1	2	3	4
2012-13	306.3	28.7	335.0
2013-14	320.8	28.7	349.5
2014-15	333.8	28.7	362.5
2015-16	351.9	27.9	379.8
2016-17	315.2	15.8	331.0
2017-18	677.8	0.0	677.8
2018-19	1,181.4	0.0	1,181.4
2019-20	1,306.2	0.0	1,306.2
2020-21	1,045.4	0.0	1,045.4
2021-22	1,586.3	0.0	1,586.3
Total	7,425.1	129.7	7,554.8

Cash Management

VII.10 The aggregate 'normal WMA' limit for states, including the union territory of Puducherry, was ₹102.4 billion for 2011-12, same as in the previous year. The monthly average utilisation of WMA and OD by all states in 2011-12 was lower than in the previous year (Table VII.6).

Table VII.6: Utilisation of WMA/OD and Investment of State Governments (Average Monthly Outstanding)

(₹ billion)

Months	Special WMA			Normal WMA			Overdraft			Total		
	2010-11	2011-12	2012-13	2010-11	2011-12	2012-13	2010-11	2011-12	2012-13	2010-11	2011-12	2012-13
1	2	3	4	5	6	7	8	9	10	11	12	13
Apr	5.9	9.7	4.6	2.9	7.0	3.9	1.9	8.7	2.8	10.7	25.4	11.3
May	3.0	6.2	1.1	0.1	2.4	0.4	0.0	0.4	Neg	3.1	9.0	1.5
Jun	0.4	2.3	0.7	0.0	2.6	3.4	0.0	0.1	0.2	0.4	5.0	4.2
Jul	Neg	1.4		0.0	1.6		0.0	0.0		Neg	3.0	
Aug	0.1	1.6		1.2	2.7		0.0	0.0		1.3	4.2	
Sep	1.2	1.0		0.9	2.2		Neg	0.1		2.1	3.3	
Oct	8.2	1.3		5.4	3.2		1.2	0.1		14.8	4.6	
Nov	9.0	5.4		4.8	1.6		2.4	0.0		16.2	6.9	
Dec	0.2	3.1		0.6	2.2		0.0	0.1		0.8	5.4	
Jan	4.5	2.7		1.1	1.3		0.0	0.0		5.7	4.1	
Feb	9.5	0.5		5.3	1.1		2.0	0.0		16.8	1.5	
Mar	8.9	0.2		3.6	1.3		2.6	0.3		15.1	1.8	
Average	4.2	2.9		2.2	2.1		0.8	0.8		7.2	5.8	

Neg: Negligible.

Table VII.7: No. of Days States Availed of Special/ Normal WMA and OD

State	Special WMA			Normal WMA			Overdraft		
	2010-11	2011-12	2012-13	2010-11	2011-12	2012-13	2010-11	2011-12	2012-13
1	2	3	4	5	6	7	8	9	10
Andhra Pradesh	3	0	0	0	0	0	0	0	0
Haryana	10	23	12	10	22	11	8	6	5
Nagaland	0	41	120	0	20	75	0	0	15
Punjab	133	177	33	132	177	30	13	26	25
Uttar Pradesh	4	0	0	4	0	0	0	0	0
West Bengal	195	185	37	113	59	10	62	28	2
Manipur	0	0	87	0	0	54	0	0	25
Mizoram	25	15	5	15	1	1	0	0	0
Uttarakhand	35	57	0	12	4	0	10	0	0
Meghalaya	1	0	0	0	0	0	0	0	0
Jharkhand	0	5	8	0	2	8	0	0	0
Jammu and Kashmir	-	0	0	-	136	47	-	4	0

VII.11 Many state governments have accumulated sizeable cash surpluses in the recent years. The liquidity pressures during 2011-12 were thus confined to a few states (Table VII.7). The surplus cash balances of state governments are automatically invested in 14-day Intermediate Treasury Bills (ITBs), the discount rate of which is currently fixed at 5 per cent. The average investment in 14-day ITBs decreased during 2011-12, while the average investment in Auction Treasury Bills (ATBs) more than tripled (Table VII.8). The average overall investment in ITBs and ATBs by states increased from ₹885.1 billion in 2010-11 to ₹998.0 billion in 2011-12.

VII.12 The Reserve Bank, on behalf of the state governments, maintains the consolidated sinking fund (CSF) that provides a cushion for amortisation of market borrowing/liabilities of the states and the guarantee redemption fund (GRF), which provides for the servicing of contingent liability arising from the invocation of guarantees issued in respect of

Table VII.8: Investments in ATBs and ITBs by State Governments/UTs

(₹billion)

Month	Investment in ATBs			Investment in ITBs			Total		
	2010-11	2011-12	2012-13	2010-11	2011-12	2012-13	2010-11	2011-12	2012-13
1	2	3	4	5	6	7	8	9	10
April	2.5	108.6	231.6	770.7	864.1	843.1	773.2	972.7	1,074.7
May	2.5	145.3	318.8	766.3	728.1	768.2	768.8	873.4	1,087.0
June	7.0	249.8	413.3	780.2	677.9	682.3	786.5	927.8	1,095.6
July	30.0	326.4		847.9	613.9		877.9	940.3	
August	80.0	329.6		781.2	645.2		861.2	974.8	
September	112.7	327.6		718.1	615.4		830.8	943.0	
October	125.0	297.2		664.4	613.7		789.4	910.9	
November	134.7	267.9		682.0	667.1		816.7	935.0	
December	154.6	240.2		824.9	762.0		979.5	1,002.2	
January	183.2	326.3		767.5	717.1		950.7	1,043.4	
February	178.2	381.7		803.5	774.5		981.7	1,156.2	
March	144.6	329.5		1,058.2	986.5		1,202.8	1,316.0	
Average	95.9	276.8	321.2	789.2	721.2	764.5	885.1	998.0	1,085.8

borrowings by state level undertakings or other bodies. As on March 31, 2012, 20 state governments had notified CSF and 10 states had set up GRF. The outstanding investments under CSF and GRF amounted to ₹431.4 billion and ₹41.2 billion, respectively at end-June 2012.

VII.13 The challenge in 2012-13 would be to manage the relatively higher budgeted market borrowings of the central government as also the expected elevated level of borrowings of the state governments, with inflation persisting at a high level and tight liquidity conditions. In an environment of slowing growth and given the limited options regarding debt management, it is crucial that the fiscal deficit and its financing by way of market borrowings does not escalate beyond the budgeted level.

VIII CURRENCY MANAGEMENT

Under the clean note policy, the Reserve Bank endeavours to ensure a steady supply of fresh banknotes. During 2011-12, the Reserve Bank continued with its efforts to strengthen the security features of banknotes and increase public awareness so as to address the challenge of counterfeit notes. While the Indian currency acquired a unique symbol (₹) of its own in 2010 and thus acquired a place in the select club of countries with a symbol for their currency, a further step was taken during 2011-12 by incorporating this symbol on banknotes and coins.

VIII.1 The Reserve Bank is the sole authority to issue banknotes in India. Although one rupee notes and coins of all denominations are issued by the government, they are put into circulation only through the Reserve Bank. Despite increasing spread of technology-driven non-cash modes of payment, the demand for banknotes and coins continues to rise. The Reserve Bank, in pursuing its clean note policy, endeavours to ensure a steady supply of fresh banknotes. It also continues with efforts to strengthen the security features of banknotes and increase public awareness so as to address the challenge of counterfeit notes. Recently, the unique symbol (₹) of the Indian currency was incorporated on banknotes and coins.

VIII.2 The challenges faced by the Reserve Bank in its currency operations include ensuring availability of adequate quantity of banknotes and coins in the system, ensuring a better quality of banknotes and ascertaining their genuineness. In keeping with the same, suitable steps were taken in 2011-12. Soiled and unfit banknotes were shredded and briquetted and hence removed from circulation. To ensure that only genuine banknotes were put into circulation, high priority continued to be accorded to prevention and detection of counterfeit notes in the banking system. Towards this end, banks were directed to enhance the use of technology. Further, the process of upgrading the security features of the banknotes was pursued with renewed vigour. Again, so as to encourage reporting of counterfeit notes, conscious efforts were made to simplify the administrative and legal procedures. The Reserve Bank has also been examining various options to enhance the life of banknotes as part of its clean note policy.

BANKNOTES IN CIRCULATION

VIII.3 At 12.5 per cent, the growth in value of banknotes outpaced the growth in volume terms (7.4 per cent) in 2011-12. Notes of denomination 500 and 1000 together accounted for 82 per cent of the total value of banknotes in circulation (Table VIII.1).

COINS IN CIRCULATION

VIII.4 The Coinage Act, 2011 was passed by the Parliament and became effective from March 28, 2012. It replaced the Coinage Act, 1906. The Act has re-defined the legal tender character of coins as: (i) ₹1 and above – up to a sum of ₹1000, and (ii) 50 paise – up to a sum of ₹10. Besides consolidating the laws relating to coinage and the Mints, the Act prohibits and imposes a penalty on the melting or destruction of coins, unlawful making, and issue or possession of metal pieces to be used as money.

VIII.5 There was a marked decline in the volume and value of small coins in circulation in 2011-12 as coins of denomination of 25 paise and below ceased to be legal tender from June 30, 2011 (Table VIII.2). The supply of coins responded to the increase in demand from the public during 2011-12 (Box VIII.1). The demand was greater from the new sources of coin usage such as toll plazas, malls, Delhi Metro Rail, *etc*. In the wake of increasing numbers of complaints from various trade bodies

Table VIII.1: Banknotes in Circulation (As at end-March)

Denomination	Volume (Million pieces)			Value (₹ billion)		
	2010	2011	2012	2010	2011	2012
1	2	3	4	5	6	7
₹2 and ₹5	7,953 (14.1)	11,116 (17.2)	11,540 (16.2)	29 (0.4)	43 (0.5)	45 (0.4)
₹10	18,536 (32.8)	21,288 (33.0)	23,002 (32.2)	185 (2.4)	213 (2.3)	230 (1.9)
₹20	2,341 (4.1)	3,020 (4.7)	3,510 (4.9)	47 (0.6)	60 (0.7)	70 (0.6)
₹50	4,211 (7.4)	3196 (5.0)	3,488 (4.9)	211 (2.7)	160 (1.7)	174 (1.4)
₹100	13,836 (24.5)	14024 (21.7)	14,119 (19.8)	1,384 (17.6)	1,402 (15.0)	1,412 (11.6)
₹500	7,290 (12.9)	8,906 (13.8)	10,256 (14.8)	3,645 (46.2)	4,453 (47.6)	5,128 (48.7)
₹1,000	2,383 (4.2)	3027 (4.7)	3,469 (5.0)	2,382 (30.2)	3,027 (32.4)	3,469 (32.9)
Total	**56,549**	**64,577**	**69,382**	**7,883**	**9,358**	**10,528**

Note: Figures in parentheses represent per cent share in total.

Table VIII.2: Coins in Circulation (As at end-March)

Denomination	Volume (Million pieces)			Value (₹ billion)		
	2010	2011	2012	2010	2011	2012
1	2	3	4	5	6	7
Small coin	54,738 (52.0)	54,797 (48.8)	14,785 (18.9)	15 (13.1)	15 (11.5)	7 (5.5)
₹1	29,461 (28.0)	32,675 (29.1)	34,414 (44.1)	30 (26.8)	33 (25.9)	34 (25.6)
₹2	13,198 (12.5)	15,342 (13.7)	18,201 (23.3)	26 (23.8)	31 (24.3)	36 (27.1)
₹5	7,760 (7.4)	9,070 (8.1)	9,981 (12.8)	39 (35.0)	45 (35.9)	50 (37.1)
₹10	149 (0.0)	300 (0.0)	648 (0.8)	1 (1.3)	3 (2.4)	6 (4.8)
Total	**1,05,306**	**1,12,184**	**78,029**	**111**	**127**	**135**

Note: Figures in parentheses represent per cent to total.

and members of the public on unavailability of coins, the government has constituted a Committee (Chairman: Dr. K.C. Chakrabarty, Deputy Governor, Reserve Bank) to examine the issues relating to the increase in demand for coins and supply/distribution bottlenecks.

Box VIII.1
Demand for Coins

As complaints from the public mounted regarding non-availability of coins during 2011-12, the Reserve Bank undertook a quick survey to understand the usage of coins, market practices, circulation of coins, *etc.* The survey was conducted in February 2012 in twelve cities, *viz.*, Mumbai, Delhi, Kolkata, Chennai, Bangalore, Lucknow, Ahmedabad, Dehradun, Ranchi, Jamnagar, Jabalpur and Mandya covering 1200 respondents (100 from each city). The respondents were classified into two major segments, *viz.*, general public (60 per cent of the respondents) and traders (40 per cent) and were chosen from different trading/occupational categories.

In order to assess the availability of coins, the respondents were asked about the difficulty experienced in obtaining coins and the stock of coins with them. The respondents were also asked how often in the past month during a transaction they had faced a situation where neither the buyer nor the seller had the coins required for the transaction. The salient findings of the survey based on sample estimates are as follows:

- The per capita average stock of coins with the general public is 40 pieces, of which 34 pieces (88 per cent) are ₹1, ₹2 and ₹5 coins. However, nearly 40 per cent of the general public has a stock of only 10 coins or less.
- Although traders keep a higher average stock of 173 pieces, of which 153 pieces are ₹1, ₹2 and ₹5 coins, the bottom 56 per cent traders have a stock of 40 coins or less.
- Majority of the respondents reported ₹1 (44 per cent) and ₹5 (34 per cent) coins as the most needed coins.
- About 77 per cent of the general public and 69 per cent of traders reported that counter-party transactions were the main source of coins. The other source of coins is commission agents.
- Only 3 per cent of the general public and 4 per cent of traders reported banks as a source of coins. Only 8 per cent of the respondents reported having approached banks for coins in the past one month. The survey also found that most of the people (about 84 per cent) did not deposit coins in banks.
- The segment of general public having a stock of at least 40 coins reported less than 20 per cent instances of a shortage situation.
- In the case of traders, the relationship between the stock of coins and the incidence of coin shortage was not well established.

(Contd....)

- Nearly 56 per cent of respondents reported difficulty in giving correct coin change as coins are not easily available from any source. Another 27 per cent cited reasons such as not wanting to carry coins, while another 11 per cent did not want to spend time in selecting, counting and giving exact change. The remaining 6 per cent reported that shopkeepers did not accept small coins as change.
- About 44 per cent of the respondents reported that shopkeepers gave some items as a substitute for coins.

As this survey was in the nature of a quick assessment, the survey results may be subject to sampling errors arising from small sample size and purposive sampling, recall ability of the respondents and accuracy of the information given by the respondents. However, it has provided pointers to better addressing the demand for coins from the public.

CURRENCY OPERATIONS

Infrastructure for Currency Management

VIII.6 The Reserve Bank carries out the issue of notes and management of currency through its 18 issue offices, one sub-office at Lucknow, a currency chest at Kochi and a wide network of 4,221 currency chests and 4,018 small coin depots. There is an agency agreement with SCBs, under which the currency chest facility is granted to them. Currency chests with sub-treasury offices are being gradually phased out and their number reduced to 11 during 2011-12. During the year a revised agreement was entered into with the banks maintaining currency chests that *inter-alia* stipulates various services to be provided to the public/linked bank branches and the Reserve Bank's right to take penal action in case poor conduct of this function was observed/ reported. The State Bank and its associates have the largest share (70 per cent) of currency chests followed by nationalised banks (27 per cent) (Table VIII.3).

VIII.7 The Monetary Policy Statement for 2012-13 announced that the distribution of bank notes and coins would be channelised only through currency chests/bank branches, thus bringing the related services closer to customers. Banks are expected to strengthen their distribution systems and procedures so as to cater to the growing needs of the common man.

CLEAN NOTE POLICY

Indent (Order for) and Supply of Fresh Banknotes and Coins

VIII.8 The note printing presses supplied almost 100 per cent of the indented banknotes for 2011-12. The total supply of notes in volume terms increased by 6.3 per cent in 2011-12 (Tables VIII.4 and VIII.5).

Table VIII.3: Currency Chests and Small Coin Depots as at end-December 2011

Category	No. of Currency Chests	No. of Small Coin Depots
1	2	3
Treasuries	11	-
State Bank of India	2,192	2,118
State Bank Associate Banks	778	775
Nationalised Banks	1,124	1,009
Private Sector Banks	107	107
Co-operative Banks	1	1
Regional Rural Banks	3	3
Foreign Banks	5	5
Total	**4,221**	**4,018**

Table VIII.4: Indent and Supply of Banknotes (April-March)

Volume (Million pieces)

Denomination	2010-11		2011-12		2012-13 P
	Indent	Supply	Indent	Supply	Indent
1	2	3	4	5	6
₹5	-	674	-	2	-
₹10	5,000	5,143	5,700	6,252	5,400
₹20	1,500	1,104	600	1,045	800
₹50	2,000	1,602	1,200	949	1,500
₹100	4,300	3,420	6,100	5,079	6,100
₹500	4,000	4,130	2,000	2,330	2,500
₹1,000	1,000	467	2,000	1,927	1,000
Total	**17,800**	**16,540**	**17,600**	**17,584**	**17,300**

P: Provisional.

Table VIII.5: Indent and Supply of Coins

Denomination	Volume (Million pieces)				
	2010-11		2011-12		2012-13 P
	Indent	Supply	Indent	Supply	Indent
1	2	3	4	5	6
50 paise	70	59	70	107	50
₹1	2,600	2,746	1,600	1,480	1,550
₹2	1,700	1,811	2,900	3,343	3,200
₹5	1,300	1,292	800	761	850
₹10	1,000	232	1,000	403	1,000
Total	**6,670**	**6,140**	**6,370**	**6,094**	**6,650**

P: Provisional.

Disposal of Soiled Banknotes

VIII.9 During 2011-12, 13.8 billion pieces of soiled banknotes (21.3 per cent of the total in circulation as on March 31, 2011) were processed and removed from circulation (Table VIII.6). Of this, 8.5 billion pieces were processed through 59 Currency Verification and Processing Systems (CVPS). The remaining banknotes were disposed under other modes. The number of banknotes withdrawn from circulation and eventually disposed at the Reserve Bank offices was almost same as the previous year, in line with the ongoing efforts for speedier removal of soiled banknotes from currency chests and augmenting the disposal at Reserve Bank offices.

Table VIII.6: Disposal of Soiled Banknotes and Supply of Fresh Banknotes (Million pieces)

Denomi-nation	April-March					
	2009-10		2010-11		2011-12	
	Dis-posal	Supply	Dis-posal	Supply	Dis-posal	Supply
1	2	3	4	5	6	7
₹1,000	78	865	179	706	375	1,440
₹500	1,247	3,513	1,864	4,347	1,994	5,560
₹100	4,307	3,935	5,227	4,085	5,577	1,091
₹50	2,400	791	2,095	1,114	1,578	1,522
₹20	790	467	664	1,296	562	4,237
₹10	3,832	4,975	3,657	5,580	3,584	3,379
Up to ₹5	418	441	166	549	101	371
Total	**13,072**	**14,987**	**13,852**	**17,677**	**13,772**	**17,600**

Measures to Improve the Quality of Banknotes in Circulation

VIII.10 Banks have been advised to ensure that all notes received by them are processed on note sorting machines (NSMs) before being re-issued to the public. Further, notes in the denomination of ₹100 and above are to be processed through machines conforming to the "note authentication and fitness sorting parameters" prescribed by the Reserve Bank, before being issued over the counter or through ATMs. Bank branches with average daily cash receipts of ₹5 million were advised to use such machines by end-March 2011. During 2011-12, banks were further directed to cover every single branch of SCBs including RRBs to ensure compliance.

VIII.11 As on December 31, 2011, banks had installed 10,394 NSMs. Further, banks had also made arrangements for issue of machine processed notes in other 1,706 branches. The above measure, besides promoting efficient banknote sorting, provides an impetus to both the clean note policy and the detection of counterfeit notes.

COUNTERFEIT BANKNOTES

VIII.12 Due to higher awareness and use of NSMs, the number of counterfeit banknotes detected has been increasing. Reflecting the increased use of NSMs, bank branches accounted for almost 93 per cent of the total counterfeit notes detected in 2011-12 (Table VIII.7).

Table VIII.7: Counterfeit Notes Detected (No. of Pieces)

Year	Detection at		Total
	Reserve Bank	Other banks	
1	2	3	4
2009-10	52,620 (13.1)	3,48,856 (86.9)	4,01,476
2010-11	45,235 (10.4)	3,90,372 (89.6)	4,35,607
2011-12	37,690 (7.2)	4,83,465 (92.8)	5,21,155

Note: Figures in parentheses represent the per cent share in total.

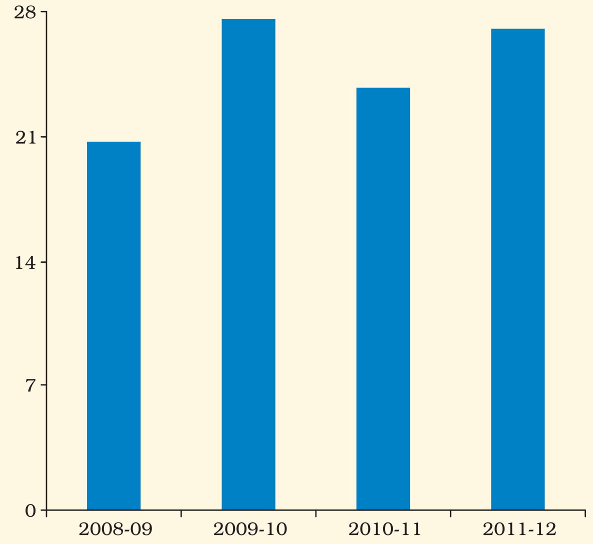
VIII.13 During 2011-12, banks were instructed to stop re-issue of banknotes of ₹1,000 denomination of the Mahatma Gandhi Series 2000 and ₹100 denomination of the Mahatma Gandhi Series 1996 in a prompt, smooth and non-disruptive manner without any inconvenience to the public. Such banknotes, however, continued to be legal tender and acceptable for all transactions and no member of the public was denied exchange facility. Further, in order to ensure that all cases of detection of counterfeit notes at the bank branches/treasuries were promptly reported to the police authorities, it was decided to revise the procedure to be followed on detection of counterfeit banknotes at bank branches, treasuries and sub-treasuries. The Reserve Bank, in co-ordination with the central government, has been pursuing with all state governments to nominate a nodal police station in every district for the purpose of reporting the detection of counterfeit notes. Further, banks and treasuries were advised that: (i) for cases of detection of counterfeit notes up to four pieces, in a single transaction, a consolidated report in the prescribed format should be sent to the police authorities at the end of the month; and (ii) for cases of detection of counterfeit notes of five or more pieces, in a single transaction, FIR should be lodged with the nodal police station/police authorities as per jurisdiction.

EXPENDITURE ON SECURITY PRINTING AND DISTRIBUTION

VIII.14 The expenditure incurred on security printing charges (note forms) in 2011-12 (July-June) increased by ₹3.3 billion (13.8 per cent) mainly on account of an increase in the supply of banknotes compared to the previous year (Chart VIII.1 and Table VIII.4). Expenditure on remittance of treasure has increased from ₹455 million in 2010-11 (July–June) to ₹528 million in 2011-12 mainly due to the increased supply of banknotes/coins to the currency chests.

VIII.15 Abiding by the Reserve Bank's directives, banks exercise adequate caution while processing

Chart VIII.1: Cost of Security Printing
(₹ billion)



banknotes so as to ensure that the banking channel is not used as a conduit for circulation of counterfeit notes. With the increasing incidence of counterfeit notes, the need for adequately trained personnel at banks to identify such notes has increased manifold. Trained personnel to man the counters is not only important for the detection/identification of counterfeit notes but can also serve as a point of awareness for members of the public. While the Reserve Bank and banks have been conducting training programmes, in the emergent scenario these may not be adequate. It was therefore proposed that the Indian Banks Association (IBA), in consultation with the banks should ensure that all bank personnel handling cash are trained on features of genuine Indian banknotes, with the objective to train all such personnel within three years. The Reserve Bank will also provide faculty support and training material.

VIII.16 In order to align the currency management systems with the emerging needs of the time and leveraging technology, the critical areas of operational importance have been revisited. A roadmap has been prepared to realign its business processes for greater efficiency and productivity.

IX PAYMENT AND SETTLEMENT SYSTEMS AND INFORMATION TECHNOLOGY

A robust and well developed payment system infrastructure in the country facilitates safety, security and efficiency of payment transactions coupled with low transaction costs and better risk management for system participants. In 2011-12, the Reserve Bank persisted in its efforts at enhancing these features as also in improving the accessibility and affordability of the payment and settlement systems. Simultaneously, the ambit of technology is being widened within the Reserve Bank, particularly, in terms of data flow and knowledge dissemination.

IX.1 Through its multifaceted roles as a regulator, supervisor and harbinger of innovation, the Reserve Bank oversees the orderly development of a secure and efficient domestic payment and settlement system. As part of this function, the Reserve Bank has furthered its social responsibility by enabling payment system services at low costs by promoting institutions such as IDRBT and systems such as INFINET and RTGS. The total turnover under various payment and settlement systems, in terms of both value as well as volume, exhibited a steady growth during the year 2011-12. In terms of volume, a growth of 9.1 per cent and in value terms 7.6 per cent was registered (Table IX.1).

Table IX.1: Payment System Indicators - Annual Turnover

Item	Volume (million)			Value (₹ trillion)		
	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
1	2	3	4	5	6	7
Systemically Important Payment Systems (SIPS)						
1. RTGS	33.2	49.3	55.0	322.8	394.5	484.9
Total SIPS (1)	**33.2**	**49.3**	**55.0**	**322.8**	**394.5**	**484.9**
Financial Markets Clearing						
2. CBLO	0.1	0.2	0.1	155.4	122.6	111.6
3. Government Securities Clearing	0.4	0.4	0.4	89.9	69.7	72.5
4. Forex Clearing	0.9	1.2	1.3	142.1	191.6	222.0
Total Financial Markets Clearing (2-4)	**1.4**	**1.7**	**1.9**	**387.4**	**383.9**	**406.1**
Others						
5. MICR Clearing	1,149.7	1,155.1	1,114.5	85.3	83.0	80.2
6. Non-MICR Clearing	230.6	232.3	227.0	18.8	18.3	18.8
Retail Electronic Clearing						
7. ECS DR	149.3	156.7	164.7	0.7	0.7	0.8
8. ECS CR	98.1	117.3	121.5	1.2	1.8	1.8
9. EFT/NEFT	66.3	132.3	226.1	4.1	9.4	17.9
Total Retail Electronic Clearing	**313.7**	**406.3**	**512.3**	**6.0**	**11.9**	**20.6**
Cards						
10. Credit Cards	234.2	265.1	320.0	0.6	0.8	1.0
11. Debit Cards	170.2	237.1	327.5	0.3	0.4	0.5
Total Cards	**404.4**	**502.2**	**647.5**	**0.9**	**1.1**	**1.5**
Total Others (5 to 11)	**2,098.4**	**2,295.9**	**2,501.3**	**110.9**	**114.4**	**121.1**
Grand Total (1-11)	**2,133.0**	**2,346.9**	**2,558.2**	**821.1**	**892.9**	**1,012.0**

Note: 1. Data for MICR clearing include data for high value clearing (HVC) for the year 2009-10. HVC was a special clearing of cheques for ₹ 0.1 million (later changed to ₹1 million) and was discontinued from April 1, 2010.
2. At the end of April 2012, MICR clearing was available at 64 centres (66 centres during the previous year) and the cheque truncation system (CTS) is available at two centres, namely New Delhi and Chennai. Full cheque clearing volume at New Delhi and Chennai has been migrated to CTS from July 2009 and March 2012 respectively. The CTS data is part of the MICR data clearing.
3. Settlement of government securities clearing and forex transactions is through the Clearing Corporation of India Ltd (CCIL).
4. The figures for cards are for transactions at POS terminals only.
5. Transactions pertaining to pre-paid instruments (PPI) and mobile banking for a value of ₹62 billion and ₹18.21 billion respectively have not been included in the retail electronic clearing.

VISION DOCUMENT 2009-12

IX.2 The Reserve Bank's Vision Document outlined a three-year road-map (2009-12) for the Indian payment and settlement system. The document sought progress in the following key areas:

Authorisation of Payment Systems

IX.3 The Payment and Settlement Systems Act 2007 (PSS Act) mandates that entities that want to start a payment system in India need to obtain authorisation from the Reserve Bank. As at end-May 2012, 41 authorised entities were operating various payment systems in the country. These include a financial market infrastructure organisation - Clearing Corporation of India Ltd. (CCIL), a systemically important retail payment operator - National Payments Corporation of India (NPCI), card payment networks (VISA, MasterCard, RuPay, *etc.*), automated teller machine (ATM) networks, cross-border in-bound money transfer services and pre-paid payment instrument (PPI) issuers.

Smooth Functioning of the Existing Payment Systems

IX.4 To ensure uninterrupted availability of the clearing and settlement infrastructure, first and second alternate bank arrangements have been put in place at all magnetic ink character recognition (MICR) processing centres and major clearing houses. The efficacy of such arrangements is tested through the conduct of return clearing at monthly intervals and a full-fledged business continuity plan (BCP) including the funds settlement in the books of the first and second alternate bank at least once a year. BCP exercises for CCIL, the real time gross settlement (RTGS) system, and national electronic fund transfer (NEFT) are carried out at more frequent intervals.

IX.5 The access criteria for payment systems were revised in October 2011 by putting in place two sets of access criteria, one for centralised payment systems (CPS), such as RTGS, NEFT and national electronic clearing service (NECS) and the other different set for decentralised payment systems, such as clearing houses at MICR centres, electronic clearing services (ECS) and regional ECS (RECS).

IX.6 The revised access criteria for both systems are: (i) minimum CRAR of 9 per cent; (ii) net NPAs below 5 per cent; and (iii) the recommendation of the concerned regulatory department. In addition, a minimum net-worth of ₹0.25 billion is required for being a direct participant in the CPS. Since March 2012, all members of clearing houses are granted automatic membership to decentralised payment systems, if they are already direct participants of a CPS.

IX.7 Under the revised access criteria for CPS, 48 banks, which include 7 SCBs (all foreign banks) 11 regional rural banks, 1 local area bank, 3 state co-operative banks, 3 district central co-operative banks and 23 urban co-operative banks, were granted direct membership until May 2012.

IX.8 Sub-membership route has been introduced in the national payment systems to provide access to banks that do not qualify for direct participation in these systems

Promoting Electronic Modes of Payment

IX.9 The Reserve Bank vigorously promotes the use of electronic modes of payment over paper-based payments, as they are safe, secure, cost-effective and more efficient. The various security measures in card payment systems and the guidelines for intermediaries have also contributed to the safety of the system, resulting in the increased use of electronic payments (Table IX.1).

IX.10 The increase in the spread of NEFT to 86,449 branches and RTGS to 84,638 branches as at end-May 2012 underscores the success of various policy initiatives in this regard. Further, the rationalisation of the access criteria norms, including the option of sub-membership, is expected to increase the electronic payment products that banks offer to their customers.

IX.11 To provide a fillip to the growth of the electronic payment system, the Reserve Bank had waived processing charges in March 2006. These have been re-introduced from July 1, 2011 by way of a service charge from originating banks to provide adequate compensation to banks that manage the operations and the destination bank. Along similar lines, service charges in the RTGS system were introduced from October 1, 2011 to recover operational costs and to bring further efficiency in the system. The RTGS service charges have been introduced with three sub-components: monthly membership fee, transaction fee, and time varying tariff. Member banks are permitted to pass on only the time varying tariff to their customers.

IX.12 Reflecting these measures, transactions under NEFT grew by 71 per cent (volume) and 91 per cent (value) during 2011-12. The volume and value of gross transactions in RTGS also registered a growth of 11.7 per cent and 11.2 per cent respectively, during 2011-12. The value of gross transactions in RTGS constituted 51 per cent of the total value of non-cash payments during 2011-12.

IX.13 The increasing usage of alternate modes of payments, such as credit cards, debit cards, PPIs and mobile payments, has accelerated the growth of non-cash and non-paper based mode of payments. The use of both debit and credit cards at POS were at par in 2011-12; however, usage in value terms is still tilted towards credit cards. (Table IX.1).

IX.14 PPIs registered a significant growth of over 67 per cent (in value terms) during 2011-12 and constituted 36.3 per cent of the total card segment in the country, with paper vouchers accounting for the bulk. As of end-March 2012, 39 banks (including the Department of Post) and 20 non-bank entities were authorised to issue PPIs in India. The launch of e-wallets by non-banks reflects the significant opportunity for mobile wallets and magstripe cards to increase their overall share in the PPI market.

IX.15 To encourage the use of mobile phones as a channel of payment, India has adopted a bank-led mobile payment model. As at end-March 2012, 49 banks with a customer base of 13 million provided mobile banking service in India. During the year 2011-12, 25.6 million mobile banking transactions valued at ₹18.2 billion were transacted, thus registering a growth of 198 per cent and 174 per cent, respectively, over the previous year.

Promoting Safety and Efficiency in Payment Systems

Paper-based Payment Systems

IX.16 Paper-based payments account for 52.4 per cent of total non-cash transactions in terms of volume, although they account for only 8.4 per cent in value terms. Given the widespread use of paper, the Reserve Bank initiated the following measures to improve the existing systems: (i) an improved software application package - express cheque clearing systems (ECCS), with an in-built speed clearing facility was introduced in 2011 in non-MICR clearing houses to replace the clearing house application software package. It has been rolled out in 1,170 clearing houses (as at end-June 2012) and speed clearing is now available at over 1,200 clearing houses; (ii) instructions were issued regarding the maximum charges that could be recovered from savings bank customers for cheque collection; (iii) a grid-based CTS was initiated in March 2012 with the roll-out of grid-based CTS in Chennai by NPCI, which was then extended to cover Coimbatore and Bengaluru. The road-map for the roll-out of CTS in other regions has been prepared.

CTS 2010 - Standardisation of Cheques

IX.17 The implementation of grid-based CTS, increased issuance of multi-city cheques and speed clearing called for standardisation and enhanced security features of cheques. Accordingly, the CTS 2010 cheque standards were designed to help presenting banks identify the bonafides of cheques from drawee banks in an image-based processing scenario, limit fraud and enable straight-through processing. All banks have been advised to issue only CTS 2010 standard cheques to their customers on a priority basis in the northern and southern regions of the country and across the country through a time bound action plan.

Retail Electronic Payment System

IX.18 The RECS covering all CBS-enabled branches, which was launched in 2009, is now available in 10 centres where local ECS processing has been subsumed into RECS. Banks have also been advised to expand the scope of NEFT by using it for payment of loans. As a customer service measure, payment of penal interest for delayed credit to the beneficiary's account / return has been mandated.

Alternate Payment Systems

Card Payments

IX.19 The Reserve Bank has mandated additional factor of authentication for the use of cards issued by banks in India. Accordingly, banks have implemented the same for all on-line card-not-present (CNP) transactions (e-commerce, m-commerce and interactive voice response). The mandate has been extended to include all mail order telephone order and standing instructions by May 1, 2012, with the additional caveat that in the case of customer grievance for transactions effected without the additional authentication after the stipulated date, the issuer bank shall reimburse the loss to the customer without demur.

IX.20 As part of the measures to contain the risk in card present (CP) transactions, the Reserve Bank in March 2011 constituted a working group on CP transactions to study and recommend an action plan to foolproof the system. The Reserve Bank has since advised banks and other stakeholders to implement the necessary measures[1] within the stipulated time-frame.

Pre-paid Payment Instruments

IX.21 Several rationalisation measures, such as relaxation in KYC for issuing PPIs for small-value instruments, redefined merchant categories to include utility bills/ essential services/ air and train travel tickets and recurring payment of college/ school fees and government taxes have been undertaken to promote the use of PPIs given their potential to minimise cash transactions. The issuance of co-branded PPIs and special categories of PPIs such as gift cards, loading of cross-border inward remittance and government benefits into PPIs have been permitted. Non-bank payment system operators have been allowed to issue mobile phone-based semi-closed PPIs.

IX.22 To encourage the use of corporate cards, banks have been permitted to issue these to corporates for further issuance to employees, provided the corporate is listed in a stock exchange in India. This will enhance their use for the purchase of goods and services at all delivery channels and for cash withdrawal.

IX.23 The relaxation in the domestic money transfer guidelines in October 2011 enabled authorised entities (banks and non-banks) to increase domestic remittances through formal payment channels. The measures aim to help citizens, especially domestic migrants, fulfill their remittance needs through formal channels (Box IX.1).

Mobile Payments

IX.24 The growing popularity of mobile banking facility, particularly for small-value transactions, prompted the Reserve Bank to raise the limit for end-to-end encryption from ₹1,000 to ₹5,000 and remove the transaction limit of ₹50,000 per customer per day. Banks have been advised to prescribe transaction limits based on their own risk perception with the approval of their respective boards.

IX.25 For fund transfer through interbank mobile payment service (IMPS), an unstructured supplementary services data (USSD) that is being attempted across mobile network operators (MNOs) by NPCI will help in enabling mobile banking to the customers. IMPS is being extended to accept merchant payments, using the bank account and *Aadhaar* number.

IX.26 Relaxation of the BC guidelines to allow 'for profit' companies to act as BCs of banks has enabled MNOs to become BCs of banks. Given the wide reach of MNOs' in providing mobile phone

[1] Refer Report on Trend and Progress of Banking in India 2010-11 – Box III.3: Recommendations of the Working Group on Securing Card Present Transactions

Box IX.1
Domestic Money Transfer

Domestic money transfer (DMT) is the remittance of funds by one individual to another within the country. In India, the formal channels for such remittances are through banks in the form of cheques, demand drafts, RTGS, NEFT and IMPS and the Department of Post through money orders/ instant money orders (IMOs). The informal channels are private operators.

However, formal channels remain inaccessible to the migrant population for economic, institutional and social reasons, making them dependent on the informal money transfer system. This exposes migrant labour segment to potential risk of theft at every stage of the transaction *viz*., collection, deposit, withdrawal and disbursal. These informal money transfer systems and the volumes and value remain outside the scope of data capture, leaving no trace, which hinders oversight of such arrangements.

Given this scenario, the Reserve Bank adopted a gradualist approach by issuing DMT guidelines in October 2011. With this initiative, the formal banking channel has been opened to people who do not have a bank account but at the same time need to use the formal banking channel (*i.e.,* with the presence of a bank account either at the beneficiary end or the remitter end) to send/ receive remittances. Further, card-to-card transfers [person-to-person (P2P)] also enable the transfer of funds from the semi-closed PPI (with full KYC) issued by a non-bank to the customer of another semi-closed PPI issued by the same entity with similar characteristics or a bank account.

Three schemes have been introduced to enable P2P transfers under these guidelines:

a) Liberalising the cash pay-out arrangements for amounts being transferred out of bank accounts to beneficiaries who do not have a bank account, and enhancing the transaction cap from the existing limit of ₹5,000 to ₹10,000, subject to an overall monthly cap of ₹25,000 per beneficiary. The remitting bank should obtain the name and address of the beneficiary.

b) Enabling walk-in customers who do not have a bank account (for instance, migrant workers) to transfer funds to bank accounts (of, say, family members or others) subject to a transaction limit of ₹5,000 and a monthly cap of ₹25,000 per remitter. The customer needs to provide minimum details, such as his/her name and complete address, to the remitting bank.

c) Enabling the transfer of funds among domestic debit/ credit/pre-paid cards and from a semi-closed PPI to a bank account, subject to the same transaction/monthly cap as at (b) above.

While enabling DMT, banks and non-banks have been advised to put in place: a robust system of safeguards including velocity checks and alerts to customers about credit into accounts using this facility; effect these fund transfers in a real or near real-time basis and settle inter-bank transactions only in Reserve Bank approved payment systems; provide this service at a reasonable charge to popularise the scheme; and have appropriate customer grievance redressal mechanism with customer grievances brought under the purview of the Reserve Bank's Banking Ombudsman Scheme. These efforts would facilitate remittances through the formal banking channels in a safe and efficient manner at reasonable costs.

services to customers across the country, this unique partnership model piloted in India is expected to boost mobile payments under the overall ambit of financial inclusion. Further, since March 2012 inter-operability at the retail outlets or sub-agents of BCs at the point of customer interface has been permitted if the transactions are carried out on-line and on the core banking solutions, which is expected to boost payment transactions.

Expanding Delivery Channels

IX.27 With the view of using ATMs as extended delivery channels for branchless banking in Tier III to Tier VI unbanked/ under-banked areas, the Reserve Bank has permitted non-banks to set up, own and operate ATMs that are styled White Label ATMs (WLAs), which would provide ATM services to customers of all banks. Non-bank entities that have a minimum net-worth of ₹1 billion need to seek authorisation under the PSS Act, 2007 and opt for one of the three schemes. A certain percentage of the total WLA installed by the entities have to be installed in Tier V and Tier VI centres. The sponsor bank will be responsible for cash management and the customer grievance redressal.

Strengthening the Payment System Infrastructure

IX.28 Since RTGS is liquidity-intensive, the next generation RTGS (NG-RTGS) is structured to be equipped with liquidity saving features, an advanced gridlock resolution mechanism, increased security measures, operational reliability, business continuity and compliant with international standards. It would encourage inter-operability between alternative systems. The new system would endorse (a) the latest technology; (b) high scalability and flexibility to adapt to changes in the financial environment and other requirements; and (c) enhance accessibility to cope with changes in the financial environment, such as globalisation of financial transactions and networking of settlement infrastructures.

IX.29 *RuPay cards:* With a view to introducing a domestic card scheme to ensure efficient price discovery and healthy competition with other international card payment networks, NPCI was granted approval under the PSS Act, 2007 to issue RuPay cards by banks in India under the RuPay domestic card payment scheme. NPCI launched India's first domestic card, the RuPay card (ATM and micro-ATM cards) through banks in India. Subsequently, in March 2012, NPCI was permitted to launch RuPay debit cards that are accepted at POS terminals in India.

IX.30 *Aadhaar Enabled Payment Systems (AEPS)* is an NPCI initiative to enable bank customers to perform balance enquiry, cash withdrawal, cash deposit, and remittances through the micro-ATMs at BCs using *Aadhaar*. In addition, the system can be used to route government benefits to beneficiaries using *Aadhaar* as an authentication mechanism. AEPS, thus, is a bank-led model that furthers the financial inclusion efforts.

IX.31 *Aadhaar Payment Bridge System* is a centralised electronic transfer system developed by the NPCI to enable benefit transfers such as MGNREGA, Social Security Pension, Handicapped Old Age Pension from government departments, through their respective sponsor or accredited bank, to the beneficiaries using *Aadhaar* numbers. It is currently being run on a pilot basis.

IX.32 *Automated* Clearing *House* for bulk transactions is likely to be operationalised in the near future by NPCI.

PAYMENT SYSTEM OVERSIGHT

IX.33 An oversight framework put in place, is consistent with the international standards prescribed by the committee on payment and settlement systems (CPSS), the global standards setting body in payment and settlement systems. Oversight of authorised payment systems is carried out through a combination of off-site monitoring and need-based on-site inspection.

IX.34 For off-site monitoring process, data collection and consolidation has been streamlined through the online return filing system (ORFS), which uses structured templates. A database on the various payment instruments, their volume and value has been created and placed on the Reserve Bank's website. The data is analysed periodically to discern patterns and trends for further policy actions.

IX.35 Authorised entities carry out self-assessment based on a structured self-assessment template (comprising operations, risk management and business continuity arrangements among other parameters). The results of the self-assessment are analysed and corrective measures to address the short-comings are conveyed to the entities. This is complemented with periodic system audits by qualified professionals and market intelligence. The assessment process is complemented with need-based on-site inspection.

IX.36 CCIL, which is a critical financial market infrastructure, has been brought under the oversight mechanism, which includes off-site surveillance and monitoring as well as on-site inspection. The off-site monitoring and surveillance includes vetting the regulations for various segments operated by CCIL, a review of its risk management framework (its stress and back-test methodologies, margining, and the creation of a default fund), and monitoring and review of defaults and settlement shortfalls across segments. The process is rounded off with a review of its business continuity plan and disaster recovery plans; operational and information security audits.

IX.37 As regards, failed transactions at ATMs, the time limit for the issuing bank to resolve customer complaints has been reduced from 12 to 7 working days from the date of receipt of the customer complaint. If the issuing bank fails to re-credit the customer's account within this period, it would have to compensate the customer at ₹100 per day. The customer is entitled to receive this compensation, only if a claim is lodged with the issuing bank within 30 days of the date of transaction. The number of free transactions permitted per month (five transactions as on date) at other bank's ATMs to savings bank account holders has been modified to include all types of transactions, *i.e.,* both financial and non-financial.

OTHER DEVELOPMENTS

IX.38 Vision Document 2012-15: The draft of the Payments System Vision Document for the period 2012-15 has been placed in the public domain for comments. The vision is to ensure that all "payment and settlement systems in the country are safe, efficient, interoperable, authorised, accessible, inclusive and compliant with international standards". To this end, the Reserve Bank would pro-actively encourage electronic payment systems to promote and usher in a less-cash society in the country.

IX.39 The Financial Sector Assessment Programme (FSAP) of the payment systems in India was carried out by an IMF-World Bank team in September 2011. The FSAP team assessed the government securities settlement system which is operated by the Public Debt Office of the Reserve Bank against the CPSS-IOSCO - 'Recommendations for securities settlement systems (RSSS)' and concluded that the systems observe or broadly observe the standards, with two standards not being applicable. The FSAP team also assessed the CCIL, the central counterparty (CCP), authorised under the PSS Act, 2007 against the CPSS-IOSCO 'Recommendations for central counterparties (RCCP)' and concluded that the CCIL observes or broadly observes the standards, with two standards not being applicable.

IX.40 *Financial Market Infrastructure:* CCIL has been operating a reporting platform for interest rate swaps and has since been accorded approval to act as a trade repository for credit default swaps and forex over-the-counter (OTC) products.

IX.41 *SWIFT Oversight Group:* SWIFT is subjected to co-operative oversight by the G-10 central banks with the National Bank of Belgium as the lead overseer. The SWIFT Co-operative Oversight Group (OG) has been expanded to include other CPSS member countries, including the Reserve Bank of India.

IX.42 *Domestic use of SWIFT:* The structured financial messaging solution (SFMS) operated by the Institute for Development and Research in Banking Technology (IDRBT) is the only messaging infrastructure that banks are permitted to use for exchange of financial messages. Recently, permission has been accorded for the domestic use of SWIFT as an alternate messaging solution. This permission is subject to SWIFT: (i) having a joint venture in India; (ii) locating a server in India for domestic messages; and (iii) ensuring fair pricing to users. SWIFT has since agreed to the conditions and the modalities for the use of SWIFT for domestic funds transfer are being worked out.

International Developments

IX.43 India (Reserve Bank) was included as a member of the CPSS, the international standards setting body for payment and settlement systems, in 2009 and is committed towards implementing these standards.

Publication of 'Report on OTC Derivatives Data Reporting and Aggregation Requirements

IX.44 CPSS-IOSCO have constituted a technical committee to address the mandate in Recommendation 19[2] of the Financial Stability

[2] Authorities with the legal mandate to set requirements for the reporting of transactions to trade repositories should consider the recommendations set out in the forthcoming report of the FSB Data Gaps and Systemic Linkages Group, and consult with the Committee on the Global Financial System (CGFS), the Bank for International Settlements (BIS), the ODSG and ODRF, to identify the data that should be reported to trade repositories to enable authorities to carry out their respective tasks and monitor, among other things, implementation of the G-20 commitments to central clearing and exchange or electronic platform trading. Further, as the data must be able to be readily aggregated on a global basis, by end- 2012 CPSS and IOSCO, in consultation with authorities, and with the ODRF, should develop both for market participants reporting to trade repositories and for trade repositories reporting to the public and to regulators: (i) minimum data reporting requirements and standardised formats, and (ii) the methodology and mechanism for the aggregation of data on a global basis.

Board (FSB) Report on 'Implementing OTC Derivatives Market Reforms' prepared by the FSB OTC Derivatives Working Group. The recommendation 19 asks CPSS and IOSCO to develop both for market participants reporting to trade repositories (TRs) and for TRs reporting to the public and to regulators: (i) minimum data reporting requirements and standardised formats; and (ii) the methodology and mechanism for the aggregation of data on a global basis.

IX.45 Accordingly CPSS-IOSCO technical committee has come out with the 'Report on OTC Derivatives Data Reporting and Aggregation Requirements (Data Report)' which was published in January 2012. The report supports the view that TRs, by collecting data pertaining to OTC trades centrally, would provide authorities and the public with better and timely information on OTC derivatives. This would make markets more transparent, help to prevent market abuse, and promote financial stability. The report also supports the international developments of a global legal entity identifier for data reporting and aggregation.

Publication of Red Book on Payment System

IX.46 The CPSS, BIS publishes reference work on the payment systems and other financial market infrastructure of various countries as Red Books. While the previous edition of the Red Book covered the payment systems in G-10 countries, the current volume, which was brought out after CPSS membership was increased in 2009, covers 10 countries including India. In addition, on an annual basis, the CPSS publishes statistics on payments, clearing and settlement systems in CPSS countries including data from India. The latest statistical update contains data for 2010.

INFORMATION TECHNOLOGY

IX.47 During 2011-12, the Reserve Bank continued its endeavour to facilitate the Indian banking sector's alignment with the latest innovations in technology by improving its IT infrastructure, implementing new applications and initiating steps for further adoption of technology in the banking sector.

IT Sub-Committee of the Board

IX.48 In line with the enhanced emphasis on IT governance, an IT sub-committee of the central board has been constituted in the Reserve Bank with an independent board member as the Chairman. The Sub-committee will guide the Reserve Bank on the overall IT strategy, infrastructure and applications besides reviewing and monitoring the implementation of IT initiatives.

Information Security (IS) Policy

IX.49 A review of the IS policy and guidelines (issued in 2005, 2007) against the backdrop of the changed IT environment in the Reserve Bank coupled with changes in applicable security aspects across business process components, *i.e.*, people, infrastructure, systems, applications and processes, was carried out in consultation with an advisory group comprising an external expert and members from different departments of the Reserve Bank. The policy and sub-policy documents have been revised to provide mandate, enablers and policy direction in the main policy document, while the sub-policies cover the component and domain-specific aspects.

Business Continuity Planning

IX.50 Given the importance of planning to face disasters and manage business continuity, a thematic video conference on the subject was held at the Reserve Bank, followed by an internal approach paper and the initiation of BCP documentation in the Reserve Bank. Considering the need to have different stakeholder departments on board as also the business centricity of the business continuity management (BCM) process, an advisory group, comprising external experts and internal heads of select departments, was constituted. The documentation requirements and organisational arrangements will be taken forward by the newly constituted Risk Management Department (RMD) as approved by the Audit and Risk Management sub-committee of the board.

Automated Data Flow

IX.51 The Reserve Bank has advised all commercial banks to put in place an automated data flow (ADF) system from which the banks can cull data from source systems without manual intervention for their reports to the Reserve Bank. A core group prepared an approach paper recommending implementation in phases, keeping in view the technology and process maturity of banks. A reporting mechanism has been put in place to monitor progress and a co-ordination group comprising representatives from select banks has been constituted to review progress on a quarterly basis. All banks are expected to put ADF in place by end-March 2013.

RTGS and NG-RTGS System

IX.52 RTGS volume crossed 0.3 million transactions twice during March 2012 and the necessary resource augmentation was undertaken to handle the high transaction volumes. In view of the increasing volumes, as also other business requirements, the Reserve Bank is in the process of replacing the existing RTGS with NG-RTGS, which provides more functions and facilities. The NG-RTGS is expected to adopt the emerging messaging standards (Box IX.2).

Upgrading the Enterprise Knowledge Portal

IX.53 The enterprise knowledge portal (EKP), which has emerged as the major mode of disseminating information and sharing knowledge in the Reserve Bank, is being upgraded with the latest features for effective search and advanced content management and collaboration tools.

Desktop Virtualisation

IX.54 A central data system, where users are able to work on diskless nodes (*i.e.,* the desktop has no

Box IX.2
Payment Systems: Emerging Messaging Standards

The existing RTGS system uses a proprietary message format whereas NEFT uses the SFMS format, which is a secure messaging standard developed to serve as a platform for intra-bank and inter-bank applications. SFMS is an Indian standard similar to that used by SWIFT, which is used globally for financial messaging. Launched in December 2001 at the IDRBT, SFMS has the potential to be used for all secure communication within the bank and between banks.

Most central banks currently use SWIFT-MT standards for payment transactions. The International Standards Organisation (ISO) has devised new standards (ISO 20022) for the financial sector based on Extensible Mark-up Language (XML) that are easy to maintain and use Java technology. These messages (MX messages) permit better flexibility in monitoring the message content and details, and thus, help reduce costs and simplify information gathering, monitoring and surveillance activities for various purposes such as anti-money laundering.

From a system point of view, XML messages are easier to work with. It is the default format for exporting data in most contemporary systems, and is hence, optimal for a new system. Also, XML offers the lowest implementation cost. However, it involves the cost of migration for the banking sector as a whole due to the higher network bandwidth and disk space required at the central site. There would be an incremental cost for participant banks, especially medium and small banks, because the bandwidth requirements for MX are relatively higher. In addition, there will be a nominal increase in cost due to an increase in memory and CPU utilisation for the central banks and the community. Although there is some impact on disk space and network bandwidth, so far this has not constrained the market infrastructure in countries that are migrating to ISO 20022 standards. However, migration to new standards involves smooth communication among all existing applications systems, *i.e.,* core banking systems at banks and various applications running at corporates that interact with the payments systems being run by the Reserve Bank.

The Reserve Bank has initiated steps to develop NG-RTGS. Among other things, the system will use an XML based messaging system that conforms to ISO 20022 standards. The ISO 20022 message standards (http://www.iso20022.org) for the financial sector are being examined by the ISO as well as the BIS. These standards aim at a "common language" for all financial communications, which would promote standardisation and save costs through improved transaction processing and better communication among various business domains, communication networks, and different stakeholders, such as financial institutions, clients and suppliers. Such initiatives are usually driven by communities of users looking for cost-effective measures to support specific financial business processes and interoperability with existing protocols.

To adopt and promote messaging standards appropriate for India, a working group has been set up, comprising representatives from select public and private sector commercial banks, the IDRBT, the CCIL, the NPCI and the Reserve Bank.

Box IX.3
Desktop Virtualisation

Virtualisation is a methodology for dividing the resources of a computer, using a variety of hardware and software abstraction techniques, into multiple execution environments by creating multiple isolated partitions – Virtual Machines (VM) or Virtual Environments (VEs) – on a single physical server. This separates the logical interface from the physical machine. Virtualisation originated in the 1960s as a technique to optimise the use of very expensive and relatively scarce computing resources. However with the advent of less-expensive computing technologies, such as Intel-based servers and PCs, the cost consideration was mitigated. As a result, servers and PCs proliferated, requiring new ways to better manage and use these resources.

Desktop virtualisation, often called client virtualisation, separates a computer desktop environment from the physical computer. The "virtualised" desktop is stored on a centralised, or remote, server and not on the physical machine. It allows users to interact with a virtual desktop (in the same way they would use a physical desktop) by letting the user log into their remote desktop from any location.

The key benefit of virtualisation is that total cost of ownership (TCO) is reduced. Organisations can bring down overall TCO by reducing individual desktop management and extending the lifecycle of hardware. Other benefits are the efficient use of CPU and memory resources, reduced energy costs, reduced desktop downtime, increased availability, centralised desktop security and data protection, support of 'Bring Your own Device', flexibility to add new users and a uniform computing environment across the organisation. Its drawbacks are non-availability if the network is not well managed, challenges in setting up and maintaining drivers for printers and other peripherals, difficulty in running certain complex applications, reliance on connectivity to the corporate or public network, and the complexity and high costs of deploying and managing the virtual desktop infrastructure (VDI).

The factors that need to be considered for VDI deployment are investment in technology, storage and network upgrades, training and software costs. Over time, the implementation of VDI saves costs. Overall, VDI can provide a better data sharing environment and access to data from anywhere, at any time. These features are expected to increase the overall efficiency and productivity of an organisation.

internal hard disk to store data) and also from anywhere (remote location) at any time through internet access is proposed to be implemented in phases over two years. Besides optimising resources for software and hardware management, this project will support green IT through reduced power consumption (Box IX.3). Preliminary work in this regard has commenced.

Upgrading of the Video Conferencing System

IX.55 In view of the benefits of video conferencing (VC) in terms of time and cost, and its increasing use, particularly for thematic VCs, a project on upgrading VC facilities in the Reserve Bank has been taken up. Adoption of HD technology, increased reach across the Reserve Bank and desktop VC facilities for senior management are planned.

Perimeter Security

IX.56 While enhancing operational efficiency by reducing the time, space and volume constraints for access and availability of information, the information and communication technologies have also brought new challenges to the integrity, availability and confidentiality of systems and data. New and increasing threats of disruptive intervention from users outside the system, through modes such as remote access, and the ever increasing intensity and nature of probable attacks call for a revamped perimeter security system in the Reserve Bank. Steps in this regard have been initiated.

X GOVERNANCE, HUMAN RESOURCES DEVELOPMENT AND ORGANISATIONAL MANAGEMENT

The smooth functioning of the multi-faceted work of the Reserve Bank necessitates robust organisational support to ensure healthy governance and efficient human resource management, aside from a quality work environment. Recent years have seen a number of important initiatives from the Reserve Bank to enhance its communication strategy to the public, apart from improved transparency in its governance and efforts to acquire and groom a high calibre work force. The various departments of the Reserve Bank persisted in their efforts to further improve organisational functioning, paying utmost care to the corporate social responsibility that goes with it.

INITIATIVES FOR IMPROVED GOVERNANCE

X.1 Central banks operate under varied framework and organisational set-up. While some have formal statute-backed autonomy, others enjoy varied degrees of informal autonomy. Irrespective of the structure, it is central bank actions and governance practices that earn its reputation. The accountability for their actions is enforced by informal public scrutiny, discipline and transparency practices followed as part of good governance (Box X.1). In this context, the Reserve Bank, in recent years, has focused on continuously

Box X.1
Governance Practices by Board of Directors of Central Banks – Global Experience

Central banks are established and operate under their own statutes and their role and functions differ substantially across countries. They can be divided into three main categories based on the prime emphasis of their mandate: i) a single primary mandate (*e.g.,* the European Central Bank (ECB) – inflation targeting); ii) two co-equal primary goals (*e.g.,* the US Federal Reserve – long-term price stability and full employment); iii) a broad mandate (*e.g.,* central banks of Canada, India, China, *etc,* – currency stability, flow of credit, price stability with growth, developmental aspects, *etc.*). After the recent crisis, formal central bank responsibility for financial stability is becoming increasingly common.

Governance framework

The board of directors normally forms the apex structure, overseeing and guiding the activities of the bank. Most central banks have a single central board. In certain cases, however, there is more than one board, each with a separate function, which allows an alignment of expertise and to focus on the task. For example, the Reserve Bank of Australia has two boards – the Reserve Bank Board responsible for monetary policy and financial stability, and the Payment System Board responsible for matters relating to the payment system.

Constitution

Most central banks are state entities that are wholly owned by the state, while some central banks have been established as private entities under a company law (*e.g.,* Belgium, South Africa). With the government as the 'owner', board members are appointed through a political process. The appointment process, however, is clearly specified by law in most cases and a reasonably long tenure, a staggered term for members, restrictions on dismissal of the governor or board members, *etc.* limit the scope of misuse. The legal requirement for a length of term of office helps strengthen institutional autonomy.

In the case of the Reserve Bank of India, the governor and board members are appointed for a period up to five and four years respectively, and can be re-appointed. In the case of the Federal Reserve Board, the statutory term is 14 years. Both the Federal Reserve and the ECB have limitations on the re-appointment of board members.

Size and membership

Regional factors, history and the size of the country have influenced the size of the board. Governance and oversight boards typically include external members with specialisation/ experience in fields relevant to the bank's governance. Central bank boards/ decision-making bodies range from less than five to more than twenty members. Boards with fewer than ten members are more common. The number of board members in the case of the Swiss National Bank is three, the Federal Reserve's Federal Open Market Committee is nineteen, the Reserve Bank of India is twenty one and the ECB's Governing Council is twenty three. The board is usually chaired by the Governor; however, in some cases it is chaired

(Contd....)

by a non-executive member (*e.g.*, the Reserve Bank of New Zealand).

Meetings

The number of meetings of the board/ decision-making body of the central banks depends on their legal set-up. While the court of directors of the Bank of England meet for a minimum of seven times in a calendar year, the ECB's Governing Council normally meets twice a month. At the Reserve Bank of India, the board generally meets seven times a year, while the committee of the central board meets every week.

Independence

The institutional and operational independence of a central bank is ensured by law or convention in most cases. These arrangements are closely linked to the form of government, whether parliamentary or presidential. The ECB is granted a high degree of institutional independence by statute/Treaty, by which ECB and its decision-making bodies do not take instructions from the government or any other bodies. The US Congress, on the other hand, retains the ultimate power to instruct the Federal Reserve by law and to dismiss a board member. In some countries, the government has the power to issue directives to override the central bank's monetary policy decisions (*e.g.,* Canada, Korea, and Malaysia).

According to the statutes, in the case of the Reserve Bank of India, the government can issue instructions to the board and remove the Governor, a Deputy Governor or any board member, though this power has not been exercised so far.

Accountability and transparency

Central banks are accountable to the state from which they derive their statutory authority. The ECB reports to the European Parliament. In the US, Congress has oversight responsibilities combined with legislative powers over the Federal Reserve. In Belgium, Italy, South Africa and Turkey the central bank is also accountable to private shareholders.

However, no formal accountability mechanism is laid down by statutes for the Reserve Bank of India. The Reserve Bank remains accountable to Parliament through the Finance Minister. Besides, the standing committee on finance of the Parliament summons the Governor for testimony. Many central banks are subject to periodic review by the legislature. The Bank of Canada board undertakes an annual self-evaluation and also evaluates board processes and management effectiveness in supporting the board. In the case of the Reserve Bank of New Zealand, the board's primary function is to monitor the performance of the Governor and provide the Minister of Finance with an annual assessment of the bank's performance.

The Reserve Bank of India has taken several initiatives to improve transparency. Apart from publications through the website and print media, the public interface of the Governor and top management through events like Town Hall meetings and outreach programmes present a unique experiment in central banking transparency in an emerging economy.

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improving its governance within the given legal framework. It has also strived to improve its communication and human capital.

Meetings of the Central Board and its Committee

X.2 The central board held seven meetings during 2011-12. Apart from the four held at the standard metropolitan centres, three were held at non-traditional centres, including Mussoorie, Uttarakhand. In The post-budget meeting of the central board (March 19, 2012), which the Finance Minister also attended, the Governor stressed the Reserve Bank's concerns, particularly with respect to fiscal consolidation.

X.3 The discussions and decisions taken at the central board meetings, while pertaining to general superintendence and the direction of affairs of the Reserve Bank, also included important issues relating to its role in supporting socio-economic goals and the development of the nation in line with its mandate as a full -service central bank.

X.4 Forty -five weekly meetings of the committee of the central board (CCB) were held in Mumbai during the year (up to end-June 2012). The CCB attended to the current business of the Reserve Bank, including approval of the weekly accounts of the Issue and Banking Departments. Two sub-committees of the central board have been formed, *viz.,* (i) the audit and risk management sub-committee (earlier known as the inspection and audit sub-committee) with a wider mandate to lay down the broad strategy and policies for the Reserve Bank's risk management functions, and (ii) the IT sub-committee (ITSC) that will, *inter alia*, guide the Reserve Bank on overall IT strategy, as well as related infrastructure and applications. Details of the changes in directors/members of the central board/local boards since July 1, 2011 are outlined in Annex 1.

Appointment/Retirement of Executives

X.5 Shri V. S. Das, Executive Director, retired from the Reserve Bank's service as at the close of business on July 31, 2012.

X.6 Shri Jasbir Singh was appointed as Executive Director with effect from August 1, 2012.

Awards

X.7 Shri Y.H. Malegam was conferred the Padma Shri Award on Republic Day, 2012 for public affairs. Dr. Anil Kakodkar was conferred the Maharashtra Bhushan Award for 2011-12 for his contributions in the field of nuclear power. Ms. Ela Bhatt was, *inter alia,* awarded the prestigious Roosevelt Medal in the Netherlands and conferred an honorary degree by Georgetown University in Washington DC, in recognition of her four decade long career as an international leader in Women's rights.

Visits of Foreign Dignitaries

X.8 Several foreign delegations visited the Reserve Bank during the year and interacted with the top management on a wide spectrum of issues, including reviews of the global economic situation, the framework for strong, sustainable and balanced global growth, financial/ regulatory reforms and reforms for international financial institutions. The Reserve Bank's monetary and regulatory policies were also discussed, apart from aspects pertaining to mutual trade and bilateral relations. The list of high-profile dignitaries who visited the Reserve Bank during 2011-12 is given in Annex III.

INITIATIVES FOR IMPROVED COMMUNICATION

X.9 Demystifying the central bank and the Governor's office has been a major plank of communication in the past few years at the Reserve Bank. Some unique initiatives in this direction are discussed in the following paragraphs. These efforts went a long way to augment other structured and unstructured communications on policy issues.

Town Hall Events

X.10 At the instance of the Governor, town hall events were organised specifically to generate awareness about initiatives taken by the central bank and commercial banks to improve customer service. Four such events were organised in tier II cities, with the audience representing a wide cross-section of users and potential users of banking services. Senior officials of local commercial banks dealing directly with customer service, the Indian Banks' Association, the Banking Codes and Standards Board of India, the Reserve Bank's customer service department, the department of payment and settlement systems and the Banking Ombudsman of the concerned state participated in the events. By partnering with television channels, the events were given wider reach.

Newsibition

X.11 Initiated by the Reserve Bank's Platinum Jubilee publication, 'Mint Road Milestones' in 2010, and largely drawing upon newspaper clippings and photographs in the media and other archival material, including rare documents, the newsibition depicts the 75-year history of the Reserve Bank. Through illustrations, the Reserve Bank's journey was made accessible to a wide audience. This was evident from the response received in Kolkata, where it opened in December 2010. The positive response then prompted the Reserve Bank to turn the newsibition into a travelling exhibition in 2011-12. It has, since then, visited Bhopal, Agartala, Guwahati, Kanpur, New Delhi, Jaipur, Ahmedabad, Mumbai, Bhubaneswar and Hyderabad.

Educational Visits

X.12 To demystify the world of central banking, the Reserve Bank regularly organises educational visits to its offices for students from schools, colleges and foreign universities, groups of citizens and non-government organisations. During 2011-12, around 4,200 participants from 64 institutions visited the Reserve Bank's central office in Mumbai alone. Students from foreign universities, such as, Athens University, the London School of Economics, Pace University (New York), St. Mary's College of California, Harvard University and various universities in Singapore have visited the Reserve Bank. On request, officers of the Reserve Bank also visited colleges, schools and NGOs to disseminate information about its role and functions.

Promoting Research

X.13 During 2011-12, the Reserve Bank took significant policy supportive measures to promote its research. Accordingly, seminars were organised for the two annual statutory publications of the Reserve Bank. Sessions for the Report on Trend and Progress of Banking in India 2010-11 were organised at Benaras Hindu University (Benaras) and the Madras School of Economics (Chennai). The Annual Report 2010-11 was the agenda for discussion in a series of four seminars held for the first time in outside institutions, such as, the Institute of Economic Growth (New Delhi), the Indira Gandhi Institute of Development Research (Mumbai) and the Indian Institute of Management (Kolkata). These sessions were well-received by students and academics, who also provided valuable feedback.

Research Initiatives at the Reserve Bank

X.14 The research publications of the Reserve Bank staff *viz.,* the RBI Occasional Papers and the web-based RBI Working Paper Series (RBIWPS) continued as the major platforms for disseminating focused in-house research on a wide array of issues that support the policy-making process through analytical and technical inputs. In all, up to mid-August 2012, 38 papers were released through the RBIWPS, covering a range of issues such as interest rate channels of monetary transmission, trends in real lending rates of Indian banks, growth-inflation trade-off, capacity utilisation and inflation forecasting. The Reserve Bank staff continued to publish several research articles in reputed national as well as international economic and financial research journals.

X.15 The Department of Economic and Policy Research (DEPR) of the Reserve Bank organised the Second International Research Conference (SIRC) on February 1-2, 2012 in Mumbai. The theme of the conference was 'Monetary policy, sovereign debt and financial stability: the new trilemma' and encapsulated the complex challenges for central banks in the post-crisis period. The Governors/Head of central banks/monetary authorities of Brazil, Bangladesh, Iceland, Maldives, Nepal, Pakistan and Singapore participated in the conference, apart from international academia and the heads of major commercial banks and financial and research institutions in India. The reality of the new trilemma was acknowledged, and fiscal discipline was deemed critically important for financial and price stability. The importance of the interaction between sovereign debt and monetary policy in determining market confidence was also acknowledged.

X.16 To enable the public to access improved real-time data, the Department of Statistics and Information Management (DSIM) revamped the Data Base on the Indian Economy (DBIE) portal. Data are mainly presented through time-series formatted reports organised under sectors and sub-sectors by periodicity. This not only makes the data user-friendly, but it also allows researchers to obtain time series data across all publications of the Reserve Bank, including the RBI bulletins, the Weekly Statistical Supplement (WSS), and other banking reports. The visitor count of almost 0.15 million during March-June 2012 highlights the popularity of this initiative.

X.17 Following the Reserve Bank of India Act, 1934 [Section 17(15B)], the Reserve Bank provides funds for external research activities through the RBI Endowment Scheme. These include establishment of RBI Chairs by grant of corpus fund to universities/research institutions. Specific research projects, both short-term and medium-term, which at present include macroeconomic modelling, the India KLEMS project and an evaluation framework for technologically delivered financial intermediation has been undertaken with the Reserve Bank's financial support. Such research has provided useful insight. For instance, the preliminary results of the KLEMS project suggest that the trend growth in total factor productivity (TFP) in the Indian economy was about 1 per cent per annum during 1980-2008 when computed using labour input and capital services. The TFP distinctly improved during 2000-08. Financial support has also been provided for publishing research journals and organising conferences, seminars and workshops. Scholarship scheme for faculty members from academic institutions have been instituted, under which three studies on micro-finance institutions, the efficiency of the banking system and commercial paper have been submitted. The Reserve Bank also provides funds for conducting the development research group (DRG) studies, 37 of which have been published so far.

X.18 To facilitate greater academic interaction, the Reserve Bank held the First Research Conference of RBI Chair Professors in Mumbai on February 14, 2012. Eight papers were presented and debated on policy issues such as Indian food inflation, international capital flows, financial inclusion and the international clearing union. In addition Prof. Nicholas Stern, I.G. Patel Chair Professor at the London School of Economics and Political Science, presented a paper on 'Low-Carbon Growth in a Fragile Decade for the World Economy'.

HUMAN RESOURCE DEVELOPMENT INITIATIVES

Training/ Deputation/ Higher Studies/Distance Learning

X.19 To enhance the quality of human capital in the organisation, the Reserve Bank continued to provide avenues for skill upgrading to its staff (Box X.2). The six training establishments of the

Box X.2
Capacity-Building Initiatives

The multi-faceted work of the Reserve Bank necessitates wide segment-specific variations that require vastly different competencies in terms of infrastructure and human resource. The organisational design of the Reserve Bank has accordingly been structured as a two-way interface between the environment and internal capabilities. Capacity-building initiatives over the years have, however, not been confined to training its own personnel. As the central bank of the country, the Reserve Bank has also made conscious efforts towards creating institutions devoted to the systematic training of supervisory staff of various banks in India.

Capacity building for the Reserve Bank has, therefore, been driven by three broad considerations: (i) the current policy context in which the banking sector in India operates and the broad direction that the Reserve Bank would like the constituents to take; (ii) the state of preparedness of the Reserve Bank as also other banks and financial institutions for future developments and the efforts, individual as well as collective, that they have undertaken towards this; and (iii) efficiently dovetailing policy-making, competency development and research in banking and finance in India and working out a possible action matrix.

The Reserve Bank has two training colleges, namely, the Reserve Bank Staff College (RBSC) in Chennai and the College of Agricultural Banking (CAB) in Pune, that were established in 1963 and 1969, respectively. The RBSC organises training courses, both functional and behavioural, for various categories of officers in the Reserve Bank as well as officials of select commercial banks. It also conducts short seminars and workshops on different themes with a view to disseminating and sharing knowledge and providing policy inputs.

CAB, on the other hand, designs and delivers regular training programmes on a wide range of subjects for officers in the Reserve Bank and various commercial banks, regional rural banks and co-operative banks. It also organises conferences and seminars, both national and international, and conducts customised programmes (on-site and off-site) for its clientele. In collaboration with reputed international institutions, it organises programmes of topical relevance.

The four zonal training centres (ZTCs) of the Reserve Bank located at Belapur in Navi Mumbai, Kolkata, New Delhi and

(Contd....)

Chennai provide training to junior officers as also Class III and Class IV staff. Each ZTC has been allocated a focus area.

The Reserve Bank also deputes its officers abroad to attend training courses, seminars, conferences and workshops conducted by other central banks, financial and multilateral institutions. Further, to get acquainted with new developments in the fields of economics, finance and quantitative analysis and to sharpen executive skills, the Reserve Bank deputes senior officers for advanced management and executive education programmes at leading international business schools.

The Reserve Bank also organises short courses in collaboration with reputed external institutions (including institutions that it fully or partially funds) in the areas of banking, finance, soft skills, human resources, *etc.* for a limited number of staff every year.

To encourage and facilitate self-learning for its employees, various schemes have been introduced under which employees can pursue studies in the subject of their interest, provided the same is useful for the Reserve Bank in the long run. These schemes include commercial bank training for select officers up to grade C, the golden jubilee scholarship scheme, incentives for acquiring higher professional qualifications like Ph.D./ M.Phil./ FCA, study leave and a scheme for a sabbatical of one year for senior officers.

The offices of the Reserve Bank also have study circles with lectures on both functional and behavioural themes. Through its monthly thematic video-conferences on important and emerging issues that are anchored by members of the leadership team, the Reserve Bank encourages its staff to participate in the discussions, thereby blurring the perceived gaps due to hierarchies, and generating new ideas and integrating different geographies that may not have the opportunity to interface and network with each other.

The Reserve Bank also financially supports and facilitates specialised training institutes like the Indira Gandhi Institute of Development Research (IGIDR), Mumbai, the Centre for Advanced Financial Research and Learning (CAFRAL), Mumbai, the National Institute of Bank Management (NIBM), Pune and the Indian Institute of Bank Management (IIBM), Guwahati. All these institutions are engaged in research, training and consultancy for the banking and financial sectors.

These capacity-building initiatives are key components that help the Reserve Bank build a knowledge-enabling organisation strategy and enable the organisational culture.

Reserve Bank cater to its training requirements, and also those of select commercial banks (Table X.1).

Table X.1: Reserve Bank Training Establishments - Programmes Conducted

Training Establishment	2009-10 (July-June)		2010-11 (July-June)		2011-12 (July-June)	
	No. of Programmes	No. of Participants	No. of Programmes	No. of Participants	No. of Programmes	No. of Participants
1	2	3	4	5	6	7
RBSC, Chennai	143	2,960	147	2,904	125	2,492*
CAB, Pune	160	4,885	162	4,951	190	5,647@
ZTCs (Class I)	47	1,066	57	1,140	116	2,098
ZTCs (Class III)	112	1,826	87	1,310	35	639
ZTCs (Class IV)	63	1,214	70	1,422	65	1,237

* : Includes 20 concurrent auditors, 32 NABARD officers, 13 trainee IES officers and 15 foreign participants.
@: Includes 24 foreign participants.

Training at External Institutions

X.20 During 2011-12 the Reserve Bank deputed 1,072 officers to participate in training programmes, seminars and conferences organised by external management/banking institutions in India. A number of Class III and Class IV employees were also deputed for training in external institutions in India during the year. The Reserve Bank also deputed 511 officers to attend various training courses, seminars, conferences and workshops conducted by banking and financial institutions and multilateral institutions in more than 41 countries (Table X.2).

Table X.2: Number of Officers Trained in External Training Institutions in India and Abroad

Year	No. of officers trained in India (external institutions)	No. of officers trained abroad
1	2	3
2009-10	1,104	553
2010-11	1,090	578
2011-12	1,072	511

X.21 Twelve officers of the Bank availed of study leave under different schemes for higher studies during the year. Further, 412 employees pursued select part-time or distance education courses during 2011-12 under the Reserve Bank's incentive scheme.

Joint India-IMF Training Programme (ITP)

X.22 The Reserve Bank and the International Monetary Fund (IMF) have jointly established the Joint India–IMF Training Program (ITP) at NIBM, Pune. During 2011-12, eight training programmes, on topics including anti-money laundering and combating the financing of terrorism, macroeconomic management and fiscal policy/ financial sector issues, financial market analysis, international trade-in-services and financial soundness indicators were conducted with 47 participants from the Reserve Bank.

Grants and Endowments

X.23 The Reserve Bank is an organisation that furthers corporate social responsibility in a number of ways in its area of domain. As part thereof, the Reserve Bank extends financial support to select institutions that cater to the training, research and consultancy requirements of the banking and financial sectors. During 2011-12, ₹280 million was provided to IGIDR, Mumbai, ₹38 million to CAFRAL, Mumbai, ₹14 million to NIBM, Pune and ₹2 million to IIBM, Guwahati.

INITIATIVES IN ORGANISATION MANAGEMENT

X.24 The Reserve Bank continued with its initiatives for strategic talent acquisition alongside its capacity-building initiatives and knowledge dissemination agenda. Policies to meet the career aspirations of the staff as also the efficient functioning of the organisation have been pursued.

Industrial Relations

X.25 The Reserve Bank continues to hold periodic meetings with recognised associations/ federations of officers and employees/ workmen on various matters related to service conditions and welfare measures, and its interactions with industry remained encouraging during the year.

Right to Information Act (RTI), 2005

X.26 In the seventh year of the implementation of the RTI Act in the Reserve Bank, the number of requests for information has increased by 30 per cent to 4,812, of which 95 per cent has been addressed. The number of first appeals received during the year was 702, of which the Appellate Authority has passed orders on 595 appeals. The Central Information Commission (CIC), through video-conferencing arrangements in the Reserve Bank's premises, heard 161 cases of second appeals filed by the appellants. A pilot programme was conducted at the RBSC for CAPIOS/dealing officers to familiarise them with the provisions of the RTI Act and its implementation in the Reserve Bank and to facilitate the exchange of ideas and experience.

Recruitment

X.27 During 2011 (January–December), the Reserve Bank recruited 154 employees. Of this, 25 belonged to scheduled castes (SCs) and 12 to scheduled tribes (STs) categories, constituting 24 per cent of total recruitment (Table X.3).

Staff Strength

X.28 The total staff strength as on December 31, 2011 was 18,132 compared with 19,207 the year

Table X.3: Recruitment by the Reserve Bank – 2011

Category of Recruitment	Total	*of which*		Percentage	
		SC	ST	SC	ST
1	2	3	4	5	6
Class I	146	24	11	16.4	7.5
Class III	-	-	-	-	-
Class IV					
a. Maintenance Attendant	7	1	1	14.3	14.3
b. Others	1	-	-	-	-
Total	**154**	**25**	**12**	**16.2**	**7.8**

* : January-December.

Box X.3
Organisational Structure of the Reserve Bank: Sub-Offices

The Reserve Bank's organisational structure has, over the years, broadly followed India's federal government structure. In terms of expansion of its branch network, the Reserve Bank has adopted an incremental approach that has seen the opening of its branches as and when a need is felt, for catering to the specific interests of such areas.

The main orientation of the strengthening of this decentralisation of operations has been to seize or create the potential for engagement in local development processes so as to be able to look after the soundness of the financial system and ensure that the financial concerns of all sections of the population in these areas, with the vulnerable and marginalised groups at the core of the agenda, are adequately addressed.

This decentralisation is also critical, given the distinctive local flavour reflecting the regional/ sub-national sub-text, attributes and aspirations in our economy on the one hand, and pan-Indian trends like perceptible shifts in economic choices and preferences or the rural–urban continuum in economic linkages, on the other. The complexity of our policy responses and the delivery of services at all regional offices of the Reserve Bank, including its sub-offices, have sought to factor in both these dimensions while facilitating a process of integration in the interests of growth and equity.

The first sub-office was opened in November 1970 at Kochi, followed by one in Panaji in November 1983. The Srinagar sub-office was opened in 1981 with the FED cell. The RPCD and DBS cells carved out of the Jammu office also function there during the summer months, coinciding with the Durbar move to Srinagar. Soon after the formation of the states of Uttarakhand, Chhattisgarh and Jharkhand, the Reserve Bank opened its sub-offices in Dehradun, Raipur and Ranchi, effective June 2006, January 2007 and November 2007, respectively. The sub-office at Shimla was opened in July 2007.

While the Guwahati office had been catering to the needs of all seven north-eastern states (Assam, Meghalaya, Tripura, Mizoram, Manipur, Nagaland and Arunachal Pradesh), the physical presence of the Reserve Bank in each of the states was felt necessary to facilitate financial inclusion and literacy and to closely monitor the adequacy of bank credit and rural credit flows in order to address the problems of unemployment and lack of economic development in the region. A decision was taken in 2010-11 to open sub-offices in six north-eastern states in phases. Accordingly, the sub-office in Agartala was set up in May 2011. For the state of Sikkim, which had been under the supervision of the Reserve Bank's office in Kolkata, a sub-office in Gangtok was opened in January 2010.

With a view to developing new ideas and strategies to advance and leverage the Reserve Bank's policies and emerging priorities, all its new sub-offices have focused on affording greater access to financial services to the vast unreached segment of the population, as well as on bridging the knowledge gap in financial education and literacy

before (Box X.3). Of the total staff, 45.1 per cent belong to Class I, 18.6 per cent to Class III and the remaining 36.2 per cent to Class IV (Table X.4).

X.29 In the total staff strength, the SC and ST categories make up 21.1 and 8.9 per cent, respectively (Table X.5). In accordance with the central government's policy, the Reserve Bank provided reservation to other backward classes (OBCs) effective September 8, 1993. The representation of OBCs (recruited after September 1993) in the Reserve Bank as on December 31, 2011 stood at 971.

X.30 The Mumbai centre (including the central office departments) continued to have the maximum staff (30.3 per cent), followed by Kolkata (8.9 per cent), Chennai (7.2 per cent) and New Delhi (6.8 per cent) (Table X.6).

X.31 The total strength of ex-servicemen in the Reserve Bank as on December 2011 stood at 192

Table X.4: Category-wise Actual Staff Strength
(As on December 31, 2011)

Class	Actual Strength
1	2
a. Class I	**8,183**
1. Senior Officers in Grade F	90
2. Senior Officers in Grade E	233
3. Senior Officers in Grade D	374
4. Officers in Grade C	968
5. Officers in Grade B	1,400
6. Officers in Grade A	5,045
7. Treasurer	5
8. Deputy Treasurer	19
9. Assistant Treasurer	49
b. Class III	**3,381**
1. Senior Assistant	1,390
2. Assistant	617
3. Secretarial Assistant	88
4. Word Processor Assistant	355
5. Special Assistant (Teller)	467
6. Class III (Others)	464
c. Class IV	**6,568**
1. Maintenance Staff	1,427
2. Service Staff	4,223
3. Technical Staff	197
4. Other Staff	721
Total Strength in the RBI (a+b+c)	**18,132**

Table X.5 : Staff Strength of the Reserve Bank

Category	Category-wise strength						Percentage of total strength	
	Total strength		SC		ST		SC	ST
	Dec 31, 2010	Dec 31, 2011	Dec 31, 2010	Dec 31, 2011	Dec 31, 2010	Dec 31, 2011		Dec 31, 2011
1	2	3	4	5	6	7	8	9
Class I	8,754	8,183	1,277	1,189	598	563	14.5	6.9
Class III	3,604	3,381	554	518	422	395	15.3	11.7
Class IV	6,849	6,568	2,200	2,121	688	660	32.3	10.0
Total	**19,207**	**18,132**	**4,031**	**3,828**	**1,708**	**1,618**	**21.1**	**8.9**

SC : Scheduled Caste. ST : Scheduled Tribe.

Table X.6: Reserve Bank's Office-wise Strength of Staff
(As on December 31, 2011)

Office (including sub-offices)	Class I	Class III	Class IV	Total
1	2	3	4	5
Agartala	5	0	0	**5**
Ahmedabad	327	170	287	**784**
Bangalore	463	146	260	**869**
Belapur	139	65	210	**414**
Bhopal	169	26	96	**291**
Bhubaneswar	199	67	212	**478**
Chandigarh	179	32	112	**323**
Chennai	501	304	492	**1,297**
Dehradun	10	3	3	**16**
Gangtok	4	0	0	**4**
Guwahati	239	96	214	**549**
Hyderabad	333	118	284	**735**
Jaipur	266	115	211	**592**
Jammu@	87	8	61	**156**
Kanpur	276	166	383	**825**
Kochi	49	45	42	**136**
Kolkata	625	361	628	**1614**
Lucknow	186	56	140	**382**
Mumbai	669	470	1104	**2243**
Nagpur	275	238	264	**777**
New Delhi	579	266	382	**1227**
Panaji, Goa	10	4	2	**16**
Patna	220	63	249	**532**
Pune-CAB-CRDC-ITP	59	22	81	**162**
Raipur	9	0	0	**9**
Ranchi	11	0	0	**11**
Shimla	7	0	0	**7**
Thiruvananthapuram	208	69	160	**437**
Total	**6,104**	**2,910**	**5,877**	**14,891**
CODs #	**2,079**	**471**	**691**	**3,241**
Grand Total	**8,183**	**3,381**	**6,568**	**18,132**

CAB: College of Agricultural Banking.
CRDC: Central Records and Documentation Centre.
ITP: IMF Training Program, Pune.
@: Includes Srinagar sub-office.
#: Central office departments including DICGC.

in Class I, 101 in Class III and 677in Class IV. The total number of differently-abled employees in Class I, Class III and Class IV cadres in the Reserve Bank stood at 232, 79 and 126, respectively, as on December 2011.

Campus Recruitment

X.32 Greater emphasis on the Reserve Bank's regulatory and supervisory role *vis-à-vis* banks, financial institutions and non-banking financial companies in recent years has highlighted the need to acquire talent that has analytical and managerial skills. The Reserve Bank introduced a separate channel of campus recruitment for direct recruitment of officers, under which 17 candidates, including 3 SC and 5 OBC candidates, from various management institutes and central universities in the country were inducted during 2011-12.

Recruitment of Assistants

X.33 Taking into account the anticipated high rate of retirements in the Reserve Bank during the next five years, the process of recruiting 1,000 assistants in the Class III cadre across all offices has been initiated.

Promotion Policy

X.34 With a view to better meet the long-term career aspirations of officers, a new promotion policy has been put in place. It combines the time -bound and merit-based promotion systems in alternate grades to develop a flatter organisational structure with greater empowerment, accountability and quicker decision-making, and provides greater flexibility in the deployment of officers under three groupings, *viz*. junior, middle and senior levels.

Formation of Risk Management Department

X.35 Based on the recommendations of an inter-department group set up by the Reserve Bank, a Risk Management Department (RMD) has been constituted in the Reserve Bank with effect from May 31, 2012, to look after financial and operational risks. Its principal aim is effective identification, assessment and management of risks throughout the organisation.

X.36 Operational risk management, including legal risk, IT risk, business continuity plan risk and physical security risk will be the responsibility of the functional units. Each functional unit will manage the reputation risk that could arise from its area. The primary reputational risk, arising from public perception, will be addressed through a structured communication policy that will be formulated by the RMD in consultation with the department of communication.

Business Process Re-engineering

X.37 Given the changes in the external environment and keeping in view the Reserve Bank's internal capabilities and resource potential, business process re-engineering (BPR) has been considered integral to leverage manpower and technology by adopting a systematic approach to designing, prioritising, managing, controlling and monitoring business processes, competitive performance standards and operational excellence (Box X.4).

Rajbhasha

X.38 In compliance with the statutory requirements of the Rajbhasha policy, the Reserve Bank strove to promote the use of Hindi in its work during 2011-12. All training material were made available in bilingual form in its training colleges and the Reserve Bank continues to bring out various publications in bilingual form.

X.39 Various Hindi training programmes, including a number of inter-bank and internal competitions, as well as many Hindi functions, were organised during the year. The Rajbhasha officers'

Box X.4
Business Process Re-engineering

Business process re-engineering (BPR) is expected to herald the implementation of radical changes in the Reserve Bank's business processes to achieve breakthrough results. A clear understanding of the business processes lies at the root of re-engineering them. To streamline the identification of the entire gamut of the Reserve Bank's business processes, 26 central office departments have been categorised under 13 verticals based on commonalities in their work processes, while the 27 regional offices form the fourteenth vertical.

Suggestions from each of the departments and offices have been sought and are being collated vertical-wise for further study and evaluation by a BPR unit in the human resource management department (HRMD). When the suggestions are received, they will be examined by a high-level multidisciplinary committee that has the overall responsibility for optimising processes and allocating resources before taking up work on any new or revised work process.

Going forward, processes that lend themselves more easily to re-engineering will be identified. The process owners will be taken on board at this stage for brainstorming. Documentation will then be prepared on the As-Is, To-Be and quantifiable benefits envisaged in terms of savings on time and costs. After the revised processes are implemented, their effectiveness will be measured through feedback from customers and employees. The combined BPR proposals will be considered and approved by the committee for BPR planning and implementation in consultation with the senior management of the concerned department.

Learning from past experience indicate that process re-engineering has to precede technological development to bring the necessary connect between technology, information and business processes. Thus it has been felt that before initiating a holistic, organisation-wide BPR exercise, the processes linked to technological interventions with the minimal external interface need be prioritised. Accordingly, the areas identified for BPR study in the immediate future include human resource management and establishment, workflow automation, desktop virtualisation and currency management.

conference, as well as a review meeting with the Rajbhasha officers, was held to monitor the progress made in the use of Hindi and to chalk out future plans.

X.40 Major highlights during the year were an intensive Hindi typing training programme for non-typist staff (including officers) with trainees successfully passing the Hindi typing examination conducted by the Government of India; and a seminar in which Shri A.N.P. Sinha, Secretary, Department of Official Language, Ministry of Home Affairs, Government of India, delivered a lecture on 'Implementation of Official Language Policy – New Challenges'. The seminar was also webcast for staff at the regional offices. Also, a quarterly Hindi magazine on banking, 'Banking Chintan-Anuchintan' that contains original Hindi articles and a special issue on 'MSME' was published, aside from the quarterly news magazine, 'Rajbhasha Samachar', which describes activities related to implementation of the Rajbhasha policy.

Management of the Reserve Bank's Premises

X.41 The Reserve Bank endeavoured towards upgrading/ modernising the physical infrastructure in its office buildings and provide residential accommodation for officers and staff in a planned way during the year. Six construction projects (four projects for officers' flats and two for student hostels in IGIDR and RBSC) were taken up during 2010-11. Due to delay in getting the required statutory approvals, the projects are running behind schedule and are being followed up with various authorities. The facilities in the residential accommodation are also being upgraded in phases. Tendering for two more projects for the construction of residential buildings in Hyderabad and Lucknow was taken up during the year.

X.42 Preliminary work for construction of a new office building at Raipur was initiated and the work on identifying and acquiring land for office buildings and residential quarters at Dehradun, Agartala and Raipur is in progress.

X.43 A design competition was held for the construction of a new institutional complex for the CAFRAL and an architect firm has been selected for designing the same.

X.44 In view of the emerging security and fire safety needs, up-grading/ replacement of security and fire detection systems, such as a CCTV systems and an intelligent addressable fire alarm system for all office buildings has been planned and will be implemented in phases. A pilot project of an IP-based CCTV system is already underway.

Green Initiatives

X.45 Multiple initiatives to promote energy conservation, environment preservation and protection have been upheld by the Reserve Bank in line with its corporate social responsibility. For the carbon footprint-mapping exercise, the identified action points, such as planting trees and using eco-friendly paper, were implemented (Box X.5). The carbon footprint-mapping exercise has been initiated in the Jaipur and Bengaluru offices. In office buildings, occupancy sensors, timers, *etc.* are being used to avoid wastage of electrical energy. A blue print for energy conservation was prepared with short-term and medium-term goals, which will be implemented in phases.

Internal Audit/ Inspection in the Reserve Bank

X.46 An enterprise-wide risk management (EWRM) has been formalised in the Reserve Bank to strengthen the risk management systems in place and lead to uniform implementation of the risk management policies and methodologies across the organisation, with a clear segregation of the risk management function from the audit function. EWRM would have a blend of top-down and bottom-up approaches for identifying, assessing and managing various financial and non-financial risks throughout the Reserve Bank.

X.47 An audit and risk management sub-committee (ARMS) has been established this year to perform the tasks of the erstwhile inspection audit

Box X.5
Sustainable Development - Carbon Footprint Mapping

Climate change is one of the major challenges facing mankind today. Scientific studies by various international organisations have identified greenhouse gases (GHGs) as the chief cause of global warming. The financial sector, as an intermediary between savers and investors, plays an important role in environmental protection, both as a provider of capital to investors as well as user of resources. Financial institutions could, thus, act as harbingers of sustainable economic development with reduced negative consequences for climate change by prioritising investments in the industries and projects that contain the harmful effects of GHGs and also by investments in non-polluting technologies. The financial sector could thus play a direct role in contributing to the management of GHG emissions.

As a regulator, it is important for the Reserve Bank to understand the risks and implications of climate change in order to devise policies for sustainable economic development.

In this context, the Reserve Bank initiated a carbon footprint -mapping exercise of its operations in the central office building in February 2011. *Carbon footprint* is the total set of GHG emissions caused by an organisation, event or product. For simplicity of reporting, this is expressed in terms of the amount of carbon dioxide or its equivalent of other GHGs emitted.

The GHG estimation and reporting of the Reserve Bank was carried out through a consultant firm, M/s Next Gen, in accordance with the Greenhouse Protocol (GHG Protocol) guidelines laid down by the Confederation of Indian Industry and the ISO–14064 Standard. The carbon emissions were categorised in three types, *viz.,* Scope I (direct emissions), Scope II (indirect emissions, mainly from purchased electricity) and Scope III (other indirect emissions). The total GHG emissions were estimated at 8265.70 MT CO_2. In order to manage the above emissions, an action plan to control and gradually reduce the emissions and a target of 0.6 per cent reduction was set for the first year. The activities are in various phases of implementation. A similar carbon footprint-mapping exercise will be taken up in other Reserve Bank properties across the country.

References

Delphi International Ltd. (1997), “The Role of Financial Institutions in achieving Sustainable Development – Executive Summary”.

Intergovernmental Panel on Climate Change (2007), “Summary for Policymakers of the Synthesis Report of the IPCC Fourth Assessment Report”, Geneva, Switzerland.

Next Gen PMS Pvt. Ltd. (2011), “Carbon Footprint of Reserve Bank of India Central Office Building- Mumbai – Report”.

sub-committee (IASC) with an expanded mandate for risk management in the Reserve Bank. ARMS will assist the central board of the Reserve Bank in its oversight function by reviewing and monitoring the inspection and audit process, compliance, internal control systems, the financial reporting process, the risk management framework, BCPs and disaster management functions.

X.48 The Inspection Department examines and evaluates systems, processes and controls to provide objective feedback to the top management on the health of various offices and departments of the Reserve Bank. The department inspected 12 regional offices and 10 central office departments during the year. Information system audits (IS audits) were carried out along with management audit and systems inspection (MASI) and risk based internal audit (RBIA). Technology audit of the DBIE, mail messaging system, IS audit: continuous assurance at the regional offices in New Delhi, Mumbai, Belapur, Kolkata and Chennai, VA-PT of the Reserve Bank’s online recruitment application and a preliminary (pre-live) audit of core banking solution were carried out during the year.

XI THE RESERVE BANK'S ACCOUNTS FOR 2011-12

The balance sheet of the Reserve Bank expanded significantly during the year mainly reflecting the impact of liquidity injection through open market operations as also the impact of depreciation of the rupee on valuation of foreign assets. Due to low interest rates in international markets, the income from investments in foreign assets declined for the third successive year. This decline was, however, more than offset by increase in earnings from domestic assets. While the Reserve Bank's gross income increased by 43.4 per cent to ₹531.76 billion in 2011-12, there was a 17.1 per cent increase in total expenditure to ₹101.37 billion. After transfers to the Contingency Reserve, the Asset Development Reserve and the four Statutory Funds, ₹160.10 billion was allocated for transfer to the Central Government.

XI.1 The size of the Reserve Bank's balance sheet increased significantly by about ₹4,043 billion, *i.e.*, by more than 22 per cent, during the Reserve Bank's accounting year 2011-12 (July-June). On the assets side, there was an increase in the Reserve Bank's holding of domestic securities and foreign assets. The increase in domestic securities was mainly on account of the large scale open market purchases of government securities undertaken by the Reserve Bank for injection of liquidity. At nearly ₹2,140 billion, the open market purchases explain a little over half of the increase in the balance sheet during 2011-12. The increase in foreign assets was mainly due to valuation effect on the portfolio arising due to depreciation of the Indian rupee against the US dollar, which is the numeraire currency for foreign exchange reserves, and the valuation gain on gold. On the liabilities side, the expansion of the balance sheet is explained by the rise in currency in circulation as well as accretion to the Currency and Gold Revaluation Account (CGRA).

XI.2 The financial statements of the Reserve Bank are prepared in accordance with the Reserve Bank of India (RBI) Act, 1934 and the notifications issued thereunder and in the form prescribed by the Reserve Bank of India General Regulations, 1949. The balance sheet items are based on historical cost, except where they are modified to reflect the impact of revaluation. Income and expenditure are recognised on accrual basis except penal interest receivable and dividend to be earned, which are accounted for on cash basis. The Reserve Bank prepares two balance sheets. The first one relates to the sole function of currency management and is presented as the balance sheet of the Issue Department. The second one reflects the impact of all other functions of the Reserve Bank and is known as the balance sheet of the Banking Department. The balance sheet of the Reserve Bank is largely a reflection of its activities undertaken in pursuance of its currency issue function as well as monetary and reserve management policy objectives. The key financial results of the Reserve Bank's operations during the year 2011-12, together with explanations, are presented in this Chapter.

INCOME

XI.3 The Reserve Bank's income comprises earnings from foreign sources and earnings from domestic sources, with the major portion being contributed by interest receipts, complemented by relatively small amounts of income from other sources, *viz.*, discount, exchange, commission, *etc.*

XI.4 The gross income of the Reserve Bank during the year 2011-12 was ₹531.76 billion as against ₹370.70 billion in the year 2010-11, registering an increase of 43.4 per cent. The significant increase in income from domestic sources offset the decline in income from foreign sources (Table XI.1).

Table XI.1: Gross Income

(₹ billion)

Item		2007-08	2008-09	2009-10	2010-11	2011-12
1		2	3	4	5	6
A.	**Foreign Sources**					
	Interest, Discount, Exchange	518.83	507.96	251.02	211.50	198.10
B.	**Domestic Sources**					
	(i) Interest	49.58	90.56	66.47	150.32	323.39
	(ii) Other Earnings	9.09	8.80	11.35	8.88	10.27
	Total: (i) + (ii)	58.67	99.36	77.82	159.20	333.66
C.	**Total Income (Gross) (A+B)**	**577.50**	**607.32**	**328.84**	**370.70**	**531.76**

Earnings from Foreign Sources

XI.5 The Reserve Bank's earnings from the deployment of foreign currency assets (FCA) and gold decreased by ₹13.40 billion (6.3 per cent) to ₹198.10 billion in 2011-12. The rate of earnings on FCA and gold was lower at 1.47 per cent in 2011-12 compared with 1.74 per cent in 2010-11, due to the low interest rates prevalent in international markets (Table XI.2).

Earnings from Domestic Sources

XI.6 The earnings from domestic sources increased by ₹174.46 billion to ₹333.66 billion in 2011-12 recording an increase of 109.6 per cent (Table XI.3). The increase was mostly due to the combined effect of earnings from Liquidity Adjustment Facility (LAF) operations, higher coupon receipts on an increased portfolio of government securities (on account of large scale open market operations) and profit on sale of securities. The rate of earnings on average domestic assets increased from 3.77 per cent in the previous year to 5.43 per cent in 2011-12. The interest income received from the Central Government on account of Ways and Means Advances (WMA)/Overdraft (OD) was ₹12.66 billion during 2011-12 compared with ₹4.39 billion in the previous year, while the same for the State Governments was ₹348.50 million compared with ₹616.80 million during 2010-11. The daily average utilisation of WMA/OD by the Central Government was ₹142.39 billion in 2011-12 as against ₹61.70 billion in 2010-11. In the case of the states, the daily average utilisation of WMA/OD was lower at ₹4.07 billion in 2011-12 as against ₹9.26 billion in 2010-11.

EXPENDITURE

XI.7 The Reserve Bank's expenditure consists of its establishment expenses besides expenditure such as agency charges/commission and security printing charges that arise in the course of performing statutory functions. The total expenditure of the Reserve Bank increased by 17.1 per cent to

Table XI.2: Earnings from Foreign Sources

(₹ billion)

Item	Year ended		Variation	
	June 30, 2011	June 30, 2012	Absolute	Per cent
1	2	3	4	5
Foreign Currency Assets (FCA)	12,687.44	14,492.81	1,805.37	14.2
Average FCA	12,177.51	13,477.55	1,300.04	10.7
Earnings from FCA (and gold) (interest, discount, exchange gain/loss, capital gain/loss on securities)	211.50	198.10	-13.40	-6.3
Earnings from FCA (and gold) as percentage of average FCA	1.74	1.47		

Table XI.3: Earnings from Domestic Sources

(₹ billion)

Item	Year ended		Variation	
	June 30, 2011	June 30, 2012	Absolute	Per cent
1	2	3	4	5
Domestic Assets	**5,359.07**	**7,596.54**	**2,237.47**	**41.8**
Weekly Average of Domestic Assets	4,220.33	6,140.50	1,920.17	45.5
Earnings (I + II)	**159.20**	**333.66**	**174.46**	**109.6**
I. Interest and Other Income (items i to iv)	150.32	323.39	173.07	115.1
(i) Profit on Sale of Securities	30.91	93.30	62.39	201.8
(ii) Interest on Securities (A-B)	111.66	210.84	99.18	88.8
(A) Interest on Domestic Securities and LAF Operations	223.22	354.79	131.57	58.9
(B) Depreciation on Securities	111.56	143.95	32.39	29.0
(iii) Interest on Loans and Advances	7.31	18.53	11.22	153.5
(iv) Other Interest Receipts	0.44	0.72	0.28	63.6
II. Other Earnings (a+b+c+d)	8.88	10.27	1.39	15.6
(a) Discount	-	-	-	-
(b) Exchange	-	-	-	-
(c) Commission	7.81	9.52	1.71	21.9
(d) Rent realised and others	1.07	0.75	(-) 0.32	(-) 29.9
Earnings in percentage terms (on Average Domestic Assets)	3.77	5.43	--	--

₹101.37 billion in 2011-12 due to increase under all heads of expenditure (Table XI.4).

Establishment Expenditure

XI.8 The establishment expenses increased by 30.1 per cent in 2011-12 to ₹29.93 billion. The increase is primarily due to the increase in contribution of the Reserve Bank towards accrued liability of the Gratuity and Superannuation Fund based on actuarial calculations. The contribution for the year 2011-12 was ₹8.22 billion compared with ₹2.04 billion in the previous year.

Non-Establishment Expenditure

XI.9 The Reserve Bank discharges the function of banker to the government through a large network of agency bank branches that serve as retail outlets for government transactions. The

Table XI.4: Expenditure

(₹ billion)

Item	2007-08	2008-09	2009-10	2010-11	2011-12
1	2	3	4	5	6
I. Interest Payment	**0.03**	**0.01**	**0.01**	**0.55**	**0.59**
of which: Scheduled Banks*	0.02	0.00	0.00	0.00	0.00
II. Establishment	**14.31**	**24.48**	**19.87**	**23.01**	**29.93**
III. Non-establishment	**46.63**	**57.68**	**64.15**	**62.99**	**70.85**
of which: (a) Agency charges/commission	21.11	29.99	28.55	30.12	33.51
(b) Security printing charges	20.32	20.63	27.54	23.76	27.04
Total (I+II+III)	**60.97**	**82.17**	**84.03**	**86.55**	**101.37**

* : Pursuant to amendment to the RBI Act, 1934, interest payable on eligible Cash Reserve Ratio (CRR) balances was withdrawn with effect from the fortnight beginning March 31, 2007. The amount in 2007-08 was paid towards interest on CRR balances relating to the previous year.

Reserve Bank pays commission to the agency banks at prescribed rates. Agency charges/ commission paid to banks/primary dealers/ external asset managers for the year 2011-12 was ₹33.51 billion compared with ₹30.12 billion in 2010-11. This increase is mainly attributable to the increase in the commission paid to agency banks from ₹29.29 billion in 2010-11 to ₹32.13 billion in 2011-12 due to rise in the overall volume of government business conducted by them. Two smaller components of agency charges are fees paid to primary dealers as underwriting commission for the borrowing programme of the Central Government and fees paid to the external asset managers who are entrusted with the management of a small portion of the Reserve Bank's foreign exchange reserves. The expenditure on underwriting commission increased from ₹367.54 million in 2010-11 to ₹722.69 million in 2011-12 on account of increase in the number and the size of the loans floated by the Central Government. It constituted 2.2 per cent of the agency charges for the year 2011-12 as against 1.2 per cent for the year 2010-11.

XI.10 The expenditure incurred on security printing charges (such as cheques and note forms) increased by 13.8 per cent to ₹27.04 billion in 2011-12. This rise was mainly on account of increase in the overall supply of notes, particularly higher denomination notes.

Surplus transfer to the Government of India

XI.11 Section 47 of the RBI Act stipulates that after making provisions for contingencies and corpus funds as defined therein, the balance profit of the Reserve Bank is to be transferred to the Central Government. In terms of section 48 of the RBI Act, the Reserve Bank is exempted from paying any income tax or super-tax. The surplus transferable to the Government for the year 2011-12 amounted to ₹160.10 billion. This included ₹13.22 billion payable to the Government towards the interest differential on special securities converted into marketable securities. The interest differential was paid to compensate for the difference in interest expenditure borne by the Government consequent to conversion of such special securities into dated securities. The position of income, expenditure and surplus transferred to the Government during the last five years is given in Table XI.5.

Transfers to Internal Reserves

XI.12 Contingency Reserve (CR) represents the amount set aside on a year-to-year basis for meeting unexpected and unforeseen contingencies, including depreciation in the value of securities, exchange guarantees and risks arising out of monetary/exchange rate policy operations. In order to meet the needs of internal capital expenditure and make investments in subsidiaries and associate institutions, a further sum is provided and credited

Table XI.5: Trends in Gross Income, Expenditure and Net Disposable Income

(₹ billion)

Item		2007-08	2008-09	2009-10	2010-11	2011-12
1		2	3	4	5	6
a)	**Total Income (Gross)**	**577.51**	**607.32**	**328.84**	**370.70**	**531.76**
b)	**Transfers to Internal Reserves (i+ii)**	**366.39**	**275.01**	**57.18**	**134.02**	**270.25**
	(i) Contingency Reserve	334.31	261.91	51.68	121.67	246.77
	(ii) Asset Development Reserve	32.08	13.10	5.50	12.35	23.48
c)	**Total Income (Net) (a-b)**	**211.12**	**332.31**	**271.66**	**236.68**	**261.51**
d)	**Total Expenditure**	**60.97**	**82.18**	**84.03**	**86.55**	**101.37**
e)	Net Disposable Income (c-d)	150.15	250.13	187.63	150.13	160.14
f)	Transfer to Funds*	0.04	0.04	0.04	0.04	0.04
g)	**Surplus transferred to the Government (e-f)**	**150.11**	**250.09**	**187.59**	**150.09**	**160.10**

*: An amount of ₹10 million each has been transferred to the National Industrial Credit (Long Term Operations) Fund, the National Rural Credit (Long Term Operations) Fund, the National Rural Credit (Stabilisation) Fund and the National Housing Credit (Long Term Operations) Fund during each of the five years.

Table XI.6: Contingency and Asset Development Reserves and Surplus Transferred to the Government

(₹ billion)

Item	2007-08	2008-09	2009-10	2010-11	2011-12
1	2	3	4	5	6
Total Income (Gross)	**577.51**	**607.32**	**328.84**	**370.70**	**531.76**
i) Transfer to Contingency Reserve	334.30	261.91	51.68	121.67	246.77
	(57.9)	(43.1)	(15.7)	(32.8)	(46.4)
ii) Transfer to Asset Development Reserve	32.08	13.10	5.50	12.35	23.48
	(5.6)	(2.2)	(1.7)	(3.3)	(4.4)
iii) Transfer of Surplus to the Government	150.11	250.09	187.59	150.09	160.10
	(26.0)	(41.2)	(57.0)	(40.5)	(30.1)
Transfer of Surplus to the Government as Percentage of Total Income (Gross) less Expenditure	29.1	47.6	76.6	52.8	37.2

Note: Figures in parentheses indicate proportion to the total income (gross).

to the Asset Development Reserve (ADR). The amount of transfer to the CR and the ADR and the surplus transferred to the Government as a percentage of the total income in the last five years is set out in Table XI.6.

BALANCE SHEET

XI.13 The size of the balance sheet of the Reserve Bank increased significantly during 2011-12 largely due to the acquisition of domestic assets through open market operations and valuation gains reflected in the holdings of foreign assets. The increase in FCA was mainly on account of valuation gain, which more than offset the decrease in net stock of FCA due to dollar sales. On the liabilities side, the increase in the balance sheet is led by accretion to CGRA (part of 'Other Liabilities') and increase in notes in circulation (liabilities of the Issue Department). While the first component represents the effect of valuation gains in FCA and gold on account of depreciation of the Indian rupee against the US dollar as well as rise in gold prices during the year, the second component is demand-driven. These two together offset the decline in banks' deposits with the Reserve Bank brought on by reduction in the Cash Reserve Ratio (CRR) during 2011-12.

XI.14 The Reserve Bank prepares its Profit and Loss Account for the year ending June 30 every year. The format is prescribed by the Central Board with the approval of the Central Government in terms of Regulation 22 of RBI General Regulations, 1949.

Issue Department – Liabilities

XI.15 The liabilities of the Issue Department equal the currency notes issued by the Government of India before the commencement of operations of the Reserve Bank on April 1, 1935 plus the bank notes issued by the Reserve Bank since then, in terms of section 34(1) of the RBI Act. The notes in circulation increased by 13.8 per cent during 2011-12, compared with increase of 15.1 per cent during 2010-11.

Issue Department – Assets

XI.16 In terms of the RBI Act, the eligible assets for the Issue Department comprise gold coin and bullion, foreign securities, rupee coin, government securities, internal bills of exchange and other commercial paper. The total holding of gold of the Reserve Bank is 557.75 metric tonnes. A part of the gold stock, valued at ₹760.10 billion, is recorded as a distinct item on the assets side of the Issue Department balance sheet. The remaining stock of gold valued at ₹690.46 billion is reckoned as part of the assets of the Banking Department and is shown under 'Other Assets' in the balance sheet of the Banking Department.

Banking Department – Liabilities

XI.17 The liabilities of the Banking Department include the following:

a) Capital paid-up: The Reserve Bank was constituted as a private shareholders' bank in 1935 with an initial paid-up capital of ₹0.05

billion. The bank was nationalised with effect from January 1, 1949 and the entire ownership was vested in the Government of India. The paid-up capital continues to be ₹0.05 billion as per section 4 of the RBI Act.

b) Reserve Fund: The original Reserve Fund of ₹0.05 billion was created in terms of section 46 of the RBI Act as contribution from the Central Government for the currency liability of the then sovereign government taken over by the Reserve Bank. Thereafter, ₹64.95 billion was credited to this Fund by way of gain on periodic revaluation of gold up to October 1990, thus taking it to ₹65 billion. Since then, such valuation gain/loss on gold and FCA is booked in the CGRA under the head 'Other Liabilities' in the balance sheet.

c) National Industrial Credit (Long Term Operations) Fund: This Fund was created in July 1964 under section 46C of the RBI Act with an initial corpus of ₹100 million plus annual contributions from the Reserve Bank for financial assistance to eligible financial institutions. Since 1992-93, only a token amount of ₹10 million is being contributed each year.

d) National Housing Credit (Long Term Operations) Fund: This Fund was created in January 1989 under section 46D of the RBI Act with an initial corpus of ₹500 million plus annual contributions from the Reserve Bank thereafter for extending financial accommodation to the National Housing Bank. Since 1992-93, only a token amount of ₹10 million is being contributed each year. There are two other Funds, *viz*., National Rural Credit (Long Term Operations) Fund and National Rural Credit (Stabilisation) Fund constituted under section 46A of the RBI Act which are now placed with NABARD. A token contribution of ₹10 million each is made every year to both these Funds.

e) Deposits: These represent the cash balances maintained with the Reserve Bank by the Central and the State Governments, banks, all India financial institutions such as EXIM Bank and NABARD, foreign central banks, international financial institutions, the balances in different accounts relating to the Employees' Provident Fund, Gratuity and Superannuation Funds.

Deposits – Government

The Reserve Bank acts as banker to the Central Government in terms of sections 20 and 21 and as banker to the State Governments by mutual agreement in terms of section 21A of the RBI Act. Accordingly, the Central and the State Governments maintain deposits with the Reserve Bank.

Deposits – Banks

These are the balances maintained by banks in their current accounts with the Reserve Bank for maintaining CRR and as working funds for meeting payment and settlement obligations. The decline in banks' deposits by about 10 per cent in 2011-12 is mainly reflective of the cumulative CRR cut of 125 basis points for scheduled banks during the year.

Deposits – Others

These include deposits from financial institutions, Employees' Provident Fund and sundry deposits.

f) Bills payable: This represents Demand Drafts (DDs) and Payment Orders (POs) outstanding for payment and balances under the Remittance Clearance Account pending encashment of the DDs issued.

g) Other Liabilities: Internal reserves and provisions of the Reserve Bank are major components of other liabilities. In terms of specific sub-heads, other liabilities include balances in the CR, the ADR, the CGRA, the Exchange Equalisation Account (EEA), the Investment Revaluation Account (IRA) and also the surplus pending transfer to the Government and provision for outstanding expenses. Other liabilities increased from

₹4,141.97 billion as on June 30, 2011 to ₹7,263.55 billion as on June 30, 2012 mainly due to accretion to the CGRA. The CR and the ADR reflected in 'Other Liabilities' are in addition to the 'Reserve Fund' of ₹65 billion held by the Reserve Bank as a distinct balance sheet head.

Currency and Gold Revaluation Account (CGRA), Exchange Equalisation Account (EEA) and Investment Revaluation Account (IRA)

XI.18 Gains/losses on valuation of FCA and gold due to movements in the exchange rates and/or price of gold are not taken to the Profit and Loss Account but instead booked under a balance sheet head named the CGRA. The balance in this account represents accumulated net gain on valuation of FCA and gold. During 2011-12, the balances in CGRA increased by ₹2,908.86 billion from ₹1,822.86 billion as on June 30, 2011 to ₹4,731.72 billion as on June 30, 2012. This reflected the depreciation of rupee against the US dollar after adjusting for appreciation of US dollar against other currencies in which the Reserve Bank's FCA are held and the increase in the value of gold.

XI.19 The balance in the EEA represents provision made for the exchange losses arising from forward commitments. The balance in the EEA as on June 30, 2012 was ₹24.05 billion.

XI.20 The Reserve Bank values foreign dated securities at market prices prevailing on the last business day of each month and the appreciation/ depreciation arising therefrom is transferred to the IRA. The balance in the IRA as on June 30, 2012 was ₹122.22 billion. The balances in CGRA, IRA and EEA are grouped under 'Other Liabilities' in the balance sheet (Table XI.7).

Table XI.7: Balances in Currency and Gold Revaluation Account (CGRA), Exchange Equalisation Account (EEA) and Investment Revaluation Account (IRA)

(₹ billion)

As on June 30	CGRA	EEA	IRA
1	2	3	4
2008	1,632.12	0.00	-
2009	1,988.42	0.27	-
2010	1,191.34	0.19	93.71
2011	1,822.86	0.01	42.69
2012	4,731.72	24.05	122.22

Contingency Reserve (CR)

XI.21 The Reserve Bank maintains a CR to enable it to absorb unexpected and unforeseen contingencies. With transfer of ₹246.77 billion from the Reserve Bank's income to CR during 2011-12, the balance in the CR increased to ₹1,954.05 billion as on June 30, 2012.

Asset Development Reserve (ADR)

XI.22 To meet the internal capital expenditure and make investments in its subsidiaries and associate institutions, the Reserve Bank had created a separate ADR in 1997-98 with the aim of reaching one per cent of the Reserve Bank's total assets within the overall indicative target of 12 per cent of the total assets set for CR and ADR taken together. In 2011-12, ₹23.48 billion was transferred from income to ADR raising its level to ₹182.14 billion as on June 30, 2012. The CR and the ADR together constituted 9.7 per cent of the total assets of the Reserve Bank as on June 30, 2012 (Table XI.8). The ADR now accounts for 0.8 per cent of the total assets of the Reserve Bank as against the target of one per cent.

Banking Department – Assets

XI.23 The assets of the Banking Department comprise notes, rupee coin, small coin, bills purchased and discounted, balances held abroad, investments, loans and advances and other assets.

Table XI.8: Balances in Contingency Reserve and Asset Development Reserve

(₹ billion)

As on June 30	CR	ADR	Total	Percentage to Total Assets
1	2	3	4=(2+3)	5
2008	1,272.01	127.72	1,399.73	9.6
2009	1,533.92	140.82	1,674.74	11.9
2010	1,585.61	146.32	1,731.92	11.3
2011	1,707.28	158.66	1,865.94	10.3
2012	1,954.05	182.14	2,136.19	9.7

They are presented in the balance sheet in descending order of liquidity.

Notes, Rupee Coin and Small Coin

XI.24 This is the stock of bank notes, one rupee notes, rupee coins of ₹1, 2, 5 and 10 and small coins kept in the vaults of the Banking Department to meet the day to day requirements arising out of usual receipt and payment transactions as a banker.

Bills Purchased and Discounted

XI.25 Though the Reserve Bank can undertake purchase and discounting of commercial bills under the RBI Act, there is no such asset in the Reserve Bank's books at present.

Balances Held Abroad

XI.26 This represents foreign currency balances held abroad. This is a part of Reserve Bank's FCA shown under assets of the Banking Department. The other parts of the FCA are the foreign securities shown under assets of the Issue Department and those included in the Bank's Investment account as assets of the Banking Department.

Foreign Currency Assets

XI.27 The RBI Act provides the legal framework for deployment of the FCA as well as gold. The FCA comprises deposits with other central banks, the Bank for International Settlements (BIS), foreign commercial banks, securities representing debt of sovereigns and supra-national institutions and any other instrument or institution as approved by the Central Board of the Reserve Bank in accordance with the provisions of the Act. The increase in the level of FCA in rupee terms in 2011-12 was mainly on account of depreciation of the rupee against the US dollar after adjusting for appreciation of the US dollar against other currencies in which the Reserve Bank's FCA are held. The valuation gains more than offset the decline in FCA on account of forex sales to authorised dealers. The position of FCA as also the domestic assets over the last five years is given in Table XI.9.

Table XI.9: Foreign Currency Assets and Domestic Assets

(₹ billion)

As on June 30	Foreign Currency Assets	Domestic Assets
1	2	3
2008	12,985.52	1,644.31
2009	12,175.42	1,906.53
2010	11,644.31	3,885.94
2011	12,687.44	5,359.07
2012	14,492.81	7,596.54

XI.28 The FCA forms a major part of the foreign exchange reserves of the country. The comparative position of the foreign exchange reserves in the last two years is given in Table XI.10. It may be noted that though the Special Drawing Rights (SDRs) and the Reserve Tranche Position (RTP) form part of India's official reserves, these are held by the

Table XI.10: Foreign Exchange Reserves

(₹ billion)

Item	As on		Variation	
	June 30, 2011	June 30, 2012	Absolute	Per cent
1	2	3	4	5
A. Foreign Currency Assets	12,687.44	14,492.81 @	1,805.37	14.2
B. Gold	1,103.17	1,450.56 #	347.39	31.5
C. Special Drawing Rights (SDR)	206.32	246.59	40.27	19.5
D. Reserve Tranche Position in the IMF*	133.03	162.99	29.96	22.5
Total Foreign Exchange Reserves (A+B+C+D)	14,129.96	16,352.95	2,222.99	15.7

#: Detailed composition of foreign currency assets is given in para 8 of Notes to the Accounts.

@: Of this, gold valued at ₹760.10 billion is held as an asset of Issue Department and gold valued at ₹690.46 billion is held under 'Other Assets' in the Banking Department.

*: Reserve Tranche Position in the International Monetary Fund (IMF), which was shown as a memo item from May 23, 2003 to March 26, 2004 has been included in the reserves from the week ended April 2, 2004.

Government of India and therefore, not reflected in the Reserve Bank's balance sheet.

XI.29 The Reserve Bank has agreed to make resources available under the IMF's New Arrangements to Borrow (NAB) up to an amount of SDR 8,740.82 million (₹746.93 billion/US$13.26 billion). As on June 30, 2012, investments amounting to SDR 1,020 million (₹87.16 billion/ US$1.55 billion) have been made in notes issued under NAB.

XI.30 The Reserve Bank has agreed to invest up to an amount, the aggregate of which shall not exceed US$5 billion (₹281.55 billion), in the bonds issued by the India Infrastructure Finance Company (UK) Limited. As on June 30, 2012, the Reserve Bank has invested US$673 million (₹37.90 billion) in such bonds.

Investments

XI.31 Investments (₹6,305.90 billion appearing as assets of the Banking Department) consist of:

i) Government of India Rupee securities (₹4,827.27 billion as compared with ₹2,950.37 billion in the previous year).

ii) Foreign securities earmarked and held in the Banking Department as asset backing against future expansion of Issue Department liabilities (₹588.03 billion as compared with ₹548.34 billion in the previous year).

iii) Shares held in the BIS and the Society for Worldwide Interbank Financial Telecommunication (SWIFT) amounting to ₹2.54 billion as compared with ₹2.13 billion in the previous year.

iv) Government securities received as collateral under Repurchase agreement (Repo) and Marginal Standing Facility (MSF), netted against the securities used as collateral for Reverse Repo sales (₹874.86 billion as compared with ₹1,072.02 billion in the previous year).

v) Holdings in subsidiaries/associate institutions (₹13.20 billion – same as in the previous year).

XI.32 In addition, Government of India Rupee securities aggregating ₹10.46 billion (same position as previous year) are also held as assets of the Issue Department. As on June 30, 2012, these Government of India Rupee securities held in the Issue Department and in the Banking Department indicated at item no. (i) above, taken together, amounted to ₹4,837.73 billion as compared with ₹2,960.83 billion in the previous year. The significant increase in holdings of Government securities indicated at item (i) above was primarily on account of open market purchases by the Reserve Bank.

XI.33 Items (ii) and (iii) above taken together (*i.e.,* ₹590.57 billion) constitute the FCA component of 'Investments' in the Banking Department.

Investments in shares of subsidiaries and associate institutions

XI.34 Investments in shares are valued at cost. There was no change in the position of such investments during the year (Table XI.11).

Loans and Advances

XI.35 These represent loans and advances given to

i) Central and State Governments – These loans take the form of WMA extended in terms of

Table XI.11: Investments in Shares of Subsidiaries/Associate Institutions

(₹ million)

Name of Institution	Book value of shares held as on	
	June 30, 2011	June 30, 2012
1	2	3
1. Deposit Insurance and Credit Guarantee Corporation	500.00	500.00
2. National Bank for Agriculture and Rural Development	200.00	200.00
3. National Housing Bank	4,500.00	4,500.00
4. Bhartiya Reserve Bank Note Mudran (Pvt.) Ltd.	8,000.00	8,000.00
Total	**13,200.00**	**13,200.00**

*: The Reserve Bank divested its stake in NABARD as per the decision of the Government of India. Thus, out of 72.5 per cent of NABARD's total share capital of ₹20 billion earlier held by the Reserve Bank, 71.5 per cent was transferred to the Government of India at par on October 13, 2010. The Reserve Bank now has a 1 per cent shareholding in NABARD.

section 17(5) of the RBI Act and OD facilities, limits for which are fixed from time to time in consultation with the governments.

ii) Commercial and co-operative banks – These represent the refinance facilities made available to banks.

iii) NABARD – The Reserve Bank can extend loans to NABARD under section 17 (4E) of the RBI Act.

iv) Others – This mainly includes the loans given to EXIM Bank and primary dealers.

Other Assets

XI.36 'Other Assets' comprise fixed assets (net of depreciation), gold held abroad, amounts spent on projects pending completion, staff advances, income earned but not received, *etc.* The value of 'Other Assets' increased by ₹204.11 billion to ₹902.60 billion as on June 30, 2012, mainly on account of increase in the value of gold holdings by 31.5 per cent from ₹525.11 billion as on June 30, 2011 to ₹690.46 billion as on June 30, 2012.

Auditors

XI.37 The accounts of the Reserve Bank for the year 2011-12 were audited by M/s. V. Sankar Aiyar & Co., Mumbai and M/s. Jain Chowdhary & Co., Mumbai as the Statutory Central Auditors. Branches and other Offices were audited by the Statutory Branch Auditors, namely, M/s. S. Ramanand Aiyar & Co., New Delhi, M/s. K.K. Mankeshwar & Co., Nagpur, M/s. M.K. Dandeker & Co., Chennai and M/s. S. N. Guha & Co., Kolkata. The auditors were appointed by the Central Government in terms of section 50 of the RBI Act, 1934.

RESERVE BANK OF INDIA
BALANCE SHEET AS AT 30th JUNE 2012
ISSUE DEPARTMENT

(₹ thousands)

2010-11	LIABILITIES	2011-12	2010-11	ASSETS	2011-12
				Gold Coin and Bullion:	
151,426	**Notes held in the Banking Department**	**89,169**	578,065,257	(a) Held in India	**760,096,797**
9692,612,385	**Notes in Circulation**	**11034,645,327**	–	(b) Held outside India	**–**
			9101,656,191	**Foreign Securities**	**10261,966,851**
9692,763,811	**Total Notes Issued**	**11034,734,496**	9679,721,448	**Total**	**11022,063,648**
			2,578,063	**Rupee Coin**	**2,206,548**
			10,464,300	**Government of India Rupee Securities**	**10,464,300**
			–	**Internal Bills of Exchange and other Commercial Paper**	**–**
9692,763,811	**Total Liabilities**	**11034,734,496**	9692,763,811	**Total Assets**	**11034,734,496**

BANKING DEPARTMENT

(₹ thousands)

2010-11	LIABILITIES	2011-12	2010-11	ASSETS	2011-12
50,000	**Capital paid-up**	**50,000**	151,426	**Notes**	**89,169**
65,000,000	**Reserve Fund**	**65,000,000**	534	**Rupee Coin**	**418**
200,000	**National Industrial Credit (Long Term Operations) Fund**	**210,000**	225	**Small Coin**	**125**
1,940,000	**National Housing Credit (Long Term Operations) Fund**	**1,950,000**		**Bills Purchased and Discounted :**	
			–	(a) Internal	**–**
			–	(b) External	**–**
			–	(c) Government Treasury Bills	**–**
	Deposits				
	(a) Government		3035,309,297	**Balances Held Abroad**	**3640,273,093**
1,005,130	(i) Central Government	**1,004,903**			
424,443	(ii) State Governments	**424,570**			
	(b) Banks		4586,062,175	**Investments**	**6305,897,052**
3812,064,138	(i) Scheduled Commercial Banks	**3419,535,741**			
36,798,218	(ii) Scheduled State Co-operative Banks	**33,242,701**		**Loans and Advances to :**	
57,553,642	(iii) Other Scheduled Co-operative Banks	**53,643,644**	7,700,000	(i) Central Government	**–**
673,180	(iv) Non-Scheduled State Co-operative Banks	**916,213**	765,100	(ii) State Governments	**7,307,400**
103,578,103	(v) Other Banks	**92,870,015**		**Loans and Advances to:**	
124,307,591	**(c) Others**	**122,045,831**	17,466,900	(i) Scheduled Commercial Banks	**167,962,800**
			–	(ii) Scheduled State Co-operative Banks	**390,000**
			–	(iii) Other Scheduled Co-operative Banks	**1,290,000**
8,331,436	**Bills Payable**	**270,361**	–	(iv) Non-Scheduled State Co-operative Banks	**–**
			–	(v) NABARD	**–**
			7,952,848	(vi) Others	**28,902,498**
				Loans, Advances and Investments from National Industrial Credit (Long Term Operations) Fund:	
				(a) Loans and Advances to:	
			–	(i) Industrial Development Bank of India	**–**
			–	(ii) Export Import Bank of India	**–**
4141,971,513	**Other Liabilities**	**7263,548,128**	–	(iii) Industrial Investment Bank of India Ltd.	**–**
			–	(iv) Others	**–**
				(b) Investments in bonds/ debentures issued by:	
			–	(i) Industrial Development Bank of India	**–**
			–	(ii) Export Import Bank of India	**–**
			–	(iii) Industrial Investment Bank of India Ltd.	**–**
			–	(iv) Others	**–**
				Loans, Advances and Investments from National Housing Credit (Long Term Operations) Fund:	
			–	(a) Loans and Advances to National Housing Bank	**–**
			–	(b) Investments in bonds/debentures issued by National Housing Bank	**–**
			698,488,889	**Other Assets**	**902,599,552**
8353,897,394	**Total Liabilities**	**11054,712,107**	8353,897,394	**Total Assets**	**11054,712,107**

Significant Accounting Policies and Notes to the Accounts as per the Annex.

PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 30th JUNE 2012

(₹ thousands)

2010-11	INCOME		2011-12
236,682,172	**Interest, Discount, Exchange, Commission, *etc.*[1]**		**261,508,821**
236,682,172	**Total**		**261,508,821**
	EXPENDITURE		
550,644	**Interest**		**587,780**
23,007,071	**Establishment**		**29,934,972**
22,961	**Directors' and Local Board Members' Fees and Expenses**		**29,802**
455,277	**Remittance of Treasure**		**528,245**
30,124,883	**Agency Charges**		**33,508,790**
23,763,720	**Security Printing (Cheque, Note forms, *etc.*)**		**27,037,058**
233,259	**Printing and Stationery**		**257,177**
718,443	**Postage and Telecommunication Charges**		**804,859**
855,027	**Rent, Taxes, Insurance, Lighting, *etc.***		**1,022,927**
31,386	**Auditors' Fees and Expenses**		**26,794**
32,684	**Law Charges**		**27,879**
2,439,195	**Depreciation and Repairs to Bank's Property**		**2,424,716**
4,317,622	**Miscellaneous Expenses**		**5,177,822**
86,552,172	**Total**		**101,368,821**
150,130,000	**Available Balance**		**160,140,000**
	Less: Contribution To:		
	National Industrial Credit (Long Term Operations) Fund	10,000	
	National Rural Credit (Long Term Operations) Fund[2]	10,000	
	National Rural Credit (Stabilisation) Fund[2]	10,000	
	National Housing Credit (Long Term Operations) Fund	10,000	
40,000			**40,000**
150,090,000	**Surplus payable to the Central Government**		**160,100,000**

1. After making the usual or necessary provisions in terms of section 47 of the Reserve Bank of India Act, 1934 amounting to ₹270,254,407 thousands (2010-11 - ₹134,019,026 thousands).
2. These funds are maintained by the National Bank for Agriculture and Rural Development (NABARD).

A.K. Bera	**Harun R. Khan**	**Anand Sinha**	**Subir Gokarn**	**K.C. Chakrabarty**	**D. Subbarao**
Chief General Manager	Deputy Governor	Deputy Governor	Deputy Governor	Deputy Governor	Governor

REPORT OF THE AUDITORS

TO THE PRESIDENT OF INDIA

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 at June 30, 2012 and the Profit and Loss Account for the year ended on that date.

We have examined the Balance Sheet of the Bank as at June 30, 2012 and the Profit and Loss Account of the Bank for the year ended on that date and report that where we have called for information and explanations from the Bank, such information and explanations have been given to our satisfaction.

These financial statements include the accounts of nineteen Accounting Units of the Bank which have been audited by the Statutory Branch Auditors. We have considered branch audit reports which were furnished to us.

These financial statements are the responsibility of the Bank's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in India. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion and according to the best of our information and explanations given to us and as shown by the books of account of the Bank, the Balance Sheet read with Significant Accounting Policies and Notes to the Accounts is a full and fair Balance Sheet containing all necessary particulars and is properly drawn up in accordance with the Reserve Bank of India Act, 1934 and Regulations framed thereunder so as to exhibit a true and correct view of the state of the Bank's affairs in conformity with the accounting principles generally accepted in India.

For V. Sankar Aiyar & Co.	For Jain Chowdhary & Co.
Chartered Accountants	Chartered Accountants
Firm Registration No.109208W	Firm Registration No.113267W
S.Venkatraman	S.C.Jain
Partner	Partner
(M. No. 34319)	(M. No. 14871)

Dated: August 09, 2012
Place: Mumbai

ANNEX

RESERVE BANK OF INDIA

SIGNIFICANT ACCOUNTING POLICIES AND NOTES TO THE ACCOUNTS FOR THE YEAR 2011-12

SIGNIFICANT ACCOUNTING POLICIES

1. CONVENTION

The financial statements are prepared in accordance with the Reserve Bank of India Act, 1934 and the notifications issued thereunder and in the form prescribed by the Reserve Bank of India General Regulations, 1949 and are based on historical cost except where it is modified to reflect revaluation.

The accounting practices and policies followed in the financial statements are consistent with those followed in the previous year unless otherwise stated.

2. REVENUE RECOGNITION

Income and expenditure are recognised on accrual basis except penal interest and dividend, which are accounted for on receipt basis. Only realised gains are recognised.

Balances unclaimed and outstanding for more than three clear consecutive years in certain transit accounts including Drafts Payable Account, Payment Orders Account, Sundry Deposits Account, Remittance Clearance Account and Earnest Money Deposit Account are reviewed and written back to income. Claims in this respect are considered and charged against income in the year of payment.

Income and expenditure in foreign currency are recorded at the exchange rates prevailing on the last business day of the week/month/year as applicable.

3. GOLD AND FOREIGN CURRENCY ASSETS AND LIABILITIES

Transactions in gold and foreign currency assets and liabilities are accounted for on settlement date basis.

(a) Gold

Gold is revalued at the end of the month at 90 per cent of the daily average price quoted at London for the month. The rupee equivalent is determined on the basis of the exchange rate prevailing on the last business day of the month. Unrealised gains/losses are credited/debited to the Currency and Gold Revaluation Account (CGRA).

(b) Foreign Currency Assets and Liabilities

All foreign currency assets and liabilities are translated at the exchange rates prevailing on the last business day of the week as well as on the last business day of the month. At the year-end, foreign currency assets and liabilities are translated at the exchange rates prevailing on the last business day, except in cases where rates are contractually fixed. Exchange gains and losses arising from such translation of foreign currency assets and liabilities are accounted for in CGRA and remain adjusted therein. Forward exchange contracts are valued half-yearly, and net loss, if any, is provided for in the Exchange Equalisation Account (EEA).

Foreign securities other than Treasury Bills are valued at market price prevailing on the last business day of each month except certain "held to maturity" securities, which are valued at cost. Appreciation or depreciation, if any, is transferred to the Investment Revaluation Account (IRA). Credit balance in IRA is carried forward to the subsequent year. Debit balance, if any, at the end of the year in IRA is charged to the Profit and Loss Account and the same is reversed to the credit of the Profit and Loss Account on the first working day of the succeeding financial year.

Foreign Treasury Bills and Commercial Papers are carried at cost as adjusted by amortisation of discount. Premium or discount on foreign securities is amortised daily. Profit/loss on sale of foreign currency assets is recognised with respect to the book value. In the case of foreign securities, it is recognised with reference to the amortised cost. Further, on sale/redemption of foreign dated securities, gain/loss in relation to the securities sold lying in IRA, is transferred to the Profit and Loss Account.

4. RUPEE SECURITIES

Rupee securities, other than Treasury Bills, held in the Issue and Banking Departments, are valued at lower of book value or market price (LOBOM). Where the market price for such securities is not available, the rates are derived based on the yield curve prevailing on the last business day of the month as notified by the Fixed Income Money Market and Derivatives Association of India (FIMMDA). Depreciation in value, if any, is adjusted against current interest income.

Treasury Bills are valued at cost.

Securities received as collateral under Repurchase Agreement (Repo) and Marginal Standing Facility (MSF) are held in the Reserve Bank's books at face value.

5. SHARES

Investments in shares are valued at cost.

6. FIXED ASSETS

Fixed Assets are stated at cost less depreciation.

Depreciation on computers, microprocessors, software (costing ₹0.1 million and above), motor vehicles, furniture, *etc.* is provided on straight-line basis at the following rates.

Asset Category	Rate of depreciation
Computers, microprocessors, software, *etc.*	33.33 per cent
Motor vehicles, furniture, *etc.*	20 per cent

Amortisation of premium on leasehold land and depreciation on building is provided on written-down value basis at the following rates.

Asset Category	Rate of amortisation/ depreciation
Leasehold Land and Building(s) constructed thereon	Proportionate to lease period but not less than 5 per cent
Building(s) constructed on Freehold Land	10 per cent

Fixed Assets, costing less than ₹0.1 million, (except easily portable electronic assets such as laptops, mobile phones, *etc.,* costing more than ₹10,000) are charged to the Profit and Loss Account in the year of acquisition.

Depreciation is provided on year-end balances of the Fixed Assets.

7. EMPLOYEE BENEFITS

The liability on account of long term employee benefits is provided based on an actuarial valuation under the 'Projected Unit Credit' method.

8. CONTINGENCY RESERVE AND ASSET DEVELOPMENT RESERVE

Contingency Reserve (CR) represents the amount set aside on a year-to-year basis for meeting unexpected and unforeseen contingencies including depreciation in the value of securities, exchange guarantees and risks arising out of monetary/exchange rate policy operations.

In order to meet the internal capital expenditure and make investments in subsidiaries and associate institutions, a further sum is provided and credited to the Asset Development Reserve (ADR).

NOTES TO THE ACCOUNTS

1. SURPLUS TRANSFER TO GOVERNMENT OF INDIA

Surplus transferable to the Government includes ₹13.22 billion (same as in the previous year) representing interest differential pertaining to the period April 1, 2011-March 31, 2012 on account of conversion of special securities issued by the Government of India into marketable securities.

2. EARMARKED SECURITIES

The Reserve Bank has earmarked certain Government securities having a book value of ₹112.48 billion (previous year ₹100.67 billion) from its Investment Account in order to cover the liabilities in the Provident Fund, Gratuity and Superannuation Fund and Leave Encashment (Retiring Employees) Fund.

3. RESERVE FUND

Reserve Fund comprises initial contribution of ₹0.05 billion made by the Government of India and appreciation of ₹64.95 billion on account of revaluation of gold up to October 1990. Subsequent gains/losses on monthly revaluation of gold are taken to the Currency and Gold Revaluation Account (CGRA).

4. DEPOSITS

(a) Government

There is no outstanding balance maintained by the Central Government under the Market Stabilisation Scheme (MSS).

Deposits of State Governments include balance of the Government of the Union Territory of Puducherry.

(b) Others

(₹ billion)

Particulars		As on June 30	
		2011	2012
1		2	3
I.	Rupee Deposits from the Foreign Central Banks and the Foreign Financial Institutions	7.25	11.18
II.	Deposits from the Indian Financial Institutions	1.99	1.27
III.	Accumulated Retirement Benefits (i+ii)	94.01	105.39
	(i) Provident Fund	30.13	33.55
	(ii) Gratuity and Superannuation Fund	63.88	71.84
IV.	Miscellaneous	21.05	4.21
	Total	**124.30**	**122.05**

5. DETAILS OF OTHER LIABILITIES

(₹ billion)

Particulars		As on June 30	
		2011	2012
1		2	3
I.	**Contingency Reserve**		
	Balance at the beginning of the year	**1,585.61**	**1,707.28**
	Add: Accretion during the year	121.67	246.77
	Balance at the end of the year	**1,707.28**	**1,954.05**
II.	**Asset Development Reserve**		
	Balance at the beginning of the year	**146.32**	**158.66**
	Add: Accretion during the year	12.34	23.48
	Balance at the end of the year	**158.66**	**182.14**
III.	**Currency and Gold Revaluation Account**		
	Balance at the beginning of the year	**1,191.34**	**1,822.86**
	Add: Net Accretion (+)/Net Depletion (-) during the year	631.52	2,908.86
	Balance at the end of the year	**1,822.86**	**4,731.72**
IV.	**Investment Revaluation Account**		
	Balance at the beginning of the year	**93.71**	**42.69**
	Add: Net Accretion (+)/Net Utilisation (-) during the year	(-)51.02	(+)79.53
	Balance at the end of the year	**42.69**	**122.22**
V.	**Exchange Equalisation Account**		
	Balance at the beginning of the year	**0.19**	**0.01**
	Transfer from Exchange Account	0.01	24.05
	Add: Net Accretion (+)/Net Utilisation (-) during the year	(-)0.19	(-)0.01
	Balance at the end of the year	**0.01**	**24.05**
VI.	**Settlement Liabilities**	**166.89**	**Nil**
VII.	**Provision for Outstanding Expenses**	**15.18**	**16.16**
VIII.	**Surplus Transferable to the Government of India**	**150.09**	**160.10**
IX.	**Miscellaneous**	**78.32**	**73.11**
X.	**Total (I to IX)**	**4,141.97**	**7,263.55**

6. RBI GENERAL ACCOUNT

'Other Assets' include ₹138.28 million (corresponding figure of the previous year was ₹171.90 million) of the RBI General Account in respect of inter-office transactions and balances which are at various stages of reconciliation and necessary adjustments are being effected as and when reconciled. Consequent upon the implementation of the Core Banking System (CBS) in the Reserve Bank during 2011-12, this mechanism of inter-office transactions has ceased to exist.

7. RUPEE INVESTMENTS

Securities purchased (Repo) and sold (Reverse Repo) under the Liquidity Adjustment Facility (LAF) are added to and reduced from 'Investments', respectively. As at the year-end, the outstanding Repos and Reverse Repos amounted to ₹904.60 billion (previous year ₹1,046.90 billion) and ₹77.60 billion (previous year ₹26.00 billion), respectively. The MSF balance outstanding as at the year-end was ₹6 billion. The corresponding figure in the previous year was nil.

8. DETAILS OF FOREIGN CURRENCY ASSETS

(₹ billion)

Particulars	As on June 30	
	2011	2012
1	2	3
I. Held in Issue Department	9,101.66	10,261.97
II. Held in Banking Department		
(a) Included in Investments	550.47	590.57
(b) Balances Held Abroad	3,035.31	3,640.27
Total	**12,687.44**	**14,492.81**

Notes :

1. Uncalled amount on partly paid shares of the Bank for International Settlements (BIS) as on June 30, 2012 was ₹1.03 billion (SDR 12,041,250). The amount was ₹0.86 billion (SDR 12,041,250) in the previous year.
2. The Reserve Bank has agreed to make resources available under the IMF's New Arrangements to Borrow (NAB) (which subsumes the earlier commitment of US$10 billion/₹563.10 billion under the Note Purchase Agreement) up to a maximum amount of SDR 8,740.82 million (₹746.93 billion/US$13.26 billion). As on June 30, 2012, investments amounting to SDR 1,020 million (₹87.16 billion/US$1.55 billion) have been made under the NAB.
3. The Reserve Bank has agreed to invest up to an amount, the aggregate of which shall not exceed US$5 billion (₹281.55 billion), in the bonds issued by India Infrastructure Finance Company (UK) Limited. As on June 30, 2012, the Reserve Bank had invested US$ 673 million (₹37.90 billion) in such bonds.

9. DETAILS OF OTHER ASSETS

(₹ billion)

Particulars	As on June 30	
	2011	2012
1	2	3
I. Fixed Assets (net of accumulated depreciation)	4.88	4.37
II. Gold	525.11	690.46
III. Income Accrued	159.01	195.11
IV. Miscellaneous	9.49	12.66
Total	**698.49**	**902.60**

10. INTEREST, DISCOUNT, EXCHANGE, COMMISSION, *etc.*

Interest, Discount, Exchange, Commission, *etc.,* include the following:

(₹ billion)

Particulars	Year ended	
	June 30, 2011	June 30, 2012
1	2	3
I. Profit on sale of Foreign and Rupee Securities	55.37	111.07
II. Net profit on sale of Bank's Property	0.03	0.02

11. AUDITORS' FEES

Out of total Auditors' Fees and Expenses of ₹26.79 million, a sum of ₹2.4 million was paid to the Bank's Statutory Auditors as audit fees for audit of the Bank's accounts.

12. Previous year's figures have been regrouped/reclassified, wherever necessary, to conform to current year's presentation.

ANNEX I

DETAILS OF CHANGES IN DIRECTORS/MEMBERS OF THE CENTRAL BOARD/LOCAL BOARDS

Sr. No.	New Appointment	Position	Nominated By	Vice	With effect from	Additional Information
1	2	3	4	5	6	7
1.	Shri Dipankar Gupta	Director of Central Board	GoI under Section 8(1)(c)	Shri Man Mohan Sharma	September 20, 2011	Board of NABARD
2.	Shri Najeeb Jung	Director of Central Board	GoI under Section 8(1)(c)	Shri Sanjay Labroo	September 22, 2011	
3.	Shri Kiran Karnik	Director of Central Board	GoI under Section 8(1)(b)	Shri Y.H. Malegam	September 23, 2011	Chairman of Western Area Local Board
4.	Shri Anil Kakodkar	Director of Central Board	GoI under Section 8(1)(b)	Shri U.R. Rao	September 23, 2011	Chairman of Northern Area Local Board
5.	Shri G.M. Rao	Director of Central Board	GoI under Section 8(1)(c)	Shri Suresh Kumar Neotia	September 23, 2011	
6.	Ms. Ela Bhatt	Director of Central Board	GoI under Section 8(1)(c)	Dr. A. Vaidyanathan	September 23, 2011	
7.	Dr. Indira Rajaraman	Director of Central Board	GoI under Section 8(1)(c)	Late Dr. D. Jayavarthanavelu	September 23, 2011	
8.	Shri Y.H. Malegam	Director of Central Board	GoI under Section 8(1)(c)	Shri H.P. Ranina	October 7, 2011	Re-nominated for the 4th term on the Central Board of the Bank
9.	Shri M.V. Rajeev Gowda	Director of Central Board	GoI under Section 8(1)(b)	Shri Lakshmi Chand	October 17, 2011	Chairman of the Southern Area Local Board
10.	Shri D.K. Mittal	Director of Central Board	GoI under Section 8(1)(d) post amendment in the RBI Act, 1934	Nominee of Government of India on the Central Board	February 7, 2012	Secretary, Department of Financial Services, Ministry of Finance
11.	Shri Arvind Mayaram	Director of Central Board	GoI under Section 8(1)(d) post amendment in the RBI Act, 1934	Shri R. Gopalan	August 7, 2012	Secretary, Department of Economic Affairs
12.	Ms. Anila Kumari	Member of the Eastern Area Local Board		Shri A.K. Saikia	November 4, 2011	
13.	Sharif Uz Zaman Laskar	Member of the Eastern Area Local Board		Shri Sovan Kanungo	November 16, 2011	
14.	Shri K. Selvraj	Member of the Southern Area Local Board		Shri C.P.Nair	October 21, 2011	
15.	Shri Kiran Pandurang	Member of the Southern Area Local Board		Smt. Devaki Jain	October 21, 2011	
16.	Shri A. Naveen Bhandary	Member of the Northern Area Local Board		Dr. Pritam Singh	September 1, 2011	

Note: 1. Vacancies arising from the demise of Prof. Suresh D. Tendulkar, Smt. Shashi Rajgopalan and resignation of Dr. Ashok Ganguly remain to be filled.
2. Five vacancies in local boards remain to be filled (three in eastern area local board and one each in western and southern local board).

ANNEX II

LIST OF SPEECHES BY GOVERNOR AND DEPUTY GOVERNORS: APRIL 2011 TO JUNE 2012

Sr. No.	Title of Speech	Speech by	Date
1	2	3	4
1.	Linking Entrepreneurship with Credit – The Role of Financial System	Dr. K. C. Chakrabarty, Deputy Governor	April 4, 2011
2.	Sustainability of Economic Growth and Controlling Inflation: The Way Forward	Dr. Subir Gokarn, Deputy Governor	April 5, 2011
3.	The Global Economy and Framework	Dr. Duvvuri Subbarao, Governor	April 15, 2011
4.	Statement at IMFC	Dr. Duvvuri Subbarao, Governor	April 16, 2011
5.	Global Challenges, Global Solutions: Some Remarks	Dr. Duvvuri Subbarao, Governor	April 16, 2011
6.	Regulatory Perspectives on Derivatives Markets in India	Dr. Subir Gokarn, Deputy Governor	May 4, 2011
7.	Central Bank Governance Issues! Some RBI Perspectives	Dr. Duvvuri Subbarao, Governor	May 9, 2011
8.	Policy Discipline and Spillovers in an Inter-connected Global Economy	Dr. Duvvuri Subbarao, Governor	May 10, 2011
9.	Banking on Technology	Shri Anand Sinha, Deputy Governor	May 13, 2011
10.	Talent Acquisition and Management	Dr. K. C. Chakrabarty, Deputy Governor	May 31, 2011
11.	Macroprudential Policies: Indian Experience	Shri Anand Sinha, Deputy Governor	June 2, 2011
12.	Non-financial Reporting – What, Why and How – Indian Perspective	Dr. K. C. Chakrabarty, Deputy Governor	June 6, 2011
13.	Financial Stability Mandate of Central Banks: Issues in the International and Indian Context	Dr. Duvvuri Subbarao, Governor	June 10, 2011
14.	Challenges and Opportunities in a Trillion Dollar Economy	Dr. K. C. Chakrabarty, Deputy Governor	June 17, 2011
15.	Mutual Funds and Market Development in India	Dr. Subir Gokarn, Deputy Governor	June 22, 2011
16.	India and the Global Financial Crisis: What Have We Learnt?	Dr. Duvvuri Subbarao, Governor	June 23, 2011
17.	Economic Reforms for Sustainable Growth	Dr. Subir Gokarn, Deputy Governor	June 23, 2011
18.	Challenges for Next Generation Banking	Dr. K. C. Chakrabarty, Deputy Governor	June 25, 2011
19.	Striking the Balance between Growth and Inflation in India	Dr. Subir Gokarn, Deputy Governor	June 27, 2011
20.	Connecting the Dots	Dr. K. C. Chakrabarty, Deputy Governor	June 28, 2011
21.	Statistics in the World of RBI	Dr. Duvvuri Subbarao, Governor	July 5, 2011
22.	Technology in Banking – In Pursuit of Excellence	Shri Anand Sinha, Deputy Governor	August 4, 2011
23.	Indian Education System – Issues and Challenges	Dr. K. C. Chakrabarty, Deputy Governor	August 5, 2011
24.	Corporate Governance of Banks in India: In Pursuit of Productivity Excellence	Dr. Duvvuri Subbarao, Governor	August 23, 2011
25.	Reflections on Regulatory Challenges and Dilemmas	Shri Anand Sinha, Deputy Governor	August 24, 2011
26.	Banking, Electronic Payments and the Road Ahead	Shri Harun R. Khan, Deputy Governor	August 25, 2011
27.	Agricultural Productivity and Credit – Issues and Way Forward	Dr. K. C. Chakrabarty, Deputy Governor	September 2, 2011
28.	Financial Inclusion – Presentation	Dr. K. C. Chakrabarty, Deputy Governor	September 6, 2011
29.	Impact of Global Financial Crisis on Financial Consumers: Global and Indian Perspective on Need for Consumer Protection – Role of Ombudsmen	Dr. K. C. Chakrabarty, Deputy Governor	September 21, 2011
30.	Intervention at IMF Meeting	Dr. Duvvuri Subbarao, Governor	September 23, 2011
31.	Monetary Policy Dilemmas: Some RBI Perspectives	Dr. Duvvuri Subbarao, Governor	September 26, 2011
32.	Central Banking in the Post-Crisis Era: Experiences and Way Forward	Shri Harun R. Khan, Deputy Governor	September 28, 2011
33.	Welcome Remarks	Dr. Duvvuri Subbarao, Governor	October 7, 2011
34.	Financial Inclusion and Banks: Issues and Perspectives	Dr. K. C. Chakrabarty, Deputy Governor	October 14, 2011

Sr. No.	Title of Speech	Speech by	Date
1	2	3	4
35.	Growth, Resilience and Reform: Reflections on Post-crisis Policy Challenges	Dr. Subir Gokarn, Deputy Governor	November 2, 2011
36.	Gearing up for the Competitive Impulse in the Indian Banking Industry in its Defining Decade	Dr. K. C. Chakrabarty, Deputy Governor	November 4, 2011
37.	Financial Inclusion and Financial Stability: Are They Two Sides of the Same Coin?	Shri Harun R. Khan, Deputy Governor	November 4, 2011
38.	Indian Banking – Journey into the Future	Shri Anand Sinha, Deputy Governor	November 6, 2011
39.	Post-Crisis: The New Normal	Dr. K. C. Chakrabarty, Deputy Governor	November 8, 2011
40.	Convergence of Mobile Banking, Financial Inclusion and Consumer Protection	Dr. K. C. Chakrabarty, Deputy Governor	November 9, 2011
41.	Bank Resolution Framework: Challenges in the Indian Context	Dr. Duvvuri Subbarao, Governor	November 14, 2011
42.	Empowering Deposit Insurance Entities to Face Challenges posed by an Emerging Financial Landscape – Global and Indian Experience	Dr. K. C. Chakrabarty, Deputy Governor	November 15, 2011
43.	The Challenge of Food Inflation	Dr. Duvvuri Subbarao, Governor	November 22, 2011
44.	Rejigging the Elephant Dance	Dr. Duvvuri Subbarao, Governor	November 25, 2011
45.	Financial Inclusion in NER and Other Issues – Interview published in Assam Tribune	Dr. Duvvuri Subbarao, Governor	November 29, 2011
46.	An Assessment of Recent Macroeconomic Developments	Dr. Subir Gokarn, Deputy Governor	December 3, 2011
47.	Microenterprise Development: Path to Creating MNCs of Tomorrow	Dr. K. C. Chakrabarty, Deputy Governor	December 5, 2011
48.	Food Inflation: This Time it's Different	Dr. Subir Gokarn, Deputy Governor	December 9, 2011
49.	Reflections on Leaders and Leadership	Dr. Duvvuri Subbarao, Governor	December 9, 2011
50.	The Shrinking Money and RBI's Monetary Policy	Shri Harun R. Khan, Deputy Governor	December 10, 2011
51.	Ten Commandments for a Successful Banking Career	Dr. K. C. Chakrabarty, Deputy Governor	December 13, 2011
52.	Challenges to the Accounting Profession: Some Reflections	Dr. Duvvuri Subbarao, Governor	December 16, 2011
53.	Legislative Reforms – Strengthening Banking Sector	Shri Anand Sinha, Deputy Governor	December 18, 2011
54.	Financial Reporting in the context of Financial Stability: A Regulator's View on Some Accounting Issues	Shri Anand Sinha, Deputy Governor	December 21, 2011
55.	Infrastructure Financing in India – Progress & Prospects	Shri Harun R. Khan, Deputy Governor	December 29, 2011
56.	Crisis Preparedness in Interconnected Markets – Prevention is Better than Cure	Dr. K. C. Chakrabarty, Deputy Governor	January 1, 2012
57.	Financial Inclusion and Urban Co-operative Banks	Shri Anand Sinha, Deputy Governor	January 6, 2012
58.	Banking Sector – Maintaining Resilience to Risk and Shock and the Role of the Accounting Profession	Dr. K. C. Chakrabarty, Deputy Governor	January 7, 2012
59.	Towards Vibrant Debt Markets – A 7i Framework	Shri Harun R. Khan, Deputy Governor	January 27, 2012
60.	Enabling Affordable Housing for All – Issues and Challenges	Shri Harun R. Khan, Deputy Governor	January 30, 2012
61.	Price Stability, Financial Stability and Sovereign Debt Sustainability Policy Challenges from the New Trilemma	Dr. Duvvuri Subbarao, Governor	February 1, 2012
62.	Welcome Remarks at the RBI's Second International Research Conference	Dr. Subir Gokarn, Deputy Governor	February 1, 2012
63.	Empowering MSMEs for Financial Inclusion and Growth – Role of Banks and Industry Associations	Dr. K. C. Chakrabarty, Deputy Governor	February 4, 2012
64.	Understanding Psychology for Responsible Financial Behaviour	Shri Harun R. Khan, Deputy Governor	February 6, 2012
65.	Changing Contours of Global Crisis – Impact on Indian Economy	Shri Anand Sinha, Deputy Governor	February 11, 2012

Sr. No.	Title of Speech	Speech by	Date
1	2	3	4
66.	Interview of RBI Governor, Dr. D Subbarao by Alex Frangos of The Wall Street Journal	Dr. Duvvuri Subbarao, Governor	February 13, 2012
67.	Indian Banking Sector: Towards the Next Orbit	Dr. K. C. Chakrabarty, Deputy Governor	February 13, 2012
68.	Moving Towards Technology-led Excellence in Banking	Shri Anand Sinha, Deputy Governor	February 14, 2012
69.	BCSBI, Customer Service and Consumer Protection – Issues and Challenges	Dr. K. C. Chakrabarty, Deputy Governor	February 24, 2012
70.	Agriculture Agenda for Odisha – Issues and Challenge	Shri Harun R. Khan, Deputy Governor	February 24, 2012
71.	Outward Indian FDI – Recent Trends & Emerging Issues	Shri Harun R. Khan, Deputy Governor	March 3, 2012
72.	Striking a Balance: Credit Penetration and NPA Management – Role of Information Sharing	Shri Anand Sinha, Deputy Governor	March 7, 2012
73.	Uses and Misuses of Statistics	Dr. K. C. Chakrabarty, Deputy Governor	March 20, 2012
74.	M-Banking in India – Regulations and Rationale	Dr. K. C. Chakrabarty, Deputy Governor	March 29, 2012
75.	The Challenge of Globalisation: Some Reflections from the Reserve Bank Perspective	Dr. Duvvuri Subbarao, Governor	March 30, 2012
76.	Systemic Risk Assessment – The Cornerstone for the Pursuit of Financial Stability	Dr. K. C. Chakrabarty, Deputy Governor	April 3, 2012
77.	Musings on FEDAI, Forex Market and Indian Rupee	Shri Harun R. Khan, Deputy Governor	April 5, 2012
78.	Empowering the Growth of Emerging Enterprises	Dr. K. C. Chakrabarty, Deputy Governor	April 12, 2012
79.	Financial Literacy and Consumer Protection	Dr. K. C. Chakrabarty, Deputy Governor	April 22, 2012
80.	Strengthening Governance in Microfinance Institutions (MFIs) – Some Random Thoughts	Shri Anand Sinha, Deputy Governor	April 23, 2012
81.	Human Resource Management in Banks – Need for a New Perspective	Dr. K. C. Chakrabarty, Deputy Governor	June 1, 2012
82.	Exploring the Challenge of Financial Education across Emerging Economies	Dr. K. C. Chakrabarty, Deputy Governor	June 5, 2012
83.	Financial Inclusion – An Update – A Presentation	Dr. K. C. Chakrabarty, Deputy Governor	June 8, 2012
84.	IT and Governance in Banks – Some Thoughts	Shri Anand Sinha, Deputy Governor	June 15, 2012
85.	India – Macroeconomic Situation Assessment and Prospects – A Presentation	Dr. Duvvuri Subbarao, Governor	June 19, 2012
86.	ICT-based Financial Inclusion – Carving a New path through Innovation	Dr. K. C. Chakrabarty, Deputy Governor	June 28, 2012
87.	Issues and Challenges in Financial Inclusion: Policies, Partnerships, Processes and Products	Shri Harun R Khan, Deputy Governor	June 30, 2012
88.	Touching Hearts and Spreading Smiles	Dr. Duvvuri Subbarao, Governor	July 4, 2012
89.	Launch of the OTC Derivatives Trade Repository	Dr. Subir Gokarn, Deputy Governor	July 9, 2012
90.	Agricultural Credit – Accomplishments and Challenges	Dr. Duvvuri Subbarao, Governor	July 12, 2012
91.	Small is still Beautiful and Competitive – Reflections on the Growth of Micro, Small and Medium Enterprises (MSMEs) in India	Shri Anand Sinha, Deputy Governor	July 12, 2012
92.	Remarks at the Release Function of Dr. I.G. Patel's Book	Dr. Duvvuri Subbarao, Governor	July 16, 2012
93.	Statistics and Statistical Analysis in RBI's Work	Dr. Duvvuri Subbarao, Governor	July 17, 2012
94.	Indian Payment and Settlement Systems Responsible Innovation and Regulation	Dr. Duvvuri Subbarao, Governor	August 3, 2012
95.	The First Mile Walk into Financial Inclusion – Thinking Differently	Dr. K. C. Chakrabarty, Deputy Governor	August 7, 2012
96.	Corporate Debt Restructuring – Issues and Way Forward	Dr. K. C. Chakrabarty, Deputy Governor	August 11, 2012

ANNEX III

VISITS OF FOREIGN DELEGATIONS TO THE RESERVE BANK OF INDIA DURING JULY 01, 2011 TO JUNE 30, 2012

Sr. No.	Date of Meeting	Foreign Delegates/ Delegation	RBI Executives
1	2	3	4
1.	July 27, 2011	Mr. Danny Glaser, US Treasury Assistant Secretary for Terror Finance and Financial Crimes	Shri B. Mahapatra, Executive Director.
2.	August 23, 2011	Mr. Tiff Macklem, Deputy Governor of Canada	Dr. D. Subbarao, Governor, Dr. Subir Gokarn, Deputy Governor and Shri Deepak Mohanty, Executive Director.
3.	September 23, 2011	Conservative MPs from UK	Shri Anand Sinha, Deputy Governor, Shri B. Mahapatra, Executive Director and Shri G. Padmanabhan, Executive Director.
4.	September 29, 2011	Ms. Daniele SMADJA, Ambassador, European Union and Head of the Delegation to India	Dr. D. Subbarao, Governor.
5.	October 18, 2011	Executive Directors of World Bank Team	Dr. Subir Gokarn, Deputy Governor.
6.	November 1, 2011	Mr. Michael Carson, Senior Economist Macro Economic Research-New York Fed's Emerging Market Group	Shri Deepak Mohanty, Executive Director.
7.	November 2, 2011	Mrs. Jan Henderson, New Zealand High Commissioner and Mrs. Vicky Robertson, Deputy Secretary of New Zealand Treasury	Dr. D. Subbarao, Governor.
8.	November 16, 2011	Mr. Kenzo Yamamoto, Executive Director, Bank of Japan	Shri R. Gandhi, Executive Director and Shri G. Padmanabhan, Executive Director.
9.	December 5, 2011	Mr. Mahmoud Mohieldin, MD of World Bank	Dr. K.C. Chakrabarty, Deputy Governor.
10.	December 12, 2011	Mr. Manuel Dussault, Chief, Securities Regulation and Policies from Department of Finance, Canada	Shri Vijaya Bhaskar, Executive Director and Shri B. Mahapatra, Executive Director.
11.	January 13, 2012	Mr. Goh Chok Tong, Emiritius Senior Minister, Senior Authority to the Monetary Authority of Singapore	Dr. D. Subbarao, Governor.
12.	January 13, 2012	Swedish Delegation	Shri Deepak Mohanty, Executive Director.
13.	February 8, 2012	Mr. Gaiv Tata, Director of Financial Inclusion, Practice & Private Sector Development, Africa Region, World Bank	Shri K.C. Chakrabarty, Deputy Governor.
14.	February 10, 2012	Mr. Bill Foster, International Economist, India, US Treasury	Shri Deepak Mohanty, Executive Director.
15.	February 22, 2012	Commonwealth Parliamentary Association (CPA) delegation from Canada	Shri Anand Sinha, Deputy Governor.
16.	February 23, 2012	Mr. K. Matsuzawa, President International Friendship Exchange Council of Japan & Mr. J. Mochida, Consul. Gen. Japan	Dr. K.C. Chakrabarty, Deputy Governor.
17.	February 28, 2012	Dr. Hans Joachim, Head of Delegation of German Ministry of Economics and Technology	Shri B. Mahapatra, Executive Director.
18.	March 22, 2012	Dr. David Gruen, Executive Director, Australian Treasury	Shri Deepak Mohanty, Executive Director.
19.	May 8, 2012	Delegation from Ethiopean Central Bank-Core Banking Solution	Shri H.R. Khan, Deputy Governor.
20.	May 16, 2012	Mr. Amb Pascaul, U.S. Special Envoy	Shri R. Gandhi, Executive Director.
21.	May 29, 2012	Mr. Yue Yi, Vice President, Bank of China	Shri B. Mahapatra, Executive Director.
22.	June 25, 2012	Mr. David S. Cohen, US Treasury's Under Secretary for Terrorism and Financial Intelligence	Shri Anand Sinha, Deputy Governor.

Note: Excludes visits of Ambassadors and Consul based in India unaccompanied by Foreign Delegates.

APPENDIX TABLE 1: MACROECONOMIC AND FINANCIAL INDICATORS

Item	Average 2000-01 to 2009-10 (10 years)	Average 2003-04 to 2007-08 (5 years)	2008-09	2009-10	2010-11	2011-12
1	2	3	4	5	6	7
I. Real Economy						
I.1 Overall Real GDP (% change)	7.2	8.7	6.7	8.4	8.4 QE	6.5 RE
a) Agriculture (% change)	2.5	4.9	0.1	1.0	7.0	2.8
b) Industry (% change)	7.2	8.8	4.1	8.9	6.8	2.6
of which : Manufacturing (% change)	7.9	9.7	4.3	9.7	7.6	2.5
c) Services (% change)	8.8	9.8	9.4	10.0	9.2	8.5
Demand Side Aggregates						
d) Final Consumption Expenditure (% change)	6.3	7.2	7.7	8.3	8.1	5.4
of which : PFCE (% change)	6.4	7.5	7.2	7.2	8.1	5.5
GFCE (% change)						
e) Gross Fixed Capital Formation (% change)	10.4	16.2	3.5	6.8	7.5	5.5
I.2 Share in GDP						
a) Agriculture (%)	18.7	18.4	15.8	14.7	14.5	14.0
b) Industry (%)	20.3	20.3	20.1	20.2	19.9	19.2
c) Services (%)	60.9	61.3	64.1	65.1	65.5	66.8
I.3 Foodgrains Production (Million tonnes)	210.5	213.6	234.5	218.1	244.8	257.4
of which : Rice	89.2	90.7	99.2	89.1	96.0	104.3
Wheat	73.4	72.9	80.7	80.8	86.9	93.9
Pulses	13.5	14.1	14.6	14.7	18.2	17.2
I.4 Commercial Crops (Million tonnes) $	343.4	347.9	345.4	353.0	418.6	434.5
of which : Oilseeds	23.8	26.3	27.7	24.9	32.5	30.0
Sugarcane	291.1	291.2	285.0	292.3	342.5	357.7
I.5 Food Stocks (Million tonnes)						
a) Procurement	42.0	38.4	55.3	58.0	56.8	66.4
b) Off-take	39.5	41.5	39.5	48.9	52.9	56.2
c) Stocks at end-March	30.1	18.6	35.6	43.4	44.4	53.4
I.6 Index of Industrial Production (% change)	7.4	12.4	2.5	5.3	8.2	2.9
Sectoral						
a) Mining	4.3	4.0	2.6	7.9	5.2	-2.0
b) Manufacturing	8.0	14.5	2.5	4.8	8.9	3.0
c) Electricity	4.8	6.3	2.7	6.1	5.5	8.2
Use-Based						
d) Basic Goods	5.6	8.0	1.7	4.7	6.0	5.5
e) Capital Goods	13.3	30.0	11.3	1.0	14.8	-4.0
f) Intermediate Goods	6.2	8.5	0.0	6.0	7.4	-0.6
g) Consumer Goods	8.2	14.8	0.9	7.7	8.6	4.4
I.7 Core Infrastructure Industries (% change)	5.5	5.8	2.8	6.6	6.6	4.4
I.8 Gross Domestic Saving Rate (% of GDP)	30.7	33.3	32.0	33.8	32.3	
of which : Household	23.2	23.2	23.6	25.4	22.8	–
Private Corporate	6.3	7.2	7.4	8.2	7.9	–
Public	1.2	2.9	1.0	0.2	1.7	–
I.9 Gross Domestic Investment Rate (% of GDP)	31.3	33.6	34.3	36.6	35.1	–
II. Prices						
II.1 Wholesale Price Index Annual Average (% change)						
All Commodities	5.4	5.5	8.1	3.8	9.6	8.9
All Commodities-Point to Point (end-year)	–	–	1.6	10.4	9.7	7.7
Primary Articles	6.4	6.0	11.0	12.7	17.7	9.8
of which :						
Food Articles	5.8	5.2	9.1	15.3	15.6	7.3
Non-food Articles	6.1	5.5	12.9	5.5	22.3	9.6
Fuel and Power	8.9	7.3	11.6	-2.1	12.3	14.0
Manufactured Products	4.1	5.0	6.2	2.2	5.7	7.3
of which :						
Food Products	4.7	4.8	8.7	13.5	3.7	7.1
Non-Food Products	4.0	5.0	5.7	0.2	6.1	7.3

APPENDIX TABLE 1: MACROECONOMIC AND FINANCIAL INDICATORS *(Contd.)*

Item	Average 2000-01 to 2009-10 (10 years)	Average 2003-04 to 2007-08 (5 years)	2008-09	2009-10	2010-11	2011-12
1	2	3	4	5	6	7
II.2 Consumer Price Index (CPI) (Average % Change)						
a) CPI- Industrial Workers	5.9	5.0	9.1	12.4	10.4	8.4
of which : CPI- Industrial Workers Food	6.2	5.5	12.3	15.2	9.9	6.3
b) CPI- Agricultural Labourers	5.4	5.1	10.2	13.9	10.0	8.2
III. Money and Credit						
III.1 Reserve Money (M0) (% change)	15.4	20.4	6.4	17.0	19.1	3.7
Adjusted Reserve Money (% change)	–	–	19.0	13.0	18.2	9.6
a) Currency in Circulation (% change)	15.1	15.9	17.0	15.7	18.8	12.5
b) Bankers' Deposits with RBI (% change)	17.9	33.1	-11.3	21.0	20.2	-15.9
III.2 Narrow Money (M1) (% change)	16.0	19.6	9.0	18.2	10.0	5.9
III.3 Broad Money (M3) (% change)	17.5	18.6	19.3	16.9	16.1	13.1
a) Currency with Public (% change)	15.1	15.9	17.1	15.3	18.8	12.6
b) Bank Credit to Commercial Sector (% of GDP)	42.9	44.4	53.5	54.1	55.2	56.0
c) Bank Credit to Government (% of GDP)	23.1	21.5	22.7	25.8	25.9	26.8
d) Currency-Deposit Ratio (%)	17.8	17.8	16.1	15.9	16.3	16.2
e) Money Multiplier	4.6	4.6	4.9	4.8	4.7	5.2
III.4 Scheduled Commercial Banks						
a) Aggregate Deposits (% change)	18.1	19.0	19.9	17.2	15.9	13.5
b) Time Deposits (% change)	18.5	18.5	23.9	16.2	18.7	15.7
c) Demand Deposits (% change)	16.4	21.9	-0.2	23.4	-0.6	-2.6
d) Bank Credit (% change)	21.8	25.5	17.5	16.9	21.5	17.0
e) Non-food Credit (% change)	22.4	26.7	17.8	17.1	21.3	16.8
f) Investment in Government Securities (% change)	17.7	13.3	20.6	19.3	8.6	15.9
g) Credit-Deposit Ratio (%)	64.8	68.0	72.4	72.2	75.7	78.0
h) Credit-GDP Ratio (%)	37.4	39.3	49.3	50.2	51.4	52.1
IV. Financial Markets						
IV.1 Interest rates (%)						
a) Call / Notice Money rate	6.1	5.6	7.1	3.2	5.8	8.2
b) 10 year G-Sec yield	7.5	7.0	7.6	7.2	7.9	8.4
c) 91-Days T-bill yield	6.1	5.8	7.1	3.6	6.2	8.4
d) Weighted Average interest rate on Central Government Borrowings	7.8	7.2	7.7	7.2	7.9	8.5
e) Commercial Paper	8.2	7.7	10.8	5.1	8.6	9.8
IV.2 Liquidity (₹ billion)						
a) LAF Outstanding ^	–	–	14.9	9.9	-1060.1	-1691.6
b) MSS Outstanding ~	–	–	880.8	27.4	0.0	0.0
c) Average Daily Call Money Market Turnover	–	184.9	224.4	159.2	177.3	267.0
d) Average Daily G-Sec Market Turnover ^^	–	77.1	108.8	139.4	142.4	171.3
V. Government Finances						
V.1 Central Government Finances (% of GDP) #						
a) Total Revenue Receipts	9.5	9.9	9.6	8.9	10.3	8.7
i) Tax Revenue	7.2	7.6	7.9	7.1	7.4	7.3
ii) Non Tax Revenue	2.3	2.3	1.7	1.8	2.8	1.4
b) Total Expenditure	15.4	14.8	15.7	15.9	15.6	14.9
i) Revenue Expenditure	12.9	12.2	14.1	14.1	13.6	13.1
of which : Interest Payment	4.0	3.8	3.4	3.3	3.0	3.1
ii) Capital Expenditure	2.5	2.6	1.6	1.7	2.0	1.8
c) Revenue Deficit	3.4	2.3	4.5	5.2	3.3	4.5
d) Fiscal Deficit	4.8	3.6	6.0	6.5	4.9	5.9
e) Primary Deficit	0.9	-0.2	2.6	3.2	1.8	2.8
f) Domestic Debt	56.8	58.2	53.9	52.6	49.3	48.6
V.2 State Finances #						
a) Revenue Deficit (% of GDP)*	1.0	0.5	-0.2	0.5	-0.1	-0.1
b) Gross Fiscal Deficit (% of GDP)*	3.1	2.7	2.4	2.9	2.1	2.3
c) Primary Deficit (% of GDP)*	0.8	0.3	0.6	1.2	0.5	0.8
d) Outstanding Liabilities (% of GDP)*	29.3	30.1	26.1	25.5	23.4	22.5

APPENDIX TABLE 1: MACROECONOMIC AND FINANCIAL INDICATORS *(Concld.)*

Item	Average 2000-01 to 2009-10 (10 years)	Average 2003-04 to 2007-08 (5 years)	2008-09	2009-10	2010-11	2011-12
1	2	3	4	5	6	7
VI. External Sector						
VI.1 Balance of Payments						
a) Merchandise Exports (% change) ∆	17.7	25.3	13.7	-3.5	37.3	23.7
Oil Exports (% change) ∆	505.4 ×	62.6	-2.9	2.3	46.9	34.3
Non Oil Exports (% change) ∆	15.7 ×	21.9	17.2	-4.5	35.5	21.6
b) Merchandise Imports (% change) ∆	19.5	32.3	19.8	-2.6	26.7	31.1
Oil Imports (% change) ∆	22.9	35.7	17.6	-7.0	21.6	46.9
Non Oil Imports (% change) ∆	18.5	31.0	20.7	-0.6	28.8	25.0
c) Trade Balance/GDP (%)	-5.3	-5.4	-9.8	-8.7	-7.8	-10.3
d) Invisible Balance/GDP (%)	4.8	5.1	7.5	5.9	5.0	6.0
e) Current Account Balance/GDP (%)	-0.5	-0.3	-2.3	-2.8	-2.7	-4.2
f) Net Capital Flows /GDP(%)	3.3	4.6	0.6	3.8	3.7	3.7
g) Current Account Balance (US$ billion)	-8.3	-4.7	-27.9	-38.2	-45.9	-78.2
Net Invisibles	44.2	45.8	91.6	80.0	84.6	111.6
of which : Services	21.6	23.4	53.9	36.0	48.8	64.1
Private Transfers	27.9	27.6	44.6	51.8	53.1	63.5
Investment Income	-5.0	-4.9	-6.6	-7.2	-16.4	-16.5
h) Net Capital Flows (US$ billion)	31.0	44.4	7.4	51.6	62.0	67.8
of which : FDI to India	16.7	15.3	41.7	33.1	25.9	33.0
FIIs	7.1	10.6	-15.0	29.0	29.4	16.8
NRI Deposits	2.5	2.0	4.3	2.9	3.2	11.9
i) Reserve Changes (BoP basis) (US $ billion) [(Increase (-)/Decrease (+)]	-22.9	-40.3	20.1	-13.4	-13.1	12.8
VI.2 External Debt Indicators						
a) External Debt Stock (US$ billion)**	157.3	156.5	224.5	260.9	305.9	345.8
b) Debt-GDP Ratio (%)	19.1	17.7	20.3	18.3	17.8	20.0
c) Import cover of Reserves (in Months) **	12.5	14.0	9.8	11.1	9.6	7.1
d) Short-term Debt to Total Debt (%)	11.8	13.6	19.3	20.0	21.2	22.6
e) Debt Service Ratio (%)	9.8	8.3	4.4	5.8	4.3	6.0
f) Reserves to Debt (%) **	95.6	113.7	112.1	106.8	99.6	85.1
VI.3 Openness Indicators (%)						
a) Export plus Imports of Goods/GDP	29.5	30.4	40.6	35.5	37.5	43.8
b) Export plus Imports of Goods & Services/GDP	39.2	40.8	53.6	47.0	50.4	55.7
c) Current Receipts plus Current Payments/GDP	45.1	46.6	60.6	53.6	56.0	61.5
d) Gross Capital Inflows plus Outflows/GDP	33.6	36.8	51.0	47.0	55.6	48.2
e) Current Receipts & Payments plus Capital Receipts & Payments /GDP	78.8	83.5	111.6	100.6	111.6	109.6
VI.4 Exchange Rate Indicators						
a) Exchange Rate (Rupee/US Dollar)						
End of Period	45.4	43.1	50.9	45.1	44.6	51.2
Average	45.6	44.1	45.9	47.4	45.6	47.9
b) 36 - Currency REER (Percentage Change)	0.4	1.0	-9.9	-3.2	8.0	-3.2
c) 36 - Currency NEER (Percentage Change)	-0.3	0.5	-10.9	-2.6	3.1	-6.4
d) 6 - Currency REER (Percentage Change)	1.5	2.5	-9.3	-0.3	13.0	-6.8
e) 6 - Currency NEER (Percentage Change)	-1.4	0.4	-13.6	-3.7	5.6	-7.9

QE : Quick Estimates. RE : Revised Estimates.
$: Includes oilseeds, sugarcane, cotton (lint) and raw jute and mesta.
- : Not Available/Not applicable.
^ : LAF outstanding as on March 31 (negative means injection).
^^ : Average daily outright trading turnover in central government dated securities.
# : Data for 2011-12 relate to Revised estimates.
* : Data for 2010-11 and 2011-12 pertain to 28 states.
∆ : Based on DGCI&S data.
× : Figure pertains to average during 2000-01 to 2008-09.
** : At end-March.
@@ : Average of 1994-95 to 1999-2000.
~ : Outstanding as on last Friday of the financial year.

Notes : 1. PFCE: Private Final Consumption Expenditure; GFCE: Government Final Consumption Expenditure; REER: Real Effective Exchange Rate.
2. Agricultural production figures for 2011-12 are based on Fourth Advance Estimates.
3. Average growth rate in the 4th column for item I.6 and I.7 are calculated with the new base year (2004-05). Average growth rate of 3 years, *i.e.*, 2005- 06, 2006-07 and 2007-08 are given in column.

APPENDIX TABLE 2 : GROWTH RATES AND SECTORAL COMPOSITION OF REAL GROSS DOMESTIC PRODUCT

(At 2004-05 Prices)

(Per cent)

Sector	Growth Rate						Share in real GDP				
	Average 2007-08 to 2011-12	2007-08	2008-09	2009-10	2010-11*	2011-12#	2007-08	2008-09	2009-10	2010-11*	2011-12 #
1	2	3	4	5	6	7	8	9	10	11	12
1. Agriculture and Allied Activities	**3.3**	**5.8**	**0.1**	**1.0**	**7.0**	**2.8**	**16.8**	**15.8**	**14.7**	**14.5**	**14.0**
of which :											
Agriculture	..	6.3	-0.3	0.7	7.8	..	14.3	13.4	12.4	12.3	..
2. Industry	**6.3**	**9.2**	**4.1**	**8.9**	**6.8**	**2.6**	**20.6**	**20.1**	**20.2**	**19.9**	**19.2**
of which :											
a) Mining and quarrying	3.2	3.7	2.1	6.3	5.0	-0.9	2.5	2.4	2.3	2.2	2.1
b) Manufacturing	6.9	10.3	4.3	9.7	7.6	2.5	16.1	15.8	16.0	15.8	15.3
c) Electricity, gas and water supply	6.0	8.3	4.6	6.3	3.0	7.9	2.0	2.0	2.0	1.9	1.9
3. Services	**9.5**	**10.3**	**9.4**	**10.0**	**9.2**	**8.5**	**62.5**	**64.1**	**65.1**	**65.5**	**66.8**
of which :											
a) Construction	7.3	10.8	5.3	7.0	8.0	5.3	8.1	8.0	7.9	7.9	7.8
b) Trade, hotels and restaurants	..	10.1	5.7	7.8	9.0	..	16.9	16.6	16.6	16.6	..
c) Transport, storage and communications	..	12.5	10.8	14.8	14.9	..	9.1	9.4	10.0	10.6	..
d) Financing, insurance, real estate and business services	10.7	12.0	12.0	9.4	10.4	9.6	16.1	16.9	17.1	17.4	17.9
e) Community, social and personal services	8.4	6.9	12.5	12.0	4.5	5.8	12.4	13.1	13.5	13.1	13.0
4. Gross Domestic Product at factor cost	**7.9**	**9.3**	**6.7**	**8.4**	**8.4**	**6.5**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Memo : (₹ billion)

Sector	(at current prices)				
	2007-08	2008-09	2009-10	2010-11	2011-12
1. Agriculture and Allied Activities	8,365.2	9,432.0	10,793.7	12,698.9	14,173.7
2. Industry	9,413.6	10,492.2	11,769.5	13,555.9	15,034.3
3. Services	28,042.1	33,111.4	38,351.7	45,319.3	53,118.5
4. Gross Domestic Product at factor cost	45,820.9	53,035.7	60,914.9	71,574.1	82,326.5
Sector	**(at constant prices)**				
	2007-08	**2008-09**	**2009-10**	**2010-11**	**2011-12**
1. Agriculture and Allied Activities	6,550.8	6,556.9	6,625.1	7,091.0	7,286.7
2. Industry	8,045.0	8,374.1	9,122.2	9,745.3	10,000.4
3. Services	24,370.6	26,655.8	29,329.1	32,023.2	34,738.1
4. Gross Domestic Product at factor cost	38,966.4	41,586.8	45,076.4	48,859.5	52,025.1

*: Quick Estimates. #: Revised Estimates. .. : Not available.

Source: Central Statistics Office.

APPENDIX TABLE 3: GROSS DOMESTIC SAVING AND INVESTMENT

Item	Per cent of GDP at current market prices				Amount in ₹ billion		
	Average 2003-04 to 2007-08	2008-09	2009-10 P	2010-11*	2008-09	2009-10 P	2010-11*
1	2	3	4	5	6	7	8
1. Household Saving (Net) (a+b)	**23.2**	**23.6**	**25.4**	**22.8**	**13,309**	**16,390**	**17,493**
a) Financial Assets	11.2	10.1	12.9	10.0	5,710	8,356	7,677
b) Physical Assets	12.0	13.5	12.4	12.8	7,598	8,035	9,816
2. Private corporate sector	**7.2**	**7.4**	**8.2**	**7.9**	**4,175**	**5,321**	**6,025**
3. Public sector	**2.9**	**1.0**	**0.2**	**1.7**	**543**	**118**	**1,302**
4. Gross Domestic Saving	**33.3**	**32.0**	**33.8**	**32.3**	**18,026**	**21,830**	**24,819**
5. Net capital inflow	**2.1**	**2.3**	**2.8**	**2.7**	**1,288**	**1,807**	**2,101**
6. Gross Domestic Capital Formation (7+8)	**33.6**	**34.3**	**36.6**	**35.1**	**19,314**	**23,637**	**26,920**
7. Errors and Omissions	**0.3**	**-1.2**	**0.5**	**-0.7**	**-687**	**313**	**-572**
8. Gross Capital Formation	**33.4**	**35.5**	**36.1**	**35.8**	**20,001**	**23,324**	**27,492**
of which :							
a) Public sector	7.8	9.4	9.2	8.8	5,317	5,916	6,762
b) Private corporate sector	12.5	11.3	12.7	12.1	6,363	8,210	9,285
c) Household sector	12.0	13.5	12.4	12.8	7,598	8,035	9,816
d) Valuables #	1.1	1.3	1.8	2.1	722	1,163	1,628
Memo:							
Total Consumption Expenditure (a+b)		69.4	69.4	68.4	38,646	44,824	52,491
a) Private Final Consumption Expenditure		58.4	57.4	56.5	32,493	37,081	43,384
b) Government Final Consumption Expenditure		11.0	12.0	11.9	6,153	7,743	9,107
Saving-Investment Balance (4-6)	-2.1	-2.3	-2.8	-2.8			
Public Sector Balance #	-4.9	-8.4	-9.0	-7.1			
Private Sector Balance #							
a) Private Corporate Sector	-5.3	-3.9	-4.5	-4.2			
b) Household Sector	11.2	10.1	13.0	10.0			
GDP at Market Prices (at current prices)	38,111	55,826	64,574	76,741			

P : Provisional Estimates. *: Quick Estimates.

\# : Valuables cover the expenditures made on acquisition of valuables, excluding works of art and antiques.

Source: Central Statistics Office.

APPENDIX TABLE 4: FINANCIAL SAVING OF THE HOUSEHOLD SECTOR (GROSS)

Item	Per cent to Gross Financial Saving			₹ billion		
	2009-10 R	2010-11 R	2011-12 P	2009-10 R	2010-11 R	2011-12 P
1	2	3	4	5	6	7
A. Change in Financial Assets (Gross Financial Saving)	**100.0**	**100.0**	**100.0**	**9,898.0**	**9,913.1**	**9,690.8**
a) Currency	**9.8**	**13.8**	**11.3**	**969.4**	**1,371.3**	**1,090.2**
b) Deposits	**41.9**	**45.6**	**52.8**	**4,148.7**	**4,516.8**	**5,120.3**
i) With Commercial Banks	36.6	41.3	48.5	3,620.0	4,093.6	4,704.2
ii) With Non-banking Companies	1.9	0.4	1.5	185.2	43.9	148.5
iii) With Cooperative Banks and Societies	3.7	3.1	2.3	361.4	311.1	222.5
iv) Trade Debt (Net)	-0.2	0.7	0.5	-17.8	68.2	45.1
c) Share and Debentures	**4.5**	**0.2**	**-0.7**	**448.4**	**17.3**	**-65.1**
of which :						
i) Private Corporate Business	0.7	0.7	0.1	70.5	67.8	13.2
ii) Banking	0.1	0.1	0.1	9.5	8.1	9.1
iii) Bonds of public Sector undertakings	0.1	0.1	0.1	6.1	8.3	11.3
iv) Mutual Funds (including UTI)	3.3	-1.2	-1.1	330.4	-115.6	-106.2
d) Claims on Government	**4.4**	**4.1**	**-2.1**	**434.8**	**410.6**	**-205.1**
i) Investment in Government securities	0.0	0.0	0.0	3.9	3.4	3.9
ii) Investment in Small Savings, etc.	4.3	4.0	-2.3	424.8	399.0	-220.3
e) Life Insurance Funds	**26.2**	**22.3**	**23.1**	**2,598.2**	**2,207.3**	**2,234.3**
of which :						
i) Life Funds of LIC and private insurance companies	25.6	22.2	23.2	2,536.3	2,200.0	2,250.0
f) Provident and Pension Funds	**13.1**	**14.0**	**15.6**	**1,298.5**	**1,389.7**	**1,516.1**
B. Change in Financial Liabilities				**2,034.5**	**2,783.2**	**2,741.7**
C. Net Financial Saving of Household Sector				**7,863.5**	**7,129.9**	**6,949.2**

R : Revised.
P : Preliminary Estimates.
Note : Components may not add up to the totals due to rounding off.

APPENDIX TABLE 5: AGRICULTURAL PRODUCTION

(Million Tonnes)

Crop	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12#
1	2	3	4	5	6	7	8	9	10	11
I. All Crops: Annual Growth Rate (per cent) $	**-12.8**	**7.3**	**-1.6**	**12.1**	**14.3**	**3.0**	**-6.4**	**-1.4**	**16.1**	**3.6**
A) Foodgrains	-18.5	22.5	-7.0	5.8	4.1	6.2	1.6	-6.9	12.2	5.1
B) Non-foodgrains	-5.7	-8.9	1.5	16.1	19.4	1.6	-10.0	1.5	17.9	2.9
A Foodgrains (1+2+3+4, a+b)	174.8	213.2	198.4	208.6	217.3	230.8	234.5	218.1	244.8	257.4
1. Rice	71.8	88.5	83.1	91.8	93.4	96.7	99.2	89.1	95.3	104.3
2. Wheat	65.8	72.2	68.6	69.4	75.8	78.6	80.7	80.8	85.9	93.9
3. Coarse Cereals	26.1	37.6	33.5	34.1	33.9	40.8	40.0	33.6	43.7	42.0
of which :										
i) Jowar	7.0	6.7	7.2	7.6	7.2	7.9	7.2	6.7	7.0	6.0
ii) Bajra	4.7	12.1	7.9	7.7	8.4	10.0	8.9	6.5	10.4	10.1
iii) Maize	11.2	15.0	14.2	14.7	15.1	19.0	19.7	16.7	21.7	21.6
4. Pulses	11.1	14.9	13.1	13.4	14.2	14.8	14.6	14.7	18.2	17.2
of which :										
i) Tur	2.2	2.4	2.4	2.7	2.3	3.1	2.3	2.5	2.9	2.7
ii) Gram	4.2	5.7	5.5	5.6	6.3	5.8	7.1	7.5	8.2	7.6
a) *Kharif*	87.2	117.0	103.3	109.9	110.6	121.0	118.1	104.0	123.6	129.9
1. Rice	63.1	78.6	72.2	78.3	80.2	82.7	84.9	75.9	80.7	91.5
2. Coarse Cereals	20.0	32.2	26.4	26.7	25.6	31.9	28.5	23.8	33.4	32.3
of which :										
i) Jowar	4.2	4.8	4.0	4.1	3.7	4.1	3.1	2.8	3.4	3.2
ii) Bajra	4.7	12.1	7.9	7.7	8.4	10.0	8.9	6.5	10.4	10.1
iii) Maize	9.3	12.7	11.5	12.2	11.6	15.1	14.1	12.3	16.6	16.2
3. Pulses	4.2	6.2	4.7	4.9	4.8	6.4	4.7	4.2	7.1	6.2
of which :										
i) Tur	2.2	2.4	2.4	2.7	2.3	3.1	2.3	2.5	2.9	2.7
b) *Rabi*	87.6	96.2	95.1	98.7	106.7	109.8	116.3	114.2	123.6	127.5
1. Rice	8.7	9.9	10.9	13.5	13.2	14.0	14.3	13.2	15.3	12.8
2. Wheat	65.8	72.2	68.6	69.4	75.8	78.6	80.7	80.8	86.9	93.9
3. Coarse Cereals	6.1	5.4	7.1	7.3	8.3	8.9	11.5	9.7	10.3	9.8
of which :										
i) Jowar	2.8	1.8	3.2	3.6	3.4	3.8	4.2	3.9	3.6	2.8
ii) Maize	1.9	2.3	2.7	2.6	3.5	3.9	5.6	4.4	5.1	5.4
4. Pulses	7.0	8.7	8.4	8.5	9.4	8.4	9.9	10.5	11.1	11.1
of which :										
i) Gram	4.2	5.7	5.5	5.6	6.3	5.8	7.1	7.5	8.2	7.6
B Non-foodgrains										
1. Oilseeds++	14.8	25.2	24.4	28.0	24.3	29.8	27.7	24.9	32.5	30.0
of which :										
i) Groundnut	4.1	8.1	6.8	8.0	4.9	9.2	7.2	5.4	6.6	6.9
ii) Rapeseed & Mustard	3.9	6.3	7.6	8.1	7.4	5.8	7.2	6.6	8.2	6.8
iii) Sunflower	0.9	0.9	1.2	1.4	1.2	1.5	1.2	0.9	0.2	0.1
iv) Soyabean	4.7	7.8	6.9	8.3	8.9	11.0	9.9	10.0	12.7	12.3
2. Sugarcane	287.4	233.9	237.1	281.2	355.5	348.2	285.0	292.3	342.4	357.7
3. Cotton @	8.6	13.7	16.4	18.5	22.6	25.9	22.3	24.2	33.0	35.2
4. Jute and Mesta +	11.3	11.2	10.3	10.8	11.3	11.2	10.4	11.8	10.6	11.6
5. Tea*	846.0	878.7	906.8	948.9	973.1	987.0	972.8	991.2	966.7	978.2
6. Coffee*	275.3	270.5	275.5	274.0	288.0	262.0	262.3	289.6	302.0	314.0

\# : Fourth Advance Estimates as on July 2012.
$: Growth rates are based on Index of Agricultural Production with base triennium ending 1993-94=100. Data for 2011-12 are averages for period 2007-08 to 2010-11.
@ : Million bales of 170 kg. each.
\+ : Million bales of 180 kg. each.
++ : For nine oilseeds out of eleven in all.
* : Million kilograms. Tea production for 2010-11 and 2011-12 is average of 2006-07 to 2010-11.
Source: Ministry of Agriculture, Government of India.

APPENDIX TABLE 6: PROCUREMENT, OFF-TAKE AND STOCKS OF FOODGRAINS

(Million tonnes)

Year	Procurement			Off-take			Stocks*		
	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Total #
1	2	3	4	5	6	7	8	9	10
1995-96	9.9	12.3	22.1	11.6	12.7	24.3	13.0	7.7	20.8
1996-97	11.8	8.1	20.0	12.3	13.3	25.6	13.1	3.2	16.4
1997-98	14.5	9.3	23.8	11.2	7.7	18.9	13.0	5.0	18.1
1998-99	11.5	12.6	24.2	11.8	8.9	20.7	12.1	9.6	21.8
1999-00	16.6	14.1	30.7	12.4	10.6	23.0	15.7	13.1	28.9
2000-01	18.9	16.3	35.2	10.4	7.7	18.2	23.1	21.5	44.9
2001-02	21.1	20.6	41.7	15.3	15.9	31.3	24.9	26.0	51.0
2002-03	19.0	19.0	38.0	24.8	24.9	49.8	17.1	15.6	32.8
2003-04	20.7	15.8	36.5	25.0	24.2	49.3	13.0	6.9	20.6
2004-05	24.0	16.8	40.8	23.2	18.2	41.4	13.3	4.0	17.9
2005-06	26.6	14.7	41.4	25.0	17.1	42.2	13.6	2.0	16.6
2006-07	26.3	9.2	35.5	25.0	11.7	36.7	13.1	4.7	17.9
2007-08	26.2	11.1	37.4	25.2	12.2	37.4	13.8	5.8	19.7
2008-09	32.8	22.6	55.5	24.6	14.8	39.5	21.6	13.4	35.5
2009-10	32.5	25.3	57.9	26.8	21.9	48.8	26.7	16.1	43.3
2010-11	31.1	25.9	56.7	29.8	23.0	52.8	28.8	15.3	44.3
2011-12	37.91	28.33	66.35	32.12	24.16	56.24	33.35	19.95	53.44
2012-13	5.67	38.15	43.81	2.27	1.66	3.94	28.50	47.53	76.15

* : Stocks as at end-March.
\# : Includes coarse grains.
Note: Off-take data for 2012-13 pertains to April 2012; procurement is as on August 13, 2012 and stocks for end-July 2012.
Source: Ministry of Food, Consumer Affairs and Public Distribution, Government of India.

APPENDIX TABLE 7: TRENDS IN INDEX OF INDUSTRIAL PRODUCTION

(Base : 2004-05=100)

Sector	Mining & Quarrying		Manufacturing		Electricity		General	
Weight	**14.2**		**75.5**		**10.3**		**100.0**	
Period	**Index**	**Growth Rate (per cent)**	**Index**	**Growth Rate (per cent)**	**Index**	**Growth Rate (per cent)**	**Index**	**Growth Rate (per cent)**
1	2	3	4	5	6	7	8	9
2007-08	112.5	4.6	150.1	18.4	120.0	6.3	141.7	15.5
		(3.7)		(92.4)		(3.9)		(100.0)
2008-09	115.4	2.6	153.8	2.5	123.3	2.7	145.2	2.5
		(11.5)		(78.9)		(9.6)		(100.0)
2009-10	124.5	7.9	161.3	4.8	130.8	6.1	152.9	5.3
		(16.8)		(73.1)		(10.1)		(100.0)
2010-11	131.0	5.2	175.7	8.9	138.0	5.5	165.5	8.2
		(7.3)		(86.7)		(5.9)		(100.0)
2011-12 P	128.5	-2.0	181.0	3.0	149.3	8.2	170.3	2.9
		(-7.6)		(83.2)		(24.3)		(100.0)
2010-11								
April-June	126.8	8.0	165.4	10.4	136.6	5.4	157.0	9.6
July-September	120.9	6.3	169.8	7.4	134.4	2.1	159.2	6.8
October-December	135.1	6.3	176.8	9.2	136.1	6.5	166.7	8.6
January-March	141.4	1.1	190.7	8.9	145.0	8.1	179.0	7.9
April-September	123.8	7.2	167.6	8.9	135.5	3.8	158.1	8.2
October-March	138.2	3.6	183.8	9.0	140.6	7.3	172.9	8.3
2011-12 P								
April-June	127.6	0.6	178.2	7.7	147.9	8.3	167.9	6.9
July-September	116.0	-4.1	175.5	3.4	148.5	10.5	164.3	3.2
October-December	129.4	-4.2	178.8	1.1	149.2	9.6	168.7	1.2
January-March	140.9	-0.4	191.4	0.3	151.6	4.5	180.1	0.6
April-September	121.8	-1.6	176.9	5.5	148.2	9.4	166.1	5.1
October-March	135.1	-2.3	185.1	0.7	150.4	7.0	174.4	0.9

P: Provisional.

Note : Figures in parentheses are relative contributions, computed as the ratio (in percentage terms) of the change in the index of the respective industry group to the change in the overall index adjusted for the weight of the relevant industry group.

Source: Central Statistics Office.

APPENDIX TABLE 8: VARIATIONS IN INDEX NUMBERS OF WHOLESALE PRICES

(Base: 2004-05 = 100)

(Per cent)

Major Group/Sub-group/Commodity	Weight	Variations					
		Year-on-Year		Average		Year-on-Year	
		March 2011	March 2012	2010-11	2011-12	July 2011	July 2012 P
1	2	3	4	5	6	7	8
All Commodities	**100.0**	**9.7**	**7.7**	**9.6**	**8.9**	**9.4**	**6.9**
I. Primary Articles	**20.1**	**13.4**	**10.4**	**17.7**	**9.8**	**11.5**	**10.4**
1. Food Articles	14.3	9.4	10.1	15.6	7.3	8.2	10.1
a) Cereals	3.4	3.5	4.6	5.3	3.9	5.2	8.3
i) Rice	1.8	2.3	5.0	5.9	3.1	2.4	10.1
ii) Wheat	1.1	0.2	-0.6	3.0	-1.8	1.8	6.7
b) Pulses	0.7	-4.0	10.1	3.2	2.5	-7.5	28.3
c) Fruits and Vegetables	3.8	18.9	10.0	16.4	6.5	11.6	10.5
d) Milk	3.2	4.4	15.3	20.1	10.3	10.8	8.0
e) Eggs, Meat and Fish	2.4	13.5	17.4	25.5	12.7	9.6	16.0
f) Condiments and Spices	0.6	20.4	-13.2	33.6	-2.6	2.0	-14.2
g) Tea and Coffee	0.2	4.7	12.6	-7.3	19.0	24.8	6.6
2. Non-Food Articles	4.3	27.3	-0.8	22.3	9.6	15.8	13.1
a) Fibres	0.9	87.7	-31.3	41.7	10.1	29.7	5.9
i) Raw Cotton	0.7	103.0	-35.2	43.9	13.0	35.3	4.7
b) Oilseeds	1.8	10.9	13.4	4.7	12.3	13.9	25.2
c) Sugarcane	0.6	7.1	0.0	46.8	6.4	7.1	1.2
3. Minerals	1.5	15.2	34.5	24.8	26.6	25.8	8.4
a) Iron Ore	0.2	40.2	2.2	78.8	10.4	5.0	10.5
b) Crude Petroleum	0.9	6.3	59.9	11.8	45.2	45.1	7.6
II. Fuel and Power	**14.9**	**12.5**	**12.8**	**12.3**	**14.0**	**12.0**	**6.0**
1. Coal	2.1	13.3	13.9	5.7	15.5	13.3	13.9
2. Mineral Oils	9.4	14.7	14.7	16.0	16.9	15.4	4.5
3. Electricity	3.5	3.6	4.0	5.4	1.6	-1.3	4.0
III. Manufactured Products	**65.0**	**7.4**	**5.2**	**5.7**	**7.3**	**7.7**	**5.6**
1. Food Products	10.0	2.4	6.2	3.7	7.1	8.1	6.3
a) Dairy Products	0.6	4.8	13.9	9.6	12.8	9.2	6.2
b) Grain Mill Products	1.3	0.7	-1.6	5.7	0.3	1.2	-0.4
c) Sugar, Khandsari and Gur	2.1	-7.8	3.2	-0.9	4.5	3.6	7.7
d) Edible Oils	3.0	13.0	9.9	5.4	12.6	14.8	10.3
e) Oil Cakes	0.5	1.5	6.3	0.8	4.0	6.4	21.8
2. Beverages, Tobacco and Tobacco Products	1.8	8.8	8.9	7.4	11.7	12.6	6.1
3. Textiles	7.3	18.3	-3.4	12.1	7.5	11.4	0.9
a) Cotton Textiles	2.6	33.1	-8.7	18.7	11.3	18.9	0.6
b) Man Made Textiles	2.2	12.6	-1.6	10.4	5.6	7.2	1.3
4. Wood and Wood Products	0.6	3.6	8.6	4.0	8.1	9.6	4.4
5. Paper and Paper Products	2.0	8.4	2.5	5.3	5.4	6.4	2.4
6. Leather and Leather Products	0.8	-1.5	4.9	-1.0	2.3	1.0	2.8
7. Rubber and Plastic Products	3.0	10.6	1.2	6.7	6.0	7.8	2.0
8. Chemicals and Chemical Products	12.0	7.4	7.7	5.3	8.6	8.7	7.2
a) Basic Inorganic Chemicals	1.2	4.1	8.3	1.0	9.5	10.6	5.3
b) Basic Organic Chemicals	2.0	8.8	5.8	7.5	8.6	10.9	2.9
c) Fertilizers	2.7	9.9	16.9	8.0	13.5	10.1	15.5
d) Pesticides	0.5	1.9	2.0	2.7	1.1	1.0	5.9
e) Drugs and Medicines	0.5	3.4	3.9	2.4	3.7	3.0	4.6
9. Non-Metallic Mineral Products	2.6	3.7	6.7	2.7	5.7	3.5	8.1
a) Cement and Lime	1.4	1.7	6.1	1.2	4.1	-0.3	10.7
10. Basic Metals, Alloys and Metal Products	10.7	11.7	10.1	8.7	11.1	10.6	9.6
a) Ferrous Metals	8.1	11.7	9.9	8.7	10.4	10.4	9.2
b) Non-Ferrous Metals	1.0	2.3	1.9	5.3	2.4	3.1	1.8
c) Metal Products	1.7	17.0	15.0	10.7	18.5	16.2	15.0
11. Machinery and Machine Tools	8.9	3.2	2.5	2.8	3.1	3.1	3.0
a) Non-Electrical Machinery	1.0	1.3	2.2	2.8	2.7	2.3	1.9
b) Electrical Machinery, Equipment and Batteries	2.3	3.2	3.6	1.5	4.7	4.4	3.1
12. Transport, Equipment and Parts	5.2	3.6	3.3	3.0	3.5	3.2	3.5

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

APPENDIX TABLE 9 : VARIATIONS IN RESERVE MONEY

(Amount in ₹ billion)

Item	Outstanding as on March 31, 2012	Variations							
		Financial year				Year-on-year			
		2010-11		2011-12		Up to August 12, 2011		Up to August 10, 2012	
		Absolute	Per cent	Absolute	Per cent	Absolute	Per cent	Absolute	Per cent
1	2	3	4	5	6	7	8	9	10
Reserve Money (C.1+C.2+C.3 = S.1+S.2+S.3+S.4+S.5-S.6)	**14,271.7**	**2,211.7**	**19.1**	**503.5**	**3.7**	**1,928.7**	**16.4**	**924.5**	**6.8**
Components									
C.1. Currency in Circulation	10,680.6	1,501.1	18.8	1,184.0	12.5	1,316.6	15.3	1,248.6	12.6
C.2. Bankers' Deposits with the RBI	3,562.9	712.1	20.2	-672.2	-15.9	643.2	20.5	-352.8	-9.3
of which:									
Scheduled Commercial Banks	3,373.6	687.2	20.6	-653.0	-16.2	623.7	21.1	-334.7	-9.4
C.3. 'Other' Deposits with the RBI	28.2	-1.5	-4.0	-8.3	-22.7	-31.1	-74.1	28.7	264.1
Sources									
S.1. Net RBI Credit to Government (a+b)	5,357.4	1,849.7	–	1,391.8	–	1,609.6	–	1,799.2	–
a) Net RBI credit to Central Government (i-ii)	**5,344.1**	**1,824.5**	**–**	**1,403.8**	**–**	**1,607.4**	**–**	**1,799.5**	**–**
i) Claims on Central Government	5,528.3	1,714.6	–	1,587.0	–	1,607.4	–	1,799.5	–
ii) Deposits of Central Government	184.2	-109.9	–	183.2	–	0.0	–	0.1	–
b) Net RBI credit to State Governments (i-ii)	13.2	25.2	–	-12.0	–	2.2	–	-0.3	–
i) Claims on State governments	13.7	28.7	–	-15.5	–	2.2	–	-0.3	–
ii) Deposits of State governments	0.4	3.6	–	-3.6	–	0.0	–	0.0	–
S.2. RBI's Claims on Commercial and Co-operative banks	48.5	39.9	–	-3.1	–	-0.1	–	66.9	–
of which:									
Loans and Advances to Scheduled Commercial Banks	48.5	39.5	–	-2.7	–	-0.2	–	65.6	–
S.3. RBI's Credit to Commercial Sector	39.6	8.4	–	18.0	–	3.9	–	33.1	–
S.4. Net Foreign Exchange Assets of the RBI	**14,722.0**	**966.2**	**7.8**	**1,436.3**	**10.8**	**1,141.6**	**8.9**	**1,695.8**	**12.1**
S.5. Government's Currency Liabilities to the Public	142.7	14.5	12.9	15.5	12.2	14.3	12.2	13.5	10.2
S.6. Net Non-monetary Liabilities of the RBI	6,038.4	667.1	22.1	2,354.9	63.9	840.6	25.2	2,684.0	64.3
S.7. Net Domestic Assets of the RBI (S.1+S.2+S.3+S.5-S.6)	**-450.2**	**1,245.4**	**–**	**-932.7**	**–**	**787.1**	**–**	**-771.4**	**–**

Data are provisional.

APPENDIX TABLE 10: VARIATIONS IN MONEY STOCK

(Amount in ₹ billion)

Items	Outstanding as on March 31, 2012	Variations							
		Financial Year				Year-on-year			
		2010-11		2011-12		up to July 29, 2011		up to July 27, 2012	
		Absolute	Per cent	Absolute	Per cent	Absolute	Per cent	Absolute	Per cent
1	2	3	4	5	6	7	8	9	10
Narrow Money (M_1)[C.1+C.2(a)+C.3]	**17,342.3**	**1,490.8**	**10.0**	**958.9**	**5.9**	**698.4**	**4.6**	**1,522.1**	**9.6**
Broad Money (M_3)	**73,592.0**	**9,014.2**	**16.1**	**8,550.8**	**13.1**	**9,734.9**	**16.7**	**9,179.5**	**13.5**
(C.1+C.2+C.3 = S.1+S.2+S.3+S.4-S.5)									
Components									
C.1. Currency with the Public	10,265.0	1,443.4	18.8	1,146.6	12.6	1,213.2	14.9	1,236.8	13.2
C.2. Aggregate Deposits with Banks (a+b)	63,298.8	7,572.3	15.7	7,412.5	13.3	8,552.4	17.0	7,916.7	13.5
a) Demand Deposits	7,049.1	48.9	0.7	-179.4	-2.5	-484.1	-7.0	259.3	4.0
b) Time Deposits	56,249.7	7,523.4	18.3	7,591.9	15.6	9,036.5	20.9	7,657.4	14.6
C.3. `Other' Deposits with the RBI	28.2	-1.5	-4.0	-8.3	-22.7	-30.6	-69.0	26.0	188.6
Sources									
S.1. Net Bank Credit to Government (A+B)	**23,695.5**	**3,147.1**	**18.9**	**3,856.5**	**19.4**	**3,891.8**	**22.1**	**4,143.4**	**19.3**
A. Net RBI credit to Government (a+b)	5,357.4	1,849.7	–	1,391.8	–	1,495.0	–	1,750.1	–
a. Net RBI credit to Central Government	5,344.1	1,824.5	–	1,403.8	–	1,494.8	–	1,742.4	–
b. Net RBI credit to State Governments	13.2	25.2	–	-12.0	–	0.2	–	7.8	–
B. Other banks' credit to Government	18,338.1	1,297.4	8.9	2,464.7	15.5	2,396.8	15.6	2,393.3	13.5
S.2. Bank Credit to Commercial Sector (a+b)	**49,594.3**	**7,452.7**	**21.3**	**7,227.5**	**17.1**	**6,834.9**	**18.8**	**7,278.1**	**16.8**
A. RBI's credit to commercial sector	39.6	8.4	–	18.0	–	4.7	–	29.7	–
B. Other banks' credit to commercial sector	49,554.7	7,444.3	21.3	7,209.5	17.0	6,830.1	18.8	7,248.5	16.8
S.3. Net Foreign Exchange Assets of Banking Sector (A+B)	**15,437.8**	**1,118.8**	**8.7**	**1,504.4**	**10.8**	**843.3**	**6.3**	**2,235.2**	**15.8**
A. RBI's net foreign exchange assets	14,722.0	966.2	7.8	1,436.3	10.8	847.9	6.6	1,933.6	14.0
B. Other banks' net foreign exchange assets	715.8	152.5	30.8	68.1	10.5	-4.6	-1.1	301.7	72.8
S.4. Government's Currency Liabilities to the Public	**142.7**	**14.5**	**12.9**	**15.5**	**12.2**	**14.3**	**12.2**	**13.5**	**10.2**
S.5. Banking Sector's Net Non-Monetary Liabilities (A+B)	**15,278.3**	**2,718.9**	**32.0**	**4,053.0**	**36.1**	**1,849.4**	**20.5**	**4,490.8**	**41.3**
A. Net non-monetary liabilities of RBI	6,038.4	667.1	22.1	2,354.9	63.9	499.3	13.9	2,903.0	71.0
B. Net non-monetary liabilities of other banks (residual)	9,239.9	2,051.9	37.4	1,698.1	22.5	1,350.1	24.8	1,587.8	23.4

Note : Data are provisional.

APPENDIX TABLE 11: SECTORAL DEPLOYMENT OF GROSS BANK CREDIT

(Amount in ₹ billion)

Sector	Outstanding as on			Variation during			
	Mar 26, 2010	Mar 25, 2011	Mar 23, 2012	2010-11		2011-12	
				Absolute	Per cent	Absolute	Per cent
1	2	3	4	5	6	7	8
I Gross Bank Credit (II + III)	30,885.7	37,314.7	43,713.5	6,429.0	20.8	6,398.9	17.1
II Food Credit	485.6	641.1	816.1	155.5	32.0	175.0	27.3
III Non-food Credit (1 to 4)	30,400.1	36,673.5	42,897.4	6,273.5	20.6	6,223.9	17.0
1 Agriculture & Allied Activities	4,161.3	4,603.3	5,225.3	442.0	10.6	622.0	13.5
2 Industry (Micro & Small, Medium and Large)	13,114.5	16,208.5	19,659.8	3,094.0	23.6	3,451.3	21.3
3 Services	7,267.9	9,008.0	10,329.3	1,740.1	23.9	1,321.3	14.7
of which:							
3.1 Transport Operators	525.2	654.6	728.1	129.5	24.7	73.5	11.2
3.2 Professional Services	434.0	602.7	638.9	168.7	38.9	36.1	6.0
3.3 Trade	1,645.0	1,862.9	2,208.8	217.9	13.2	345.9	18.6
3.4 Commercial Real Estate	921.3	1,118.4	1,205.2	197.1	21.4	86.8	7.8
3.5 Non-Banking Financial Companies (NBFCs)	1,134.4	1,755.8	2,218.1	621.4	54.8	462.4	26.3
4 Personal Loans	5,856.3	6,853.7	7,683.1	997.4	17.0	829.4	12.1
of which:							
4.1 Consumer Durables	82.9	101.6	88.0	18.6	22.4	-13.6	-13.4
4.2 Housing (Including Priority Sector Housing)	3,009.3	3,461.1	3,880.2	451.8	15.0	419.1	12.1
4.3 Advances against Fixed Deposits (Including FCNR (B), NRNR Deposits etc.)	486.5	605.2	684.9	118.7	24.4	79.7	13.2
4.4 Credit Card Outstanding	201.5	181.0	204.4	-20.5	-10.2	23.4	12.9
4.5 Education	368.6	437.1	501.9	68.5	18.6	64.8	14.8
Memo							
5 Priority Sector	10,921.8	12,393.9	13,992.5	1,472.1	13.5	1,598.6	12.9
of which:							
5.1 Housing	2,178.8	2,306.9	2,524.6	128.1	5.9	217.7	9.4

Note : 1. Data are provisional and relate to select banks which cover 95 per cent of total non-food credit extended by all scheduled commercial banks.
2. Gross bank credit data include bills rediscounted with Reserve Bank, Exim Bank, other financial institutions and inter-bank participations.

APPENDIX TABLE 12: CAPITAL MARKET - PRIMARY AND SECONDARY

(Amount in ₹ billion)

Items	2010-11		2011-12	
	No of Issues	Amount	No of Issues	Amount
1	2	3	4	5
I. PRIMARY MARKET				
A. Prospectus and Rights Issues*	**77**	**376.2**	**51**	**128.6**
1. Private Sector (a+b)	**70**	**248.3**	**49**	**81.5**
a) Financial	6	43.3	10	37.9
b) Non- Financial	64	205.0	39	43.6
2. Public Sector (a+b+c)	**7**	**127.9**	**2**	**47.1**
a) Public Sector Undertakings	2	80.3	–	–
b) Government Companies	–	–	1	1.3
c) Banks/Financial Institutions	5	47.6	1	45.8
3. Total (1+2, i+ii, a+b)	**77**	**376.2**	**51**	**128.6**
Instrument Type				
(i) Equity	77	376.2	51	128.6
(ii) Debt	–	–	–	–
Issuer Type				
(a) IPOs	51	170.5	34	59.1
(b) Listed	26	205.7	17	69.5
B. Euro Issues (ADRs and GDRs)	**42**	**94.4**	**22**	**27.2**
C. Private Placement				
1. Private Sector (a+b)	**1,338**	**1,214.5**	**588**	**619.1**
a) Financial	878	719.8	527	387.1
b) Non- Financial	460	494.8	61	232.0
2. Public Sector (a+b)	**250**	**1,169.4**	**266**	**1,560.7**
a) Financial	212	989.8	230	1,234.7
b) Non- Financial	38	179.6	36	326.0
3. Total (1+2, i+ii)	**1,588**	**2,383.9**	**854**	**2,179.8**
(i) Equity	19	136.7	6	51.6
(ii) Debt	1,569	2,247.2	848	2,128.2
D. Mutual Funds Mobilisation (Net) #		**-494.1**		**-220.2**
1. Private Sector		-192.2		-154.5
2. Public Sector		-301.9		-65.8
II. SECONDARY MARKET				
BSE Sensex: End-Period		19,445		17,404
Period Average		18,605		17,423
Period Earning Ratio@		21.2		17.8
Market Capitalisation to GDP ratio (%)		89.1		70.1
Turnover				
Cash Segment		11,034.7		6,670.2
Derivatives Segment		1.5		8,084.8
S&P CNX Nifty: End-Period		5,834		5,296
Period Average		5,584		5,243
Period Earning Ratio@		22.1		18.7
Market Capitalisation to GDP ratio (%)		87.3		68.8
Turnover				
Cash Segment		35,774.1		28,108.9
Derivatives Segment		292,482.2		313,497.3

* : Excluding Offer for sale. - : Nil/Negligible. @ : As at end Period. # : Net of redemptions.

Source: SEBI, NSE, BSE and Various Merchant Bankers.

APPENDIX TABLE 13:TURNOVER IN INDIAN DERIVATIVES MARKET

(₹ billion)

Year/Month	Equity Derivatives				Currency Derivatives			Interest Rate Derivatives
	Index Futures	Index Options	Stock Futures	Stock Options	Forward	Swap	Exchange Traded Currency Options and Futures	Interest Rate Swap
1	2	3	4	5	6	7	8	9
2009-10	**39,345**	**80,281**	**51,952**	**5,061**	**20,359**	**31,454**	**37,273**	**25,695**
2010-11	**43,569**	**172,694**	**54,958**	**10,303**	**28,902**	**41,125**	**84,153**	**47,464**
2011-12	**37,564**	**233,384**	**40,849**	**9,785**	**24,134**	**46,876**	**98,964**	**51,238**
2010-11								
Apr	2,796	9,055	4,098	767	1,743	2,646	7,193	2,448
May	3,956	1,215	4,316	798	2,708	2,972	7,828	3,095
Jun	3,723	11,699	4,218	715	2,324	3,104	7,525	5,326
Jul	2,894	10,434	4,234	737	1,951	3,170	5,334	5,501
Aug	2,991	11,575	4,963	1,009	2,227	3,450	4,923	5,135
Sep	3,839	16,885	5,556	1,085	2,494	3,206	8,685	3,123
Oct	4,025	17,055	6,088	1,077	3,125	4,281	9,058	3,464
Nov	4,248	19,029	5,399	982	2,724	3,895	6,770	2,772
Dec	3,228	15,193	4,326	824	2,145	3,375	5,435	3,413
Jan	3,845	19,625	4,111	837	2,170	3,128	6,601	5,723
Feb	4,029	20,444	4,013	809	2,386	3,272	5,980	3,355
Mar	3,996	20,486	3,634	663	2,905	4,626	8,732	4,109
2011-12								
Apr	2,823	16,460	3,532	700	2,060	3,671	7,223	3,754
May	3,057	18,929	3,367	701	2,172	4,749	10,005	4,789
Jun	2,652	17,846	3,227	658	2,400	4,956	10,390	5,368
Jul	2,657	18,677	3,499	817	2,470	3,936	12,433	4,375
Aug	3,472	22,095	3,338	733	2,588	4,062	13,655	6,488
Sep	3,473	20,859	3,265	764	2,309	3,741	9,779	4,534
Oct	2,687	16,217	2,813	666	1,542	3,119	5,778	3,545
Nov	3,314	20,294	3,066	722	1,762	3,575	6,362	2,833
Dec	3,447	21,157	2,821	730	1,584	3,458	6,084	2,993
Jan	2,974	15,631	3,528	1,074	1,476	3,940	6,113	4,999
Feb	3,252	21,758	4,536	1,216	1,333	3,720	5,179	3,531
Mar	3,756	23,461	3,856	1,005	2,438	3,948	5,963	4,027
2012-13								
Apr	2,606	19,120	3,039	1,006	4,386	3,599	4,590	3,129
May	2,869	26,414	3,030	1,129	5,033	4,249	7,928	3,613
Jun	2,851	26,752	3,048	1,081	4,544	4,169	..	5,437

Source: RBI, BSE,NSE, CCIL, USE and SEBI.
.. : Not available.

APPENDIX TABLE 14: INDICES OF REAL EFFECTIVE EXCHANGE RATE (REER) AND NOMINAL EFFECTIVE EXCHANGE RATE (NEER) OF THE INDIAN RUPEE

Year/Month	36 -Currency Trade-based weights		6 - Currency Trade-based weights	
	(Base 2004-05=100)		(Base 2004-05=100)	
	REER	NEER	REER	NEER
1	2	3	4	5
2004-05	100.0	100.0	100.0	100.0
2005-06	103.1	102.2	105.2	103.0
2006-07	101.3	97.6	104.3	98.1
2007-08	108.5	104.8	112.8	104.6
2008-09	97.8	93.3	102.3	90.4
2009-10	94.7	90.9	102.0	87.1
2010-11 (P)	102.3	93.7	114.9	91.8
2011-12 (P)	99.2	87.6	111.9	84.9
2010-11 (P)				
April	103.9	96.4	115.5	94.4
May	103.0	95.6	115.7	94.0
June	102.4	94.8	114.7	93.3
July	100.1	92.1	112.2	90.8
August	99.7	92.1	112.3	90.8
September	100.9	93.0	113.6	91.2
October	102.8	94.6	114.8	92.2
November	101.8	93.4	114.6	91.4
December	103.6	93.9	117.5	92.3
January	103.9	92.8	116.9	91.3
February	102.8	92.4	115.2	90.2
March	103.4	92.7	116.0	90.3
2011-12 (P)				
April	104.4	93.1	117.4	90.4
May	103.0	92.0	116.5	89.3
June	103.3	92.0	116.1	89.3
July	104.4	92.6	117.7	90.3
August	102.4	90.6	115.7	88.1
September	99.4	87.9	112.5	85.1
October	96.8	85.5	108.9	82.4
November	94.5	83.0	106.3	80.0
December	91.6	80.8	103.8	78.1
January	94.7	83.2	106.9	80.5
February	98.5	86.3	111.0	83.2
March	96.9	84.2	109.6	81.6
2012-13 (P)				
April	94.9	81.9	107.3	79.2
May	91.5	78.7	104.1	76.1
June	89.9	77.3	102.2	74.7

P : Provisional.

Note : For detailed methodology of compilation of indices, see "Revision of Nominal Effective Exchange Rate (NEER) and Real Effective Exchange Rate (REER) Indices", Reserve Bank of India Bulletin, December 2005.

APPENDIX TABLE 15: KEY FISCAL INDICATORS

(As per cent to GDP)

Year	Primary Deficit	Revenue Deficit	Gross Fiscal deficit	Outstanding Liabilities@	Outstanding Liabilities$
1	2	3	4	5	6
Centre					
1990-91	4.1	3.3	7.8	55.2	61.3
1995-96	0.9	2.5	5.1	50.9	59.0
2000-01	0.9	4.1	5.7	55.6	61.5
2007-08	-0.9	1.1	2.5	56.9	58.9
2008-09	2.6	4.5	6.0	56.1	58.6
2009-10	3.2	5.2	6.5	54.7	56.5
2010-11	1.8	3.3	4.9	51.3	52.8
2011-12 RE	2.8 (2.7)	4.5 (4.3)	5.9 (5.8)	50.5	51.9
2012-13 BE	1.9	3.4	5.1	49.5	–
States*					
1990-91	1.8	0.9	3.3	22.5	22.5
1995-96	0.8	0.7	2.6	20.9	20.9
2000-01	1.8	2.6	4.2	28.3	28.3
2007-08	-0.5	-0.9	1.5	26.6	26.6
2008-09	0.6	-0.2	2.4	26.1	26.1
2009-10	1.2	0.5	2.9	25.5	25.5
2010-11	0.5	-0.1	2.1	23.4	23.4
2011-12 RE	0.8	-0.1	2.3	22.5	22.5
2012-13 BE	0.6	-0.4	2.1	21.8	21.8
Combined*					
1990-91	5.0	4.2	9.4	64.7	70.9
1995-96	1.6	3.2	6.5	61.1	69.3
2000-01	3.6	6.6	9.5	70.4	76.5
2007-08	-1.2	0.2	4.0	69.5	71.4
2008-09	3.3	4.3	8.3	69.7	72.2
2009-10	4.5	5.7	9.4	69.0	70.8
2010-11	2.4	3.2	6.9	64.5	66.0
2011-12 RE	3.6	4.4	8.2	64.1	65.6
2012-13 BE	2.6	3.0	7.1	–	–

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

* : Data from 2010-11 onwards are provisional and pertains to budgets of 28 state governments.

@ : includes external liabilities of the centre calculated at historical exchange rate.

$: Includes external liabilities of the centre calculated at current exchange rate.

Note: 1. Data on combined deficit/liabilities indicators are net of inter-governmental transactions between the centre and the state governments *viz.*, (a) NSSF investment in state governments special securities (b) Loans advance by the centre to states and (c) State governments' investment in centre's treasury bills.

2. Negative sign (-) indicates surplus in deficit indicators.
3. Figure in brackets are provisional accounts.

Source: Budget documents of the Central and State governments.

APPENDIX TABLE 16: BUDGETARY OPERATIONS OF THE STATE GOVERNMENTS

A : Measures of Deficit of State Governments (₹ billion)

Year	Fiscal Deficit		Primary Deficit		Net Reserve Bank Credit #	Revenue Deficit
	Gross	Net	Gross	Net		
1	2	3	4	5	6	7
1990-91	187.9	145.3	101.3	82.8	4.2	53.1
1995-96	308.7	268.5	90.3	107.9	0.2	86.2
2000-01	879.2	855.8	369.4	455.5	-10.9	553.2
2007-08	754.6	689.6	-243.8	-182.3	11.4	-429.4
2008-09	1,345.9	1,296.9	316.3	430.9	-16.1	-126.7
2009-10	1,888.2	1,794.2	760.1	819.1	1.9	310.2
2010-11	1,602.2	1,464.0	355.8	373.9	25.2	-50.9
2011-12 (RE)	2,073.8	1,884.9	680.4	693.7	-15.3	-65.9
2012-13 (BE)	2,152.5	1,944.0	693.7	583.4	…	-425.9
As Percentage to GDP at Current Market Prices						
1990-91	3.3	2.6	1.8	1.5	0.1	0.9
1995-96	2.6	2.3	0.8	0.9	0.0	0.7
2000-01	4.2	4.1	1.8	2.2	-0.1	2.6
2007-08	1.5	1.4	-0.5	-0.4	0.0	-0.9
2008-09	2.4	2.3	0.6	0.8	0.0	-0.2
2009-10	2.9	2.8	1.2	1.3	0.0	0.5
2010-11	2.1	1.9	0.5	0.5	0.0	-0.1
2011-12 (RE)	2.3	2.1	0.8	0.8	0.0	-0.1
2012-13 (BE)	2.1	1.9	0.6	0.6	…	-0.4

B : Select Budgetary Variables of State Governments (Per cent)

Item	1990-2000 (Average)	2010-11	2011-12 (RE)	2012-13 (BE)
1	2	3	4	5
1. Revenue Deficit / GFD	36.2	-2.3	-2.9	-18.8
2. Capital Outlay/GFD	49.2	95.3	94.2	110.2
3. Non-Developmental Revenue Expenditure / Revenue Receipts	39.8	37.4	35.0	34.7
4. Interest Payments/Revenue Receipts	16.6	13.3	12.2	11.7
5. States' Own Revenue/GDP	6.9	7.2	7.4	7.5
a) States' Own Tax Revenue/GDP	5.2	6.0	6.2	6.3
b) States' Own Non Tax Revenue / GDP	1.7	1.2	1.2	1.2
6. Current Transfers/GDP	4.4	5.0	5.5	5.6
a) States share in Central taxes/GDP	2.5	2.9	2.9	3.0
b) Grants from Centre/GDP	1.9	2.1	2.5	2.6
7. Developmental Expenditure / GDP	10.0	9.4	10.4	10.2
of which :				
Social Sector Expenditure / GDP	5.7	5.9	6.4	6.4
8. Non-Developmental Expenditure / GDP	4.6	4.7	4.7	4.7
9. Committed Expenditure/GDP	3.7	4.1	4.0	4.0
10. Capital Outlay/GDP	1.4	2.0	2.2	2.3

RE : Revised Estimates. BE : Budget Estimates. GFD : Gross Fiscal Deficit. .. : Not Available.
: Data pertain to state governments having accounts with the Reserve Bank.

Note: 1. Negative sign (-) indicates surplus in deficit indicators.
2. Committed expenditure comprises expenditure on interest payments, pensions and administrative services.
3. Current transfers includes states share in central taxes and grants from the centre.
4. The net Reserve Bank credit to state governments refers to variations in loans and advances given to them by the Reserve Bank net of their incremental deposits with the Reserve Bank.

Source: Budget documents of the state governments and the Reserve Bank records.

APPENDIX TABLE 17: INDIA'S EXPORTS AND IMPORTS

(US $ million)

Exports of principal commodities				
Commodity/Group	April - March			
	2008-09	2009-10R	2010-11R	2011-12P
1	2	3	4	5
I. Primary Products	**25,335.4**	**26,396.5**	**32,844.7**	**45,574.0**
A. Agricultural & Allied Products	17,534.9	17,734.1	24,207.6	37,420.8
B. Ores & Minerals	7,800.5	8,662.5	8,637.1	8,153.3
II. Manufactured Goods	**123,148.9**	**115,180.7**	**157,993.9**	**186,784.2**
A. Leather & Manufactures	3,556.0	3,361.1	3,910.6	4788.5
B. Chemicals & Related Products	22,708.1	22,908.8	28,871.0	37,190.5
C. Engineering Goods	47,285.6	38,271.3	58,137.4	6,7093.1
D. Textiles & Textile Products	20,016.4	19,853.0	24,225.0	27,998.0
E. Gems & Jewellery	27,955.2	28,996.3	40,476.1	46,900.8
F. Handicrafts	301.0	224.8	256.9	233.5
III. Petroleum Products	**27,547.0**	**28,192.0**	**41,480.0**	**55,603.5**
IV. Others	**9,263.7**	**8,982.2**	**18,817.7**	**16,661.7**
Total Exports (I+II+III+IV)	**185,295.0**	**178,751.4**	**251,136.2**	**304,623.5**
Imports of principal commodities				
I. Bulk Imports	**138,791.0**	**125,315.1**	**151,167.1**	**214,754.6**
A. Petroleum, Petroleum Products & Related Material	93,671.7	87,135.9	105,964.4	154,905.9
B. Bulk Consumption Goods	4,975.3	9,012.7	8,854.8	11,614.4
C. Other Bulk Items	40,144.0	29,166.5	36,347.9	48,234.3
II. Non-Bulk Imports	**164,905.3**	**163,057.7**	**218,602.0**	**274,662.8**
A. Capital Goods	71,833.1	65,865.0	78,546.1	99,364.7
B. Mainly Export Related Items	31,930.8	31,270.0	53,608.3	54,478.9
C. Others	61,141.4	65,922.8	86,447.6	120,819.3
Total Imports (I+II)	**303,696.3**	**288,372.9**	**369,769.1**	**489,417.4**

P : Provisional. R : Revised.
Source : DGCI & S.

APPENDIX TABLE 18: INDIA'S OVERALL BALANCE OF PAYMENTS

Item	₹ billion			US $ million		
	2009-10 R	2010-11 PR	2011-12 P	2009-10 R	2010-11 PR	2011-12 P
1	3	4	5	7	8	9
A. CURRENT ACCOUNT						
1 Exports, f.o.b.	8633	11395	14825	182,442	250,468	309774
2 Imports, c.i.f.	14232	17351	23946	300,644	381,061	499533
3 Trade Balance	-5600	-5956	-9121	-118,203	-130,593	-189759
4 Invisibles, Net	3803	3855	5362	80,022	84,647	111604
a) 'Non-Factor' Services	1700	2223	3078	36,016	48,816	64098
of which :						
Software Services	2352	2524	2992	49,705	55,460	62212
b) Income	-380	-789	-768	-8,038	-17,309	-15988
c) Private Transfers	2471	2420	3050	51,791	53,125	63469
d) Official Transfers	12	1	2	254	16	25
5 Current Account Balance	-1797	-2101	-3760	-38,181	-45,945	-78155
B. CAPITAL ACCOUNT						
1 Foreign Investment, Net (a+b)	2400	1823	1887	50,362	39,652	39231
a) Direct Investment	860	429	1032	17,966	9,360	22061
of which :						
i) In India	1578	1181	1550	33,109	25,884	32952
Equity	1093	630	1068	22,905	13,791	22833
Re-invested Earnings	411	544	393	8,669	11,939	8205
Other Capital	74	7	89	1,535	154	1914
ii) Abroad	-718	-752	-518	-15,143	-16,524	-10892
Equity	-469	-363	-183	-9,871	-7,975	-3874
Re-invested Earnings	-51	-49	-58	-1,084	-1,084	-1208
Other Capital	-198	-339	-277	-4,188	-7,465	-5809
b) Portfolio Investment	1540	1394	856	32,396	30,293	17170
In India	1539	1447	867	32,376	31,471	17409
Abroad	1	-53	-12	20	-1,179	-239
2 External Assistance, Net	136	225	113	2,890	4,941	2296
Disbursements	279	359	274	5,897	7,882	5646
Amortisation	143	134	161	3,007	2,941	3350
3 Commercial Borrowings, Net	95	570	479	2,000	12,506	10344
Disbursements	706	1098	1562	15,003	24,113	32590
Amortisation	611	528	1083	13,003	11,606	22247
4 Short Term Credit, Net	349	502	306	7,558	10,990	6668
5 Banking Capital	98	220	710	2,083	4,962	16226
of which :						
NRI Deposits, Net	142	148	582	2,922	3,238	11918
6 Rupee Debt Service	-5	-3	-4	-97	-68	-79
7 Other Capital, Net @	-632	-503	-301	-13,162	-10,994	-6,929
8 Total Capital Account	2440	2833	3190	51,634	61,989	67,755
C. Errors & Omissions	**-1**	**-137**	**-116**	**-12**	**-2993**	**-2432**
D. Overall Balance [A(5)+B(8)+C]	**642**	**595**	**-685**	**13,441**	**13,050**	**-12831**
E. Monetary Movements (F+G)	**-642**	**-595**	**685**	**-13,441**	**-13,050**	**12831**
F. IMF, Net	**0**	**0**		**0**	**0**	**0**
G. Reserves and Monetary Gold (Increase -, Decrease +)	**-642**	**-595**	**685**	**-13,441**	**-13,050**	**12831**
of which : SDR allocation	-250	–	–	-5,160	–	–

P : Provisional. PR : Partially Revised. R : Revised.

@ : 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.

APPENDIX TABLE 19: FOREIGN DIRECT INVESTMENT FLOWS TO INDIA: COUNTRY-WISE AND INDUSTRY-WISE

(US $ million)

Source/Industry	2007-08	2008-09	2009-10 P	2010-11 P	2011-12 P
1	2	3	4	5	6
Total FDI	19,425	22,697	22,461	14,939	23,473
Country-wise Inflows					
Mauritius	9,518	10,165	9,801	5,616	8,142
Singapore	2,827	3,360	2,218	1,540	3,306
U.S.A	950	1,236	2,212	1,071	994
Cyprus	570	1,211	1,623	571	1568
Japan	457	266	971	1,256	2,089
Netherlands	601	682	804	1,417	1,289
United Kingdom	508	690	643	538	2760
Germany	486	611	602	163	368
UAE	226	234	373	188	346
France	136	437	283	486	589
Switzerland	192	135	96	133	211
Hong Kong SAR	106	155	137	209	262
Spain	48	363	125	183	251
South Korea	86	95	159	136	226
Luxembourg	15	23	40	248	89
Others	2,699	3,034	2,374	1,184	983
Sector-wise Inflows					
Manufacture	3,726	4,777	5,143	4,793	9,337
Construction	2,551	2,237	3,516	1,599	2,634
Financial Services	3,850	4,430	2,206	1,353	2,603
Real Estate Activities	1,336	1,886	2,191	444	340
Electricity and other Energy Generation, Distribution & Transmission	829	669	1,877	1,338	1,395
Communication Services	66	2,067	1,852	1,228	1,458
Business Services	1,158	643	1,554	569	1590
Miscellaneous Services	1,901	1,458	888	509	801
Computer Services	1,035	1,647	866	843	736
Restaurants & Hotels	280	343	671	218	870
Retail & Wholesale Trade	200	294	536	391	567
Mining	461	105	268	592	204
Transport	816	401	220	344	410
Trading	176	400	198	156	6
Education, Research & Development	156	243	91	56	103
Others	884	1,097	384	506	419

P : Provisional.
Note : Includes FDI through SIA/FIPB and RBI routes only.

APPENDIX TABLE 20 : INDIA'S FOREIGN EXCHANGE RESERVES

End of Month	Foreign Exchange Reserves (₹ billion)					Foreign Exchange Reserves (US $ million)					Total Foreign Exchange Reserves (in SDR million)	Movement in Foreign Exchange Reserves (in SDR million)*
	SDRs	Gold #	Foreign Currency Assets	Reserve Tranche Position in IMF	Total (2+3+4+5)	SDRs	Gold #	Foreign Currency Assets	Reserve Tranche Position in IMF	Total (7+8+9+10)		
1	2	3	4	5	6	7	8	9	10	11	12	13
Mar-94	3.39	128	473	9	614	108	4,078	15,068	299	19,553	13,841	6,595
Mar-95	0.23	138	660	11	808	7	4,370	20,809	331	25,517	16,352	2,511
Mar-96	2.80	157	584	11	754	82	4,561	17,044	310	21,997	15,054	-1,298
Mar-97	0.07	146	804	10	960	2	4,054	22,367	291	26,714	19,272	4,218
Mar-98	0.04	134	1025	11	1170	1	3,391	25,975	283	29,650	22,200	2,929
Mar-99	0.34	126	1254	28	1408	8	2,960	29,522	663	33,153	24,413	2,213
Mar-00	0.16	130	1529	29	1688	4	2,974	35,058	658	38,694	28,728	4,315
Mar-01	0.11	127	1845	29	2001	2	2,725	39,554	616	42,897	34,034	5,306
Mar-02	0.50	149	2491	30	2670	10	3,047	51,049	610	54,716	43,876	9,842
Mar-03	0.19	168	3415	32	3615	4	3,534	71,890	672	76,100	55,394	11,518
Mar-04	0.10	182	4662	57	4901	2	4,198	107,448	1,311	112,959	76,298	20,904
Mar-05	0.20	197	5931	63	6191	5	4,500	135,571	1,438	141,514	93,666	17,368
Mar-06	0.12	257	6473	34	6764	3	5,755	145,108	756	151,622	105,231	11,565
Jun-06	0.02	285	7187	35	7507	–	6,180	155,968	764	162,912	110,123	4,892
Sep-06	0.06	285	7277	35	7597	1	6,202	158,340	762	165,305	111,967	6,736
Dec-06	0.04	288	7527	24	7840	1	6,517	170,187	546	177,251	117,822	12,591
Mar-07	0.08	296	8366	20	8682	2	6,784	191,924	469	199,179	131,890	26,659
Jun-07	0.06	277	8399	19	8694	1	6,787	206,114	460	213,362	140,780	8,890
Sep-07	0.08	293	9536	17	9846	2	7,367	239,955	438	247,762	159,164	27,274
Dec-07	0.13	328	10505	17	10850	3	8,328	266,553	432	275,316	174,223	42,333
Mar-08	0.74	401	11960	17	12380	18	10,039	299,230	436	309,723	188,339	56,449
Jun-08	0.48	395	12986	23	13404	11	9,208	302,340	528	312,087	191,040	2,701
Sep-08	0.17	402	13016	22	13441	4	8,565	277,300	467	286,336	183,876	-4,463
Dec-08	0.13	411	11948	42	12402	3	8,485	246,603	877	255,968	166,184	-22,155
Mar-09	0.06	488	12301	50	12839	1	9,577	241,426	981	251,985	168,544	-19,795
Jun-09	0.02	469	12163	60	12692	1	9,800	254,093	1,248	265,142	170,814	2,270
Sep-09	251	496	12700	66	13513	5,224	10,316	264,373	1,365	281,278	177,533	8,989
Dec-09	241	854	12071	67	13232	5,169	18,292	258,583	1,426	283,470	180,820	12,276
Mar-10	226	812	11497	62	12597	5,006	17,986	254,685	1,380	279,057	183,803	15,259
Jun-10	227	927	11633	61	12848	4,875	19,894	249,628	1,313	275,710	186,429	2,626
Sep-10	230	922	11914	90	13156	5,130	20,516	265,231	1,993	292,870	188,197	4,394
Dec-10	228	1007	12001	88	13324	5,078	22,470	267,814	1,972	297,334	193,070	9,267
Mar-11	204	1026	12249	132	13610	4,569	22,972	274,330	2,947	304,818	192,254	8,451
Jun-11	206	1103	12676	133	14119	4,614	24,668	283,458	2,975	315,715	197,266	5,012
Sep-11	220	1403	13490	128	15241	4,504	28,667	275,699	2,612	311,482	199,461	7,207
Dec-11	236	1418	14006	144	15805	4,429	26,620	262,933	2,706	296,688	193,248	994
Mar-12	229	1383	13305	145	15061	4,469	27,023	260,069	2,836	294,397	190,045	-2,209

– : Negligible.
: Gold has been valued close to international market price.
* : Variations over the previous March.

Note : 1. Gold holdings include acquisition of gold worth US$ 191 million from the Government during 1991-92, US$ 29.4 million during 1992-93, US$ 139.3 million during 1993-94, US$ 315.0 million during 1994-95 and US$ 17.9 million during 1995-96. On the other hand, 1.27 tonnes of gold amounting to ₹ 435.5 million (US$11.97 million), 38.9 tonnes of gold amounting to ₹ 14.85 billion (US$ 376.0 million) and 0.06 tonnes of gold amounting to ₹ 21.3 million (US$ 0.5 million) were repurchased by the Central Government on November 13, 1997, April 1, 1998 and October 5, 1998 respectively for meeting its redemption obligation under the Gold Bond Scheme.

2. Conversion of foreign currency assets into US dollar was done at exchange rates supplied by the IMF up to March 1999. Effective April 1, 1999, the conversion is at New York closing exchange rate.

3. Foreign currency assets excludes US$ 250.00 million (as also its equivalent in Indian Rupee) invested in foreign currency denominated bonds issued by IIFC (UK) since March 20, 2009, excludes US$ 380.00 million since September 16, 2011, US$ 550.00 million since February 27, 2012 and US$ 673.00 million since 30th March 2012.

APPENDIX TABLE 21: INDIA'S EXTERNAL DEBT

(As at end-March)

Item	₹ billion			US $ million		
	2010 R	2011 PR	2012 P	2010 R	2011 PR	2012 P
1	2	3	4	5	6	7
I. Multilateral	**1,934**	**2,167**	**2,571**	**42,857**	**48,474**	**50,453**
A. Government borrowing	1,707	1,903	2,226	37,825	42,578	43,686
i) Concessional	1,160	1,207	1,387	25,711	26,991	27,221
ii) Non-concessional	547	697	839	12,114	15,587	16,465
B. Non-Government borrowing	227	263	345	5,032	5,896	6,768
i) Concessional	–	–	–	–	–	–
ii) Non-concessional	227	263	345	5,032	5,896	6,768
II. Bilateral	**1,020**	**1,148**	**1,364**	**22,593**	**25,698**	**26,757**
A. Government borrowing	716	804	916	15,860	17,988	17,987
i) Concessional	716	804	916	15,860	17,988	17,987
ii) Non-concessional	–	–	–	–	–	–
B. Non-Government borrowing	304	344	448	6,733	7,710	8,771
i) Concessional	32	41	68	702	917	1,339
ii) Non-concessional	272	303	380	6,031	6,792	7,432
III. International Monetary Fund	**273**	**282**	**315**	**6,041**	**6,308**	**6,163**
IV. Trade Credit	**760**	**831**	**1,018**	**16,841**	**18,613**	**19,908**
i) Buyers' credit	668	733	882	14,811	16,411	17,244
ii) Suppliers' credit	29	28	56	651	637	1,100
iii) Export credit component of bilateral credit	62	70	80	1,379	1,564	1,564
iv) Export credit for defence purposes	–	–	–	–	–	–
V. Commercial Borrowings	**3,192**	**3,954**	**5,341**	**70,726**	**88,565**	**1,04,397**
i) Commercial bank loans	2,024	2,617	3,782	44,832	58,612	73,929
ii) Securitised borrowings (including FCCBs) $	1,132	1,305	1,533	25,075	29,221	29,963
iii) Loans/securitised borrowings, etc.	37	33	26	819	732	504
iv) Self Liquidating Loans	–	–	–	–	–	–
VI. NRI & FC(B&O) Deposits (above one-year maturity)	**2,171**	**2,308**	**2,998**	**47,890**	**51,682**	**58,608**
i) FCNR(B)	646	697	626	14,258	15,597	14,968
ii) NR(E)RA	1,190	1,178	1,607	26,251	26,378	31,408
iii) NRO	335	434	766	7,381	9,707	12,232
VII. Rupee Debt *	**75**	**71**	**69**	**1,658**	**1,601**	**1,354**
i) Defence	67	64	62	1,487	1,437	1,216
ii) Civilian +	8	7	7	171	164	138
VIII. Total Long-term Debt (I to VII)	**9,425**	**10,761**	**13,677**	**2,08,606**	**2,40,941**	**2,67,640**
IX. Short-term Debt	**2,362**	**2,901**	**4,000**	**52,329**	**64,990**	**78,179**
i) Trade Related Credits	2,143	2,610	3,332	47,473	58,463	65,130
ii) FII Investment in Govt. T-Bills & other instruments	152	242	481	3,357	5,424	9,395
iii) Investment in Treasury Bills by foreign central banks and international institutions etc.	5	2	3	103	50	64
iv) External Debt Liabilities of Central Bank and Commercial Banks	63	47	184	1,396	1,053	3,590
X. GROSS TOTAL	**11,786**	**13,663**	**17,677**	**2,60,935**	**3,05,931**	**3,45,819**
Concessional Debt	1,983	2,123	2,441	43,930	47,497	47,900
As percentage of Total Debt	16.8	15.5	13.8	16.8	15.5	13.9
Short Term Debt	2,362	2,901	4,000	52,329	64,990	78,179
As percentage of Total Debt	20.0	21.2	22.6	20.0	21.2	22.6
Memo Items:						
Debt Indicators :						
1. Debt Stock - GDP Ratio (in per cent)	18.3	17.8	20.0	18.3	17.8	20.0
2. Debt Service Ratio (per cent) (for fiscal year) (including debt-servicing on non-civilian credits)	5.8	4.3	6.0	5.8	4.3	6.0

R : Revised. PR : Partially Revised. P : Provisional.
$: Includes net investment by 100 per cent FII debt funds.
* : Debt owed to Russia denominated in Rupees and converted at current exchange rates, payable in exports.
+ : Includes Rupee suppliers' credit from end-March 1990 onwards.
Note : Multilateral loans do not include revaluation of IBRD pooled loans and exchange rate adjustment under IDA loans for Pre-1971 credits.