Report of the Central Board of Directors on the working of the Reserve Bank of India for the year ended June 30, 2011 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 2010-2011

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

गवर्नर
GOVERNOR

LETTER OF TRANSMITTAL

Ref. No. SYD.625 / 02.16.001 /2011-12

August 25, 2011
Bhadra 3, 1933 (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, 2011 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, 2011.

Yours faithfully

[D. Subbarao]

केन्द्रीय कार्यालय भवन, शहीद भगतसिंह मार्ग, मुम्बई - 400 001, भारत
फोन: +91 22 2266 0868 / 2266 1872 / 2266 2644 फैक्स: +91 22 2266 1784 ई-मेल: governor@rbi.org.in
Central Office Building, Shahid Bhagat Singh Marg, Mumbai - 400 001, India
Tel: +91 22 2266 0868 / 2266 1872 / 2266 2644 Fax: +91 22 2266 1784 E-mail: governor@rbi.org.in

हिंदी आसान है, इसका प्रयोग बढ़ाइए

CENTRAL BOARD / LOCAL BOARDS

GOVERNOR

D. Subbarao

DEPUTY GOVERNORS

Shyamala Gopinath[1]

Usha Thorat[2]

K.C. Chakrabarty

Subir Gokarn

Anand Sinha[3]

H. R. Khan[4]

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

Y.H. Malegam

Suresh D. Tendulkar[5]

U.R. Rao

Lakshmi Chand

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

H. P. Ranina

Azim Premji

Kumar Mangalam Birla

Shashi Rajagopalan[6]

Suresh Neotia

A. Vaidyanathan

M. M. Sharma

Sanjay Labroo

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

Ashok Chawla[7]

R Gopalan [8]

MEMBERS OF LOCAL BOARDS

WESTERN AREA

Y.H. Malegam

K. Venkatesan

Dattaraj V. Salgaocar

Jayantilal B. Patel

EASTERN AREA

Suresh D. Tendulkar[5]

A. K. Saikia

Sovan Kanungo

Md. Sohrab[9]

NORTHERN AREA

Mitha Lal Mehta[10]

U.R. Rao

Ram Nath

Pritam Singh

Kamal Kishore Gupta[11]

Mihir Kumar Moitra[12]

SOUTHERN AREA

Lakshmi Chand

C. P. Nair

M. Govinda Rao

Devaki Jain

1 Term expired on June 20, 2011
2 Term expired on November 9, 2010
3 Assumed office on January 19, 2011
4 Assumed office on July 4, 2011
5 Expired on June 21, 2011
6 Expired on August 5, 2011
7 Retired on January 31, 2011
8 Appointed on February 15, 2011
9 Ceased to be in Office w.e.f. May 13, 2011
10 Term ended on September 23, 2010
11 Appointed on August 26, 2010
12 Appointed on September 24, 2010

Position for the year 2010-11
(updated till August 11, 2011)

PRINCIPAL OFFICERS

(As on August 11, 2011)

EXECUTIVE DIRECTORS	V.K. Sharma
	V.S. Das
	G. Gopalakrishna
	Deepak Mohanty
	S. Karuppasamy
	R. Gandhi
	P. Vijaya Bhaskar
	B. Mahapatra
	G. Padmanabhan
CENTRAL OFFICE	
Customer Service Department	Rajesh Verma, 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	A.I. Killawala, Press Relations Officer (Gr. F)
Department of Currency Management	N. Krishna Mohan, Chief General Manager
Department of Economic and Policy Research	B.M. Misra, Officer-in-Charge
Department of Expenditure and Budgetary Control	Deepa Srivastava, 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
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	Rabi N. Mishra, Chief General Manager
Foreign Exchange Department	Meena Hemchandra, Chief General Manager-in-Charge
Human Resource Management Department	Sandip Ghose, Chief General Manager-in-Charge
Inspection Department	Karuna Sagar, Chief General Manager
Internal Debt Management Department	K.K. Vohra , Chief General Manager
Legal Department	G.S. Hegde, Principal Legal Adviser
Monetary Policy Department	Janak Raj, Adviser-in-Charge
Premises Department	K.R. Ananda, Chief General Manager
Rajbhasha Department	Ramakant K. Gupta, Deputy General Manager
Rural Planning and Credit Department	Deepali Pant Joshi, Chief General Manager-in-Charge
Secretary's Department	Grace E. Koshie, Chief General Manager & Secretary
Urban Banks Department	A. Udgata, Chief General Manager-in-Charge
CHIEF VIGILANCE OFFICER	Kaza Sudhakar
COLLEGES	**PRINCIPALS**
College of Agricultural Banking, Pune	Kamala Rajan
Reserve Bank Staff College, Chennai	J. Sadakkadulla
OFFICES	**REGIONAL DIRECTORS**
Chennai	N.S. Vishwanathan
Kolkata	Salim Gangadharan
Mumbai	J.B. Bhoria
New Delhi	Chandan Sinha
BRANCHES	
Ahmedabad	Sudarshan Sen
Bangalore	Uma Shankar
Bhopal	P.K. Panda
Bhubaneswar	B.K. Bhoi
Chandigarh	Jasbir Singh
Guwahati	Surekha Marandi
Hyderabad	A.S. Rao
Jaipur	B.P. Kanungo
Jammu	K.K. Saraf
Kanpur	Bazil Shaikh
Lucknow	Amarendra Sahoo
Nagpur	Phulan Kumar
Patna	M.K. Singh
Thiruvananthapuram	Suma Varma
	OFFICERS-IN-CHARGE
Agartala	A.K. Pandey, General Manager
Belapur	S. Bhatnagar, General Manager
Dehradun	V.S. Bajwa, General Manager
Gangtok	E.E. Karthak, General Manager
Kochi	C.V. George, General Manager
Panaji	M.A.R. Prabhu, General Manager
Raipur	Nirmal Chand, General Manager
Ranchi	H.N. Panda, General Manager
Shimla	R. Gurumurthy, General Manager
Srinagar	D.P. Sharma, Deputy General Manager

CONTENTS

Page No.

PART ONE : THE ECONOMY – REVIEW AND PROSPECTS

I. ASSESSMENT AND PROSPECTS 1
Assessment of 2010-11 2
Prospects for 2011-12 5
Reserve Bank's Perspective on the Medium-term Challenges for the Indian Economy **9**

II. ECONOMIC REVIEW 15
The Real Economy 15
Price Situation 26
Money and Credit 35
Financial Markets 42
Government Finance 52
External Sector 60

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

III. MONETARY POLICY OPERATIONS 72
Monetary Policy Operations: Context and Rationale 74

IV. CREDIT DELIVERY AND FINANCIAL INCLUSION 81
Priority Sector Lending 81
Financial Inclusion 84
Outreach Activities 87

V. DEVELOPMENT AND REGULATION OF FINANCIAL MARKETS 89
Money Market 89
Government Securities Market 90
Foreign Exchange Market 90
Derivatives Market 92

VI. REGULATION, SUPERVISION AND FINANCIAL STABILITY 96
Financial Stability Assessment 96
Monitoring of Financial Stability 98
Assessment of the Banking Sector 98
Major Decisions Taken by Board for Financial Supervision 101
Commercial Banks 102
Urban Co-operatives Banks 108
Rural Co-operatives 110
Deposit Insurance and Credit Guarantee Corporation 110
Banking Codes and Standards Board of India 111
Non-Banking Financial Companies 111

CONTENTS

Page No.

VII. PUBLIC DEBT MANAGEMENT 114

Debt Management of Central Government 114

Debt Management of State Governments 117

VIII. CURRENCY MANAGEMENT 122

Banknotes in Circulation 122

Coins in Circulation 122

Currency Operations 123

Clean Note Policy 123

Counterfeit Banknotes 124

Customer Service 126

Indigenisation of Paper, Ink and other Raw Materials for Production of Banknotes 126

Expenditure on Security Printing and Distribution 126

IX. PAYMENT AND SETTLEMENT SYSTEMS AND INFORMATION TECHNOLOGY 127

Oversight of Payment Systems in India 127

Policy Initiatives 129

CPSS Initiatives 131

Information Technology 133

Information Technology Infrastructure 133

Information Technology Applications 134

Policy Initiatives 136

X. GOVERNANCE, HUMAN RESOURCES DEVELOPMENT AND ORGANISATIONAL MANAGEMENT 137

Initiatives for Improved Governance 137

Initiatives for Improved Communication 140

Human Resource Development Initiatives 142

Initiatives in Organisation Management 143

XI. THE RESERVE BANK'S ACCOUNTS FOR 2010-11 150

Income 150

Expenditure 151

Balance Sheet 153

Significant Accounting Policies and Notes to the Accounts for the Year 2010-11 160

CONTENTS

Page No.

Annex I : List of Speeches by Governor and Deputy Governors: April 2010 to August 2011 ..... **164**

Annex II : Visits of Foreign Delegations to the Reserve Bank of India during July 01, 2010 to June 30, 2011 ..... **166**

INDEX OF APPENDIX TABLES

1. Macroeconomic and Financial Indicators 168
2. Growth Rates and Sectoral Composition of Real Gross Domestic Product 171
3. Gross Domestic Saving and Investment 172
4. Financial Saving of the Household Sector (Gross) 173
5. Agricultural Production 174
6. Procurement, Off-Take and Stocks of Foodgrains 175
7. Trends in Index of Industrial Production 176
8. Variations in Index Numbers of Wholesale Prices 177
9. Variations in Reserve Money 178
10. Variations in Money Stock 179
11. Sectoral Deployment of Gross Bank Credit 180
12. Capital Market - Primary and Secondary 181
13. Turnover in Indian Derivatives Market 182
14. Indices of Real Effective Exchange Rate (REER) and Nominal Effective Exchange Rate (NEER) of the Indian Rupee 183
15. Key Fiscal Indicators 184
16. Budgetary Operations of the State Governments 185
17. India's Exports and Imports 186
18. India's Overall Balance of Payments 187
19. Foreign Direct Investment Flows to India: Country-wise and Industry-wise 188
20. India's Foreign Exchange Reserves 189
21. India's External Debt (As at end-March) 190

BOXES

II.1 Would Firming Oil Prices Cringe Growth? 17

II.2 Food Management – What Needs to Improve? 21

II.3 Transmission of Global Commodity Price Shocks to Domestic Inflation 30

II.4 Growth Inflation Trade-off and Threshold Inflation 32

II.5 Towards Better Price Statistics 34

CONTENTS

Page No.

II.6 Determinants of Currency Demand – What Caused the Shift in Trend? 38
II.7 Short-run Shocks to Money Velocity and the Behaviour of Money Growth 39
II.8 Financial Derivatives in India - Current Status 48
II.9 Trends in Non-Bank Financing- Is the Financial System still Bank Dominant? 50
II.10 Impact of Financial Market Developments on Financial Soundness Indicators of the Banking System 51
II.11 Infrastructure Financing 51
II.12 Revenue and Expenditure Reforms – Improving the Fiscal Environment for Robust and Inclusive Growth 55
II.13 Fiscal Indicators in a Rule-based Framework: Cross-country Survey 57
II.14 Fiscal Multiplier: A Cross-Country Experience 59
II.15 Recommendations of Committee on the Comprehensive Review of the NSSF 60
II.16 Has Increasing Globalisation Limited the Effectiveness of National Policies in India? 63
II.17 India's Threshold level of Sustainable Current Account Deficit 67
II.18 Interest Rate Sensitivity of Capital Flows to India 69
II.19 Equilibrium Exchange Rate 70
III.1 Monetary Policy Transmission after the Switchover to Base Rate 73
III.2 Changes in Operating Procedure of Monetary Policy 77
IV.1 Financial Inclusion and Inclusive Growth: What the Empirical Evidence Suggests? . 84
IV.2 Committee on the MFI Sector (Malegam Committee) 88
V.1 Guidelines on Credit Default Swaps (CDS) for Corporate Bonds 94
V.2 NDF Market and its Implication for the Domestic Financial Markets 95
VI.1 Financial Stability Board (FSB) 97
VI.2 Developments related to FSDC and its Sub-Committee 98
VI.3 Corporate and Household Leverage, Credit Cycle and Economic Growth 99
VI.4 Initiatives taken by the Reserve Bank to migrate towards the Basel III norms 104
VI.5 Expert Committee on Licensing of New Urban Cooperative Banks 109
VI.6 Regulatory Framework for Core Investment Companies (CICs) 112
VII.1 Developments in RBI's role as Banker to Government 118
VIII.1 Procedure for Dealing with Counterfeit Currency 125
IX.1 Interdependencies in Payment Systems 132
IX.2 IT Vision Document: 2011-2017 134
IX.3 Information Technology as a Vehicle for Data Dissemination 135
X.1 Governance Framework in the Reserve Bank 138
X.2 Knowledge Initiative 144

CONTENTS

Page No.

CHARTS

II.1	Real GDP Growth	16
II.2	Saving and Investment (Per cent of GDP at current market prices)	16
II.3	Household Financial Savings	18
II.4	Comparative Yield: India and the World	19
II.5	2010-11 Yield Differential – State-wise	19
II.6	Monsoon and Agriculture	20
II.7	Growth in IIP (Y-o-Y)	22
II.8	Industrial Growth	22
II.9	Components of Aggregate Demand and Related Industry Growth Trends	23
II.10	Growth in Infrastructure Industries	23
II.11	Growth in Services Sector GDP	24
II.12	Growth Trend in Cargo Movements	24
II.13	Growth in services (excluding community, social and personal services)	24
II.14	Expenditure Side of GDP	25
II.15	Changing Weighted Contributions to Increase in WPI	26
II.16	Trends in Wholesale Price Inflation	27
II.17	Contribution to Inflation: Major Groups	27
II.18	Trends in Food Inflation	28
II.19	Global and Domestic Fuel Inflation (Y-o-Y)	28
II.20	Manufactured Products Inflation	29
II.21	International Commodity Prices	29
II.22	CPI and WPI Inflation (Y-o-Y)	31
II.23	Trends in GDP Growth and Inflation	31
II.24	Growth in Reserve Money	35
II.25	Important Sources of Variation in Reserve Money	36
II.26	Liquidity Management Operations	36
II.27	Money and Deposit Growth	37
II.28	Variations in M_3 in ₹ crore and per cent share of Major Components of M_3 in the Variation	37
II.29	Non-food Credit Growth (Y-o-Y, per cent)	37
II.30	Share of Various Sub-sectors in Incremental Industrial Credit Flow	40
II.31	Aggregate Deposits and Bank Credit of SCBs	41
II.32	Flow of Financial Resources to the Commercial Sector	41
II.33	Indicators of Global Financial Market Developments	42
II.34	Transmission of Policy Rates to Financial Markets	43
II.35	Movement in Government Securities Yield Curve	44

CONTENTS

Page No.

II.36 Activities in Domestic Financial Markets 46
II.37 Volatility in the Indian Financial Markets 47
II.38 Movement in Equity Markets 47
II.39 Activity in Financial Derivatives Market 49
II.40 Movement in Housing Prices and Transactions 49
II.41 Exchange Rate and Forward Premia 50
II.42 Key Deficit Indicators 53
II.43 Subsidies of Central Government 54
II.44 Key Global Indicators 61
II.45 India's External Trade 64
II.46 Year-on-Year Export Growth of India *vis-a-vis* AEs and EMEs 64
II.47 Exports and Imports of Major Commodities 65
II.48 Performance of India's Invisibles 66
II.49 Trends in the Major Components of Balance of Payments 66
II.50 Trends in Major Components of Capital Flows (Net) 68
II.51 Country-wise FDI Inflows 68
II.52 Industry-wise FDI Flows 68
II.53 Exchange Rate flexibility in India 68
II.54 Movements of Indian Rupee against US Dollar and Euro 70
II.55 External Debt Indicators 71
III.1 Repo (+)/Reverse Repo (-) under LAF 78
III.2 Outstandings under LAF and GoI Balance 78
VI.1 Soundness Indicators on SCBs 100
VII.1 Cash Balance of the Central Government 117
VIII.1 Cost of Security Printing 126
IX.1 Share of Paper Based *Vs* Electronic Transaction 130
X.1 Total Staff Strength of the Reserve Bank 146

TEXT TABLES

III.1 Movements in Key Policy Rates and Reserve Requirements in India 75
III.2 Monetary Policy Reviews 75
III.3 Liquidity Management Measures taken by the Reserve Bank in 2010-11 79
IV.1 Priority Sector Advances 81
IV.2 Disbursements under SACP by Public Sector Banks 82
IV.3 Recovery of Direct Agricultural Advances 82
IV.4 Compensation of lending institutions under Agricultural Debt Waiver and Debt Relief Scheme, 2008 82
IV.5 Credit to MSE Sector by SCBs 83

CONTENTS

Page No.

VI.1 Select Financial Indicators 101
VII.1 Gross and Net Market Borrowings of the Central Government 114
VII.2 Central Government's Market Loans - A Profile 115
VII.3 Issuance of GoI Dated Securities - Maturity Pattern 115
VII.4 States' Market Borrowings 117
VII.5 Residual Maturity Profile of Outstanding State Development Loans and Power Bonds (as at end-March 2011) 117
VII.6 Yield on State Government Securities 119
VII.7 WMA/OD of State Governments (Average monthly outstanding) 119
VII.8 No. of Days States Availed of Special/Normal WMA and OD 120
VII.9 Investments of the State Governments/UT 120
VIII.1 Banknotes in Circulation 122
VIII.2 Coins in Circulation 123
VIII.3 Currency Chests and Small Coin Depots 123
VIII.4 Indent and Supply of Banknotes (April –March) 123
VIII.5 Indent and Supply of Coins 124
VIII.6 Disposal of Soiled Notes and Supply of Fresh Banknotes 124
VIII.7 Counterfeit Notes Detected 125
IX.1 Payment System Indicators - Annual Turnover 128
X.1 Reserve Bank Training Establishments - Programmes Conducted 142
X.2 Number of Officers Trained in External Training Institutions in India and Abroad 143
X.3 Recruitment by the Reserve Bank – 2010 146
X.4 Staff Strength of the Reserve Bank 147
X.5 Category-wise Staff Strength 147
X.6 Reserve Bank's Office-wise Strength of Staff 148
XI.1 Gross Income 151
XI.2 Earnings from Foreign Sources 151
XI.3 Earnings from Domestic Sources 152
XI.4 Expenditure 152
XI.5 Trends in Gross Income, Expenditure and Net Disposable Income 153
XI.6 Contingency and Asset Development Reserves and Surplus Transfer to the Government 153
XI.7 Balances in Currency and Gold Revaluation Account (CGRA), Exchange Equalisation Account (EEA) and Investment Revaluation Account (IRA) 155
XI.8 Balances in Contingency Reserve and Asset Development Reserve 156
XI.9 Outstanding Foreign Currency and Domestic Assets 156
XI.10 Foreign Exchange Reserves 157
XI.11 Investments in Shares of Subsidiaries/Associate Institutions 157

LIST OF ABBREVIATIONS

AACS	-	Advanced Access Content System
AD	-	Authorised Dealer
ADB	-	Asian Development Bank
A.E.	-	Advance Estimates
AEs	-	Advanced Economies
ALM	-	Assets Liability Management
AMA	-	Advance Measurement Approach
AML	-	Anti Money Laundering
ASEAN	-	Association of Southeast Asian Nations
ASSOCHAM	-	Associated Chambers of Commerce and Industry of India
ATBs	-	Auction Treasury Bills
ATM	-	Automated Teller Machine
BC	-	Business Correspondent
BCBS	-	Basel Committee on Banking Supervision
BCP	-	Business Continuity Planning
BCSBI	-	Banking Codes and Standards Board of India
BE	-	Budget Estimates
BFS	-	Board for Financial Supervision
BI	-	Business Intelligence
BIFR	-	Board for Industrial and Financial Reconstruction
BIS	-	Bank for International Settlements
BO	-	Banking Ombudsman
BPL	-	Below Poverty Line
BPLR	-	Benchmark Prime Lending Rate
bps	-	Basis Points
BPSS	-	Board of Payment and Settlement System
BRBNMPL	-	Bharatiya Reserve Bank Note Mudran Private Limited
BSE	-	Bombay Stock Exchange
BWA	-	Broadband Wireless Access
CAB	-	Current Account Balance
CACP	-	Commission for Agricultural Costs and Prices
CAD	-	Current Account Deficit
CAFL	-	Centre for Advanced Financial Learning
CAFRAL	-	Centre for Advanced Financial Research and Learning
CAS	-	Central Account Section
CBLO	-	Collateralized Borrowing and Lending Obligation
CBRC	-	China Banking Regulatory Commission
CBS	-	Core Banking Solutions
CCBs	-	Central Cooperative Banks
CCIL	-	Clearing Corporation of India Ltd.
CCP	-	Central Counter Parties
CCs	-	Currency Chests
CDBS	-	Currency Disintegration and Briquetting System
CDR	-	Corporate Debt Restructuring
CDs	-	Certificates of Deposit
CDS	-	Credit Default Swap
CGA	-	Controller General of Accounts
CIC	-	Core Investment Company
CII	-	Confederation of Indian Industry
CIP	-	Central Issue Price
CMBs	-	Cash Management Bills
CODs	-	Central Office Department
CoR	-	Certificate of Registration
CP	-	Commercial Paper
CPADS	-	Centralised Public Account Department Systems
CPI	-	Consumer Price Index
CPI-IW	-	Consumer Price Index for Industrial Workers
CPIO	-	Chief Public Information Officer
CPIOs	-	Central Public Information Officers
CPSS	-	Committee on Payment and Settlement Systems
CPSUs	-	Central Public Sector Undertakings
CRA	-	Credit Rating Agencies
CRAR	-	Capital to Risk-weighted Assets Ratio
CRCS	-	Central Registrar of Co-operative Societies
CRM	-	Customer Relationship Management

LIST OF ABBREVIATIONS

CRR - Cash Reserve Ratio
CSF - Consolidated Sinking Fund
CSO - Central Statistics Office
CTS - Cheque Truncation System
CVPS - Currency Verification and Processing System
DCCBs - District Central Co-operative Banks
DEPR - Department of Economic and Policy Research
DGA - Duration Gap Analysis
DGCI&S - Directorate General of Commercial Intelligence and Statistics
DICGC - Deposit Insurance and Credit Guarantee Corporation
DIF - Deposit Insurance Fund
DIT - Department of Information Technology
DR - Disaster Recovery
DRM - Dispute Resolution Mechanism
DSIM - Department of Statistics and Information Management
DSS - Decision Support Systems
DTC - Direct Tax Code
DTL - Demand and Time Liabilities
DWM - Dynamic Working Model
EBT - Electronic Benefit Transfer
ECB - External Commercial Borrowings
ECCS - Express Cheque Clearing System
ECS - Electronic Clearing Services
EKP - Enterprise knowledge Portal
EMDEs - Emerging Market and Developing Economies
EMEs - Emerging Market Economies
EMS - Estate Management System
ERER - Equilibrium Real Exchange Rate
ETL - Extract Transform and Load
FAO - Food and Agriculture Organization
FC - Finance Commission
FCI - Food Corporation of India
FCMD - Financial Conglomerates Monitoring Division
FCNR(B) - Foreign Currency Non-Resident Accounts (Banks)
FDI - Foreign Direct Investment
FEMA - Foreign Exchange Management Act
FI - Financial Institutions
FICCI - Federation of Indian Chambers of Commerce & Industry
FIF - Financial Inclusion Fund
FITF - Financial Inclusion Technology Fund
FII - Financial Inclusion Index
FIIs - Foreign Institutional Investors
FIMMDA - Fixed Income Money Market and Derivatives Association of India
FLCCs - Financial Literacy and Credit Counseling Centres
FMC - Forwards Markets Commission
FMD - Financial Market Department
FMI - Financial Market Infrastructures
FPS - Fair Price Shops
FRAs - Forward Rate Agreements
FRBM - Fiscal Responsibility and Budget Management
FRBs - Floating Rate Bonds
FRLs - Fiscal Responsibility Legislations
FSB - Financial Stability Board
FSDC - Fiscal Stability and Development Council
FSF - Financial Stability Forum
FST - Financial Sector Technology
GCC - General Purpose Credit Cards
GCF - Gross Capital Formation
GDP - Gross Domestic Product
GDS - Gross Domestic Savings
GFCE - Government Final Consumption Expenditure
GFCF - Gross Fixed Capital Formation
GFD - Gross Fiscal Deficit
GoI - Government of India

LIST OF ABBREVIATIONS

GPS	-	Global Positioning System
GRF	-	Guarantee Redemption Fund
G-sec	-	Government Securities
GST	-	Goods and Services Tax
HLCCFM	-	High Level Coordination Committee on Financial Markets
HTM	-	Held to Maturity
IADI	-	International Association of Deposit Insurance
IAS	-	Integrated Accounting System
IBA	-	Indian Banks Association
ICCL	-	Indian Clearing Corporation Limited
ICOR	-	Incremental Capital Output Ratio
ICT	-	Information and Communication Technology
IDRBT	-	Institute for Development and Research in Banking Technology
IES	-	Integrated Establishment System
IFCs	-	Infrastructure Finance Companies
IFRS	-	International Financial Reporting Standards
IFTP	-	Inter-bank Funds Transfer Processor
IGIDR	-	Indira Gandhi Institute of Development Research
IIBM	-	Indian Institute of Bank Management
IIFCL	-	India Infrastructure Finance Company Ltd.
IIM	-	Indian Institute of Management
IIP	-	Index of Industrial Production
IIT	-	Indian Institute of Technology
IMD	-	India Meteorological Department
IMF	-	International Monetary Fund
INFINET	-	Indian Financial Network
IOSCO	-	International Organisation of Securities Commissions
IPCs	-	Irrevocable Payment Commitments
IRDA	-	Insurance Regulatory and Development Authority
IRF	-	Interest Rate Futures
IRS	-	Interest Rate Swaps
ISMS	-	Information Security Management System
ISO	-	International Organisation for Standardisation
IT	-	Information Technology
ITBs	-	Intermediate Treasury Bills
ITeS	-	Information Technology enable Services
JLG	-	Joint Liability Group
JV/WOS	-	Joint Ventures/ Wholly Owned Subsidiaries
KCCs	-	Kisan Credit Cards
KVP	-	Kisan Vikas Patra
KYC	-	Know Your Customer
LABs	-	Local Area Banks
LAF	-	Liquidity Adjustment Facility
LAN	-	Local Area Network
LC	-	Letter of Credit
LCR	-	Liquidity Coverage Ratio
LTV	-	Loan to Value Ratio
M3	-	Broad Money
MCX	-	Multi Commodity Exchange
MCX-SX	-	MCX Stock Exchange
MENA	-	Middle East and North Africa
MFIs	-	Micro-Finance Institutions
MFs	-	Mutual Funds
MIBOR	-	Mumbai Inter-bank Offered Rate
MICR	-	Magnetic Ink Character Recognition
MIS	-	Management Information System
MMS	-	Mail Messaging Solution
MoF	-	Ministry of Finance
MoU	-	Memorandum of Understanding
MPLS	-	Multi Protocol Label Switching
MQRs	-	Mid Quarter Reviews
MSE	-	Micro and Small Enterprises
MSF	-	Marginal Standing Facility
MSME	-	Micro, Small and Medium Enterprises
MSP	-	Minimum Support Prices
MSS	-	Market Stabilisation Scheme
MURI	-	Minimum Unemployment Rate of Inflation

LIST OF ABBREVIATIONS

NAB	-	New Agreements to Borrow
NABARD	-	National Bank for Agriculture and Rural Development
NAIRU	-	Non-Accelerating Inflation Rate of Unemployment
NASSCOM	-	National Association of Software and Services Company
NBFCs	-	Non-Banking Financial Companies
NBS	-	Nutrient Based Subsidy
NCAF	-	Net Capital Adequacy Framework
NCD	-	Non-Convertible Debenture
NDF	-	Non-Deliverable Forwards
NDTL	-	Net Demand and Time Liabilities
NECS	-	National Electronic Clearing Services
NEFT	-	National Electronic Fund Transfer
NEL	-	Net External Liabilities
NFA	-	Net Foreign Currency Assets
NFSB	-	National Food Security Bill
NHB	-	National Housing Bank
NIBM	-	National Institute of Bank Management
NIM	-	Net Interest Margin
NOC	-	No Objection Certificate
NOF	-	Net Owned Fund
NPAs	-	Non-Performing Assets
NPS	-	New Pension Scheme
NR(E)RA	-	Non-Resident (External) Rupee Account
NREGA	-	National Rural Employment Guarantee Act
NRIs	-	Non Resident Indians
NSC	-	National Savings Certificate
NSCCL	-	National Security Clearing Co-operation Limited
NSE	-	National Stock Exchange
NSFR	-	Net Stable Funding Ratio
NSM	-	Note Sorting Machines
NSSF	-	National Small Savings Fund
NSSO	-	National Sample Survey Office
OBCs	-	Other Backward Classes
OD	-	Over Draft
OIS	-	Overnight Index Swap
OLS	-	Ordinary Least Square
OMO	-	Open Market Operation
ORFS	-	Online Return Filing System
OTC	-	Over-the-Counter
OTS	-	One Time Settlement
PACS	-	Primary Agricultural Credit Societies
PAD	-	Public Account Department
PAR	-	Performance Appraisal Reports
PCR	-	Provisional Coverage Ratio
PDO-NDS	-	Public Debt Office- Negotiated Dealing System
PDS	-	Public Distribution System
PFCE	-	Private Final Consumption Expenditure
PGPBF	-	Post Graduate Programme in Banking and Finance
PI	-	Participant Interface
PIOs	-	Persons of Indian Origin
PNs	-	Participatory Notes
POS	-	Points of Sale
PPP	-	Public-Private Partnership
PSS	-	Payment and Settlement System
Q.E.	-	Quick Estimates
QIS	-	Quantitative Impact Study
RBI	-	Reserve Bank of India
RBSC	-	Reserve Bank Staff College
RCCP	-	Recommendations for Central Counterparties
RCS	-	Registrar of Co-operative Societies
RD	-	Revenue Deficit
RE	-	Revised Estimates
RECS	-	Regional Electronic Clearing Service
REER	-	Real Effective Exchange Rate
RIA	-	Right to Information Act
RIDF	-	Rural Infrastructure Development Fund
RNBCs	-	Residuary Non-Banking Companies
ROs	-	Regional Offices

LIST OF ABBREVIATIONS

RoA - Return on Assets
RoE - Return on Equity
RR - Revenue Rules
RRBs - Regional Rural Banks
RSSS - Recommendations for Securities Settlement Systems
RTGS - Real Time Gross Settlement
RTI - Right to Information
SACP - Special Agricultural Credit Plan
SCBs - Scheduled Commercial Banks
SCEPR - Steering Committee on Economic and Policy Research
SCs - Scheduled Castes
SCSS - Senior Citizens' Saving Scheme
SDL - State Development Loan
SEBI - Securities and Exchange Board of India
SEZ - Special Economic Zone
SGL - Subsidiary General Loan
SHG - Self-Help Group
SIDBI - Small Industries Development Bank of India
SIFI - Systemically Important Financial Institutions
SLAF - Second Liquidity Adjustment Facility
SLBC - State Level Bankers Committees
SLR - Statutory Liquidity Ratio
SMEs - Small and Medium Enterprises
SPMCIL - Security Printing and Minting Corporation of India
SPVs - Special Purpose Vehicles
ST CCS - Short-term Rural Cooperative Credit Societies
STC - Short-term Trade Credit
StCBs - State Co-operative Banks
STCRC - Short-term Co-operative Rural Credit
STOs - Sub Treasury Officers
STs - Scheduled Tribes
TAC - Technical Advisory Committee
TAFCUBs - Task Force for Cooperative Urban Banks
TAG - Technical Advisory Group
T-Bills - Treasury Bills
TGA - Traditional Gap Analysis
UCBs - Urban Cooperative Banks
USE - United Stock Exchange
UTs - Union Territories
VAR - Vector Auto Regression
VAT - Value Added Tax
VECM - Vector Error Correction Mechanism
VGF - Viability Gap Funding
VVVF - Variable Voltage Variable Frequency
WMA - Ways and Means Advances
WPI - Wholesale Price Index
XBRL - Extensible Business Reporting Language
XML - Extensive Mark Up
Y-o-Y - Year on Year
ZCBs - Zero Coupons Bonds
ZCYC - Zero Coupon Yield Curve
ZTCS - Zonal Training Centres

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*For the Year July 1, 2010 to June 30, 2011**

PART ONE: THE ECONOMY - REVIEW AND PROSPECTS

I ASSESSMENT AND PROSPECTS

The Indian economy returned to a high growth path in 2010-11. However, challenges emerged as the year progressed. First, investment activity slowed in the second half of the year as business confidence was impacted by high commodity prices, tight monetary policy, political factors and execution issues. Second, while headline fiscal numbers improved during the year, the improvement was led by cyclical and one-off factors, leaving its sustainability in question. Third, though monetary policy was tightened through the year, inflation remained sticky on the back of new pressures. It also turned broad-based in the later part of the year with cost-push and demand-pull factors feeding into producer prices. This prompted the Reserve Bank to take aggressive policy actions during May-July 2011. Going ahead, global uncertainty, sticky inflation, hardening interest rates and high base, especially for agriculture, could moderate growth in 2011-12. On the other hand, though global commodity prices appear to have plateaued, inflation is likely to be elevated in near term and fall only towards the later part of the year as monetary transmission works through further. For medium-term growth sustainability, it is important to rebalance demand from private and government consumption to private and public investment, while inflation is lowered on an enduring basis through better supply responses. Continued focus on development of infrastructure and agriculture technology through public policy would facilitate improved supply response.

I.1 The Indian economy rebounded strongly in 2010-11 from the moderation induced by global financial crisis. However, several macroeconomic factors posed new challenges in 2010-11. During the preceding year and a half, the Reserve Bank had to carefully calibrate its monetary policy as the global financial crisis and the consequent slowdown in the global growth adversely impacted India's real and financial economic conditions. Both, fiscal and monetary policies worked in tandem to pull the Indian economy quickly and firmly out of the slowdown.

I.2 Even as growth reverted to its trend, new challenges emerged. First, the headline inflation accelerated from the negative levels in mid-2009 to double digits during March-July of 2010. The whole of 2010-11 was marked by inflation persistence, with headline inflation averaging 9.6 per cent. The Reserve Bank responded to the inflation challenge by raising repo rate seven times during the year by 25 basis points (bps) each. Despite these actions, inflation remained elevated due to both newer supply-side shocks and demand factors. As input costs rose and were passed on substantially amidst strong consumption demand, inflation became generalised since December 2010.

I.3 In response to the generalisation, the Reserve Bank raised its policy rate – the repo rate – more aggressively in 2011-12. It hiked the rate by 50 bps in

* 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 2011 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.

May, 25 bps in June and again by 50 bps in July. With this, operational policy rate has been raised by 475 bps in less than 17 months since March 2010, when the rate hikes began. Monetary transmission improved considerably in the latter half of 2010-11 after sustained tight liquidity prompted banks to raise deposit and lending rates. It continued into 2011-12, helping avert inflation gathering further momentum amidst high inflation expectations and persistence of pricing power of the producers, reflecting strong demand.

I.4 Second, even as overall GDP growth increased supported by strong private consumption demand, investment slowed down during the second half of 2010-11 and has shown no signs of improvement yet. Considering that investment intentions in the new projects declined significantly in the second half of 2010-11 on a sequential basis, maintaining corporate investment levels in 2011-12 could turn out to be difficult. Corporate fixed investment, as captured by phasing details of the projects sanctioned financial assistance, which showed a seven fold jump during 2003-04 to 2009-10, also turned flat in 2010-11, with a sharp dip in the second half. Public investment in relation to the size of the economy declined during 2008-09 and 2009-10. With revenue deficit, despite some improvement during 2010-11 remaining above the levels that prevailed during 2004-05 to 2007-08, fiscal space to support investment in the economy remains limited. This underscores the importance of focusing on quality of fiscal consolidation. Meanwhile, in an uncertain interest rate environment, it remains to be seen how far the momentum in investment can be sustained ahead. As such, in the short run, investment cycle can be elongated by focusing on better execution of pipeline investment and improved governance at all levels, internal and external to a firm.

ASSESSMENT OF 2010-11

I.5 In assessing the macroeconomic performance of 2010-11, some questions are central to the overall assessment as set out below.

Why did inflation persist and was this predictable?

I.6 The year 2010-11 was marked by strong inflation exhibiting persistence on the back of elevated inflation expectations, spike in vegetable prices with unseasonal rains post-monsoon and rising global commodity prices that resulted in significant cost-push and demand-pull pressures since December 2010. Drivers of inflation changed during 2010-11. Food products were the main drivers of price rise during April-July 2010, accounting for about two-fifths of increase in WPI. Their share declined during August-November, when non-food primary products turned out to be the main drivers. However, these price pressures spilled over to manufactured non-food products during December 2010-March 2011, which accounted for 61 per cent of the price rise in this period.

I.7 Inflation became difficult to predict in face of this changing pattern, where new unforeseen price pressures emerged. The declining trend in inflation during first half of 2010-11 was disrupted by sharper-than-expected rise in global commodity prices and structural factors constraining the decline in food prices in spite of normal monsoon. An unforeseen spike in vegetable prices due to unseasonal rains followed the good monsoon. Finally, as inflation spilled over to the manufactured non-food products, producers were able to pass on a large share of the input cost pressures reflecting strong demand.

Was monetary tightening adequate and did it help fight inflation?

I.8 Cumulative monetary tightening by raising operational policy rates by 475 bps since mid-March 2010 has been one of the sharpest around the world. Of this, hikes of 325 bps occurred during 2010-11. The hikes were in smaller but frequent doses as the frequency of scheduled policy decisions was increased to eight from four, enabling a smoother adjustment of the financial markets to monetary policy actions. The magnitude of these rate hikes was small

as the nature of inflation was largely supply-driven for the larger part of the year. Also, liquidity conditions were already unusually tight following the unexpectedly large 3G/BWA spectrum auction revenues that resulted in large government cash balances with the Reserve Bank for a major part of 2010-11.

I.9 Policy choices toughened during the second half of the year. Inflation had become generalised towards the later part of the year, even as the headline IIP growth numbers available then on the basis of old index (base: 1993-94) suggested a distinct deceleration. The Reserve Bank assessed that this deceleration was exacerbated by few volatile components. The deceleration was much less if these volatile components were excluded from the growth. Furthermore, related indicators such as credit expansion, corporate profitability, exports and imports, trend in tax collections did not corroborate the slowdown. Monetary policy was tightened further in face of persistence of high inflation. However, the hikes remained small in quantum as headline and core inflation were expected to trend down. Also, uncertain inferences on growth due to data quality prompted a cautious view. The new IIP numbers (base: 2004-05) released subsequently reinforced the RBI view that growth had not decelerated during the second half of 2010-11.

I.10 In face of a series of supply-side shocks, monetary tightening helped to keep some check on the spillover effects and high inflation expectations. However, monetary policy was constrained by the extraordinarily large stimulus given in the wake of global financial crisis. Large surplus liquidity needed to be siphoned out first, before rate hikes could begin to gain traction. Both, the rate and quantum channels of monetary transmission were weak in the first half. Banks started responding to monetary signals in the second half of the year by raising deposit and lending rates, helping restrain inflationary pressures from spiraling up further.

Did the growth rebound of 2010-11 lose steam in the second half?

I.11 It is now clear that the growth did not lose momentum in the second half of 2010-11. IIP growth accelerated to 8.2 per cent in 2010-11 from 5.3 per cent in the previous year. It grew at about the same pace in the second half as in the first half.

I.12 Agricultural growth rebounded in the second half due to record *Kharif* crop on back of normal monsoon. The consequent rise in farm incomes supported demand conditions and with linkages with industry and services, kept the overall growth momentum. Services remained buoyant, except 'community, social and personal services' where policy-induced deceleration was visible as fiscal consolidation resumed.

I.13 Overall growth in 2010-11 is currently estimated at 8.5 per cent and is likely to turn higher after factoring in the new base IIP in the GDP data revisions. The above trend growth in 2010-11 was supported by strong aggregate demand conditions primarily emerging from high private consumption. As a result, the supply-side price pressures spilled over to generalised inflation.

Was the fiscal consolidation in 2010-11 temporary or permanent?

I.14 Fiscal deficit ratios in 2010-11 turned out to be better than envisaged in the Union budget. Centre's gross fiscal deficit (GFD) was 4.7 per cent of GDP against 5.5 per cent budgeted. Compared with a GFD of 6.4 per cent of GDP in 2009-10, this was a huge swing.

I.15 A qualitative assessment of fiscal correction during 2010-11, however, raises concerns. Not only did the correction in revenue account reflect more-than-anticipated non-tax revenues from spectrum auctions, there has been a spillover of subsidy expenditure from the last quarter of 2010-11 to the current fiscal year. Although the share of capital

expenditure in total expenditure increased in 2010-11 from 2009-10, it was marginally lower than the budget estimates. In particular, capital outlay-GDP ratio fell short of the budgeted ratio in 2010-11 and is still significantly lower than that achieved during pre-crisis period. Consequently, in outstanding terms, the Central government's capital outlay (as ratio to GDP) as at end-March 2011 was lower at 12.9 per cent than 13.8 per cent a year ago.

I.16 Improved fiscal position had a large temporary component arising from a business cycle upswing and one-off revenue gains. This resulted in the improvement in headline deficit numbers. Not counting for the revenue proceeds of two main one-off items – spectrum auction and the disinvestment – the GFD/GDP ratio works out to be 6.3 per cent of GDP during 2010-11. Also, revenue buoyancy was supported by a cyclical upswing that led to above trend growth. So the one-off gains and higher growth in nominal GDP of 20 per cent against the budgeted 12.5 per cent contributed largely to lower deficits, while the permanent component of fiscal consolidation was rather weak.

I.17 Clearly, a more enduring fiscal consolidation strategy that focuses on expenditure compression by restraining subsidies as well as revenue enhancement by implementing Direct Taxes Code (DTC) and Goods and Services Tax (GST) needs to be put into place without any further delay.

Why did the CAD improve and is this improvement sustainable?

I.18 The improvement in the current account gap is more sustainable than the fiscal gap. The improvement came about by cyclical upswing in global trade and turnaround in invisibles. The Current Account Deficit (CAD) improved markedly in the second half of 2010-11 on back of a strong pick-up in exports from November 2010. Diversification of trade in terms of composition as well as direction helped in achieving strong export performance. Trade policy supporting exports through schemes such as Focus Market Scheme (FMS), Focus Product Scheme (FPS) and Duty Entitlement Passbook Scheme (DEPB) also helped.

I.19 The CAD improved to 2.6 per cent in 2010-11 from 2.8 per cent in 2009-10. Going forward, there could be some pressure on CAD if the global economy weakens significantly and affects exports. With adequate foreign exchange reserves, India remains capable of handling any pressures emanating from the external sector in the near term. However, from a medium to long term perspective, it is important to improve resilience of external account by pursuing policies that shift the composition of capital flows so as to reduce dependence on its volatile components. Augmenting FDI further could bring about a better balance between different components of capital flows and reduce the possibility of volatile currency movements and any pressure on reserves in the face of contagion risks.

Have financial markets mitigated risks post-crisis?

I.20 Financial markets across the world have witnessed significant deleveraging in the post-crisis period. However, balance sheet risks still remain. Effective market discipline is not getting re-established. Assurances that multilateral backstops have the capacity to facilitate an orderly deleveraging without triggering further fiscal or bank funding lack credibility. Against this backdrop, it is important to look at whether financial risks have been sufficiently mitigated in India, should another round of contagion occur.

I.21 A strong payment and settlement system architecture with central counterparties and Delivery *versus* Payment (DvP) is in place in India. While in the post-Lehman crisis, NBFCs and Mutual Funds came under some stress, banks proved to be largely resilient. Since then regulators have taken several measures to strengthen regulation and supervision, increase transparency and reduce settlement risks for derivatives and other financial instruments.

Despite these measures there still remain areas of concern.

I.22 The OTC interest rate derivative market in India display a significant degree of concentration, with domination by a few banks. The growth of derivatives as off-balance sheet items of Indian banks is also a source of risk. The absence of a liquid 3-month or 6-month funds market has led to the absence of a term benchmark curve. This is hindering trading in Forward Rate Agreements (FRAs) as also in swaps. However, recent emergence of a deep and liquid Certificates of Deposit (CDs) market with significant secondary market trading could alleviate this issue.

I.23 India continues to promote orderly development of the financial markets. In particular, efforts have been made to develop a vibrant interest rate futures (IRF) market to support long-term debt financing in India. In March 2011, the Reserve Bank permitted IRF trading in 91-day Treasury bills with cash settlement in rupees. Guidelines for 5-year and 2-year IRFs are being finalised in consultation with the Securities and Exchange Board of India (SEBI). Furthermore, the Reserve Bank has decided to extend the period of short sale in central government securities from the existing five days to a maximum period of three months in order to provide a fillip to the IRF market and the term repo market.

Can Indian banks withstand financial market stress?

I.24 A corollary to the above question is whether the financial system can withstand another wave of stress in the global markets. Since the Indian financial system remains bank dominated, banks' ability to withstand stress is critical to overall financial stability. A series of stress tests conducted by the Reserve Bank in respect of credit, liquidity and interest rate risks showed that banks remained reasonably resilient. However, under extreme shocks, some banks could face moderate liquidity problems and their profitability could be affected.

I.25 Recent trends in asset quality, with deterioration observed in case of some major banks, is a matter of concern. Asset quality of banks needs to be closely watched in the changing interest rate environment as the sticky loan portfolio of small and medium enterprises might rise. Risks of asset quality deterioration in infrastructure sector exists. Such deterioration needs to be averted by quickly resolving the pricing and input supply issues. However, overall trends in non performing assets (NPAs) do not indicate any systemic vulnerability. At a system level, the Gross NPA (GNPA) ratio of scheduled commercial banks increased marginally to 2.52 per cent by end-June 2011 from 2.35 per cent at end-March 2011 but still remains low. Based on unaudited results of these banks, the Capital to Risk (Weighted) Asset Ratio (CRAR) based on Basel II was 13.86 per cent as at end-June 2011. Though this was lower than 14.19 per cent as at end-March 2011, it was well above the minimum requirement.

PROSPECTS FOR 2011-12

I.26 The Indian economy needs to brace up for a difficult year from a macroeconomic perspective. With weak supply response, inflation remains an important macroeconomic challenge. Consumption demand has been strong so far, though private consumption may decelerate ahead responding to monetary transmission from higher interest rates. However, it is important to shore up investment from the point of view of sustaining high growth over the medium term. Both, fiscal and monetary space is limited for any counter-cyclical stimulus if global conditions deteriorate. As such, demand rebalancing from private and government consumption to private and public investment holds the key to meeting the macroeconomic challenges in 2011-12.

I.27 There are risks that the twin deficits – fiscal and current account – could increase if the global economic problems deepen. Global uncertainties have increased markedly since the Standard & Poor's (S&P's) downgraded long-term sovereign credit rating of the US to AA+ from AAA on August 5, 2011. This

followed a US deficit reduction plan of US$ 2.4 trillion over next 10 years as against earlier proposals for a sharper reduction of about US$4 trillion. Credit Default Swap (CDS) spreads, including those for the sovereigns, have widened since the event resulting in amplification of the debt difficulties in the Euro zone region.

I.28 The S&P action came at a time when there were increasing signs of growth slowing down in the major advanced economies, especially the US. The likely impact of these developments on the Indian economy, going forward, will depend upon the effect it will have on trade, capital flows and global commodity prices.

Growth Outlook for 2011-12

I.29 After above trend growth during 2010-11, growth is expected to decelerate but remain close to the trend of about 8.0 per cent in 2011-12. Growth prospects for the year 2011-12 seem to be relatively subdued compared to the previous year due to a number of unfavourable developments. Global uncertainties have increased. If global financial problems amplify and slows down global growth markedly, it would impart a downward bias to the growth projection indicated in the First Quarter Review of Monetary Policy 2011-12. Currently, global oil and commodity prices even, after some correction, remain high and could adversely impact growth. Persistent inflationary pressures, rising input costs, rise in cost of capital due to monetary tightening and slow project execution are some of the factors that are weighing on growth. While the prospect for the farm sector looks encouraging with the normal South-West monsoon so far, industrial sector growth is likely to decelerate due to above mentioned factors. The growth of the services sector will be driven by the unfolding of the global and domestic economic situation, but is largely expected to keep its momentum.

I.30 At the sectoral level, crop prospects remain good, except in the case of some cereals, pulses and groundnut. The monsoon up to August 17, 2011 was just 1 per cent below the Long Period Average. A rainfall deficiency in Haryana, Orissa and parts of North-East, Maharashtra and Andhra Pradesh may have small adverse impact. However, RBI's overall foodgrains production weighted rainfall index was 101 till August 17, 2011, compared with 88 in the corresponding period last year. Sowing up to August 12, 2011 was marginally higher than in corresponding period of the previous year. On the whole, the prospects for agriculture at this juncture appear promising, though the growth is likely to turn out to be less than last year on a high base.

I.31 The outlook for the industrial sector in 2011-12 remains uncertain with the downside risks outweighing the upside risks. The downside risks to the industrial growth in 2011-12 may arise from (i) falling business confidence in face of global uncertainties and political factors, (ii) firm commodity prices amidst inflationary pressures, (iii) tightening of monetary conditions and (iv) weak supply response. Fixed investment growth has slumped to 0.4 per cent in the last quarter of 2010-11. Private consumption may moderate if inflationary pressures persist. The core sector performance is lagging behind the overall economic activity, resulting in infrastructure bottlenecks. The power sector growth in 2011-12, in particular, may moderate if the coal sector continues to underperform, with thermal power accounting for about 70 per cent of total power generation in India.

I.32 On the positive side, the June IIP growth of 8.8 per cent has bucked the trend of industrial growth entering a soft patch. Though the acceleration is driven by capital goods that exhibit volatile output from month to month, it has helped register a 6.8 per cent IIP growth in Q1 of 2011-12. Industrial growth ahead may derive support from domestic demand due to rising income of people from higher salaries and wages. Though demand for some interest rate-sensitive sectors has been impacted, overall consumption demand has remained strong in spite of rising prices and interest rates. In spite of high inflation, real demand has not suffered as wage

inflation, especially in rural areas has outstripped commodity price inflation.

I.33 There is a very strong structural dimension to service sector growth in India, especially with factors such as low product penetration, favourable demographics and strong demand from rural/semi-urban areas shielding services such as transport, communication, finance and insurance from a cyclical slowdown in the industrial sector. The hotel and restaurant segment is expected to register robust growth during 2011-12 driven by domestic demand. The outlook for external demand driven services, however, continues to remain uncertain, given that global growth is weakening again.

I.34 On current reckoning, real GDP growth is expected to moderate to around 8.0 per cent in 2011-12 from 8.5 per cent in 2010-11. At the same time, it is expected that the robustness of the services sector, which accounts for more than 65 per cent of GDP, would continue to support the growth process. Even so, there are major downside risks to growth during 2011-12 that may arise if (i) global financial conditions worsen, (ii) global recovery weakens further, or (iii) food and non-food commodity price inflation remain high. From the demand side, moderation is expected as investment may remain soft in the near term, while private consumption may decelerate. In face of moderating demand, expenditure-switching from government consumption expenditures to public investments would help.

Inflation Outlook for 2011-12

I.35 Inflation is likely to remain high and moderate only towards the latter part of the year to about 7 per cent by March 2012. With global growth environment deteriorating, global commodity prices, including crude oil, have weakened since the fourth week of July. However, the decline has not been very significant. Should the global recovery weaken ahead, commodity prices may decline further, which should have a salutary impact on domestic inflation.

I.36 Given the fiscal limitations and growing signs of weakness in the US, the Fed has already indicated that it will pursue its near zero rate policy at least till mid-2013. It has also hinted at another dose of quantitative easing. This policy stance may keep the commodity prices elevated. Global commodity prices currently remain far above their level in the previous year. The pass-through of the rise in global commodity prices till April 2011 has been incomplete, especially in the minerals and oil space. As such, the benefit of a moderate fall in global commodity prices on domestic price level would be limited.

I.37 On a year-on-year basis, inflation may remain stubborn in the near term and start falling sometimes in the third quarter of 2011-12. Incomplete pass-through of high global commodity prices and persistence of high inflation expectations amidst continuing food price pressures may keep inflation elevated in near term. If global oil prices stay at current level, further increase in prices of administered oil products will become necessary to contain subsidies. Fertiliser and electricity prices will also require an upward revision in view of sharp rise in input costs.

I.38 The high and persistent inflation over the last two years has brought to the fore the limitation in arresting inflation in absence of adequate supply response. However, monetary policy still has an important role to play in curbing the second round effects of supply-led inflation. In face of nominal rigidities and price stickiness, there are dangers of accepting elevated inflation level as the new normal. Doing so can un-anchor long term inflation expectations, which can then lift inflation further from the present level. This can eventually lead to a hard landing, which may impose large costs of disinflation.

Outlook on the twin deficits for 2011-12

I.39 In the context of weakening global economy and the likelihood of some spillovers to the domestic economy during 2011-12, the twin deficits require close monitoring. If the global crisis deepens and domestic economy slows down beyond what is

currently anticipated, the fiscal slippage could turn out to be an issue of concern. It could potentially erode the fiscal consolidation achieved in the previous year. On current assessment, the fiscal deficit in 2011-12 is likely to overshoot the budgeted projections. If the economy slows down beyond what is currently anticipated, the resultant revenue erosion could magnify the slippage. At the same time, the fiscal space to support any counter-cyclical policies is more limited than what existed at the time of the global crisis of 2008.

I.40 On the other hand, in the baseline scenario, the CAD would remain at a sustainable level in 2011-12. Estimates of sustainable CAD suggest a threshold of 2.7-3.0 per cent of GDP. Prospects for external sector for 2011-12 remain somewhat uncertain due to global uncertainties arising from the financial turmoil following the sovereign rating downgrade of the US, slowing pace of global recovery and the sovereign debt problems in the Euro area. These could impinge on commodity prices and exchange rate movements.

I.41 The continuance of robust performance of exports recorded in 2010-11 and 2011-12 so far faces downside risks. If these problems continue to simmer and do not turn into a full-blown crisis, the impact of growth slowdown in the advanced economies on India could partly be mitigated by continued diversification of exports. India's exports have diversified notably in composition and destination in recent years. The impact could, nevertheless, turn material in case the slowdown in global growth is sharp and widespread.

I.42 Services exports are also likely to expand due to India's comparative advantage in software services. As the Indian IT industry is inter-twined with the global economy, with the US and Europe constituting the bulk of Indian software exports, some impact from a slowdown in advanced economies can be expected. National Association of Software and Services Companies (NASSCOM), which serve as the chambers of commerce for the Indian IT and BPO companies, had projected software exports in dollar terms to grow by 16-18 per cent in 2011-12. Several pointers suggest that a growth of broadly similar order could still be attained. These include (i) better-than-expected dollar revenues by software firms in Q1 of 2011-12, (ii) reasonably good guidance for Q2, (iii) locked-in contracts this year and (iv) good corporate earnings and cash on balance sheet of the US firms in spite of sluggish growth. As such, any downside impact would be marginal in the near term. However, it can become perceptible with a lag if crisis assumes severe proportions impacting global growth prospects beyond current year. For the current year, the prospects are that services exports as well as private transfers are likely to remain stable despite problems in the US, Europe and MENA countries.

I.43 As regards capital flows, the impact is more difficult to gauge. Capital flows could surge or diminish, depending upon the degree of risk aversion among several other factors. Going forward, if global crisis turns deep, capital flows are more likely to moderate as (i) foreign portfolio investors may sell equities in the EMEs, including India to cover up losses elsewhere, (ii) risk aversion may raise the cost of borrowings for the Indian corporate and also impact direct investments, and (iii) domestic bonds could still remain less attractive if a slowdown impacts fiscal position adversely.

I.44 On the other hand, capital flows to India could increase in spells as relative returns in EMEs could now be still higher. Several investors view the valuation in the Indian stock market as attractive on an expected future earnings basis. Interest differentials are likely to remain large and alluring to debt flows. With India's growth prospects still broadly intact, its attractiveness as an investment destination may increase. In the short run, if commodity prices soften and global crisis remains contained, the resultant benefit it may have in lowering inflation, fiscal and current account deficits could attract fresh investments. Therefore, the possibility of lumpy capital inflows cannot be ruled out. Over the course, capital flows could remain volatile and may depend on how trade and capital flows, as also other macro-economic parameters, respond endogenously to exchange rate movements.

I.45 Overall, the year 2011-12 appears to have begun well from the balance of payments front. Exports in dollar terms have risen 54 per cent year-on-year during April-July 2011, while imports have expanded 40 per cent. As a result the size of the trade deficit in absolute terms during the first four months has remained largely unchanged from that in the corresponding period of the previous year. On the capital flows side, FDI to India in Q1 of 2011-12 has risen more than twice that in the corresponding period of the previous year. The prospects for FDI also appear bright as further policy initiatives are on the anvil. The debt component of the capital inflows could rise with rising interest rate differential. However, the balance of payments during 2011-12, although likely to be manageable, requires constant monitoring due to global uncertainties.

RESERVE BANK's PERSPECTIVE ON THE MEDIUM-TERM CHALLENGES FOR THE INDIAN ECONOMY

I.46 While the immediate challenge to sustaining high growth lies in bringing down inflation, growth sustainability over medium-term depends on addressing the structural bottlenecks facing the economy. There are several challenges faced by the Indian economy that are constraining growth. These include those relating to education, health, energy, infrastructure and agriculture sectors, where public policy interventions are needed as markets by themselves may not be able to do enough to remove the constraints. The Reserve Bank does not have a direct role in addressing most of these. However, addressing them is central to raising the potential level of growth in the Indian economy. Some of these are discussed below.

Lowering inflation and inflation expectations to acceptable levels

I.47 What policy interventions can help to lower inflation and inflation expectations to acceptable levels? Monetary policy has an important role to play, but may find it difficult to deliver the objective unless complementary policies are put in place. These include, improved supply response for food, higher storage capacity for grains, cold storage chains to manage supply-side shocks in perishable produce and market-based incentives to augment supply of non-cereal food items. Finally, supply response would also depend on better management of water as also technical and institutional improvements in the farm sector and allied activities. Land consolidation, improving land quality, better seeds, irrigation, harvesting, technologies and supply chain to retail points all can contribute to lowering inflation and the inflation expectations that are formed adaptively.

I.48 Tackling food inflation also needs a strategy to break the inertial element arising from rising real wages leading to increases in the Minimum Support Price (MSP), which in turn lead to higher food inflation that feeds back to higher wages with an element of indexation. Some public policy interventions may be desirable in this regard. Rural wage programmes need to be linked with productivity. If productivity improves, real wages can rise without putting pressure on prices. The inclusion agenda can then be pursued on a sustainable basis without drag on inflation and the fiscal position.

I.49 Transmission of inflation from abroad has also been an important element in keeping inflation high in the recent years. International commodity prices remain a potential threat as global liquidity is still far too large due to monetary policy accommodation by advanced countries. Fuel and food security would need to be given particular attention. There is a need for environmentally sustainable solutions to manage energy security. Free pricing of petroleum products can help, as a large population cannot be subsidised in an import dependent item. Finally, pricing power in the manufacturing sector has macro as well as micro angles. A competition policy has been put in place and industrial organisation structures could be studied along with price information to stamp out anti-competitive practices and collusive behavior. Such behavior also adds to inflationary pressures and needs to be curbed.

Harnessing technology for agriculture productivity enhancements

I.50 India is a knowledge economy with a strong technology base. Yet, it has not fully reaped the dividends from technology. For instance, substantial productivity enhancements are possible on the farm sector through better adoption of technology aided by incentives and institutional improvement. Large scale introduction of Precision Farming Techniques involving GIS and Remote Sensing, combined with local-specific fertigation practices, better cultivars and optimal water management can go a long way to improve farm productivity on a sustainable basis. The decline in availability of land for foodgrain production due to increasing urbanisation and diversion of bio-fuels makes it important that technology is harnessed for improving yields. Better adoption of modern technologies in the area of biotechnology, genomic tools, cost-effective and eco-friendly integrated pest management technologies, seed-supply chains and systems, regionally adapted varieties and hybrids, especially drought-resistant varieties can also help in improving farm output. Focus on better water harvesting, especially in dryland regions, and institutional reforms such as creation of infrastructure and laws for digitising land records in the country through appropriate legal framework would help.

I.51 Importantly, the approach to technology advancement has to be eco-friendly. It should focus on providing favourable soil conditions by managing soil organic matter and enhancing soil biological activity; improving soil and water conservation measures; reducing excessive reliance on hydrocarbon inputs; minimum or zero tillage; rotation groups to manage soil fertility and pests; integrated pest management (IPM); and exploiting complementarities in the use of genetic resources by combining these in farming systems with a high degree of genetic diversity. Resource conservation technologies that improve input use efficiency, and conserve and protect natural resources need to be aggressively promoted.

I.52 Rainfed agriculture continues to play an important role in India, contributing around 55 per cent of the cropped area and 45 per cent of the total agricultural output. Since irrigation potential in India is not fully used, there is scope for significantly increasing agricultural production. Rainfed areas contribute more than 70 per cent of the pulses and oilseeds production as well as a substantial part of horticulture and animal husbandry produce. There is, therefore, a need for a comprehensive irrigation/water management strategy as water is probably going to be the most scarce resource in the twenty-first century.

I.53 Water management is particularly important. Worldwide, ground water is preferred to surface due to easier accessibility in terms of place, time and quantity. This has been the case in India also as seen in the shift from canal irrigation in the 1970s to ground water in the 1990s. Currently, as per the Third Minor Irrigation Census, 2005, 75-80 per cent of the irrigation potential is under groundwater, bulk of which are wells - dugwells, shallow and deep tube-wells - and mainly in private hands. Notwithstanding scarcity, competing uses of water, and the consumptive nature of water use in agriculture, policy for agricultural reforms has to take into account the need to evolve programmes for recharge and management of the groundwater reserves of the country, so that extraction is limited only to what we can annually recharge. Natural and incidental recharge based on factors like rainfall, soil characteristics and geomorphology cannot sustain groundwater given the rate at which it is being consumed. Emphasis on steps like water harvesting, cultivation of high value and low water requiring crops, such as pulses and oilseeds in water scarce areas, using water-saving methods of cultivation like System of Rice Intensification (SRI) methodology for paddy and sugarcane, seawater farming for crops that thrive in salt water in coastal areas and investment in research to promote water-efficient crops could facilitate in achieving long-term sustainability in agricultural production.

I.54 In order to step up agriculture growth from a trend of around 3 per cent per annum to 4 per cent

would require a judicious use of technology, institutional reforms including those relating to land, incentives for supply response and better input use. Yields need to be improved further by biochemical elements of technology that embody irrigation, genetic seeds, chemical fertilisers and pesticides. Increased yield potential of new varieties can yield better results on optimal use of biochemicals and consumptive use of water that take into account soil moisture conditions of the land. Optimal input use, taking into account land and climatic conditions, can improve yields significantly. This strategy is essential for improving crop output, as the possibilities of further expansion in area under cultivation is limited.

I.55 The agriculture performance appears to have fallen below its potential, partly because price-factors have been emphasised more in relation to non-price factors. While price incentives may still work for large farmers who have large marketed surplus, non-price factors benefit both small and large farmers and output response is greater than through price incentives. The policies focused at price factors alone have led to distortions. For instance, fertiliser subsidies in the past, have not only distorted the optimal use of fertilisers, but have also led to sub-optimal investments in fertiliser production as the subsidy was not pegged to nutrients earlier and benefitted inefficient old plants more than the efficient new plants. As such, there is a rationale for extending the Nutrient Based Subsidy (NBS) scheme in scope. Price incentives in the form of higher MSPs, while necessary to stabilize farm incomes, have its limitation in generating aggregate supply response for agriculture.

Maintaining right balance between consumption and investment

I.56 India is amongst the fast-growing emerging markets that has the right balance between consumption and investment in aggregate demand. It does not face the problems of over-investment or from excessive leveraged consumption. In the high-growth phase, prior to the global financial crisis, leveraged consumption did increase, but from a rather low base. Investment, on the other hand, rose faster. After the global financial crisis, government consumption rose on the back of large fiscal stimulus. In 2010-11, rebalancing took place away from government consumption to private consumption, but investment declined sharply in the second half of the year. There is now a need to maintain long-term balance between consumption and investment by rebalancing demand from consumption to investment. For this, there is a need to step up savings in the economy.

I.57 From the year 2000-01 onwards, gross domestic savings increased mainly on account of rise in private corporate savings and improved performance of public sector savings even as household sector savings remained almost stable as per cent of GDP. The public sector turned from being a net dis-saver to a savings generating sector largely due to fiscal consolidation under the Fiscal Responsibility and Budget Management (FRBM) Act regime. Private corporate savings improved in line with efficiency and profitability. The Planning Commission at the start of the process for formulating the Twelfth Five Year Plan (2012-17) envisaged a growth of 9.0-9.5 per cent. In the changed scenario, where advanced economies may go through a prolonged scenario of slow growth, this may be difficult target to pursue. In order to achieve even a 9.0 per cent growth, the investment rate of 40.5 per cent would be required if ICOR remains unchanged from 4.5 realised during the Eleventh Plan. The CAD that finances the saving-investment gap has averaged less than 1 per cent of GDP over past two decades. Even assuming a higher a CAD/GDP ratio of 2 per cent, gross domestic saving (GDS) rate need to be raised by about 5 percentage points from 33.7 per cent in 2009-10. This underscores, the importance of augmenting saving as well as bringing about technological and institutional improvements to realize higher growth through higher investments and lower ICOR. Overall investment requirements and the need for continued sustainability on current account, thus

underscore the need for attaining the highs of private corporate and public sector savings reached in the recent past and exploring the possibility of invoking an upward shift in household savings which have remained stable for many years.

Facilitating energy security

I.58 Amidst high growth, India faces a large energy deficit that can eventually constrain the growth. Factoring the current and expected trends in supply and demand of energy in India, India's energy deficit could double by the end of the Twelfth Plan from about 170 million tonnes of oil equivalent during 2010-11. By the end of the Twelfth Plan, India may need to import 40 per cent of its energy requirements. Demand-supply gaps could be particularly large in coal and crude oil. This will put pressure on energy prices and balance of payments.

I.59 India will need to augment its domestic energy production. At the same time, moderation of demand, efficient energy usage and alternative sources of energy will have to form the three pillars for achieving energy security. Price increases would be necessary to incentivise energy conservation, curb demand and support supply response through capacity addition. Also, public policy support for augmentation of domestic hydrocarbons, coal and power output through public and private investments is necessary. The demand-supply gap for crude oil, petroleum products as well as natural gas in India is likely to rise. As the Ninth Round of auctioning exploration blocks under the New Exploration Licensing Policy (NELP IX) has not received adequate response, the strategy will need to be re-worked to create enabling financial and regulatory environment where public and private sectors effectively participate in the exploration.

I.60 India has large coal reserves; coal block auctions could be front-loaded. Pipeline investment in power projects is large, but once the projects go on-stream, their optimal utilisation requires that coal supply issues be resolved. This is a priority that would entail better planning and coordination amongst concerned agencies and stakeholders. It is important to ensure that not only do existing power plants get adequate coal supply, but newer plants are also able to secure input supplies so that they start off in time with a reasonable load factor. As a large amount of bank finance is locked in the infrastructure sector, the viability of new infrastructure projects need to be ensured in order to avoid any restructuring needs.

Facilitating infrastructure finance

I.61 As per the assessment of the Planning Commission, during the Twelfth Plan (2012-17) India may need infrastructure investments of over US$ 1 trillion. This poses a mammoth financing task. The infrastructure gap of India, both in relation to other major countries and its own growing demand has been a key factor affecting the overall productivity of investments. The requirement of high initial capital outlay, that too over longer terms, necessitates measures to address the financing constraint to capacity expansion in infrastructure. The financing issue relates not only to possible resource gap, but also to ensure commercially viable funding that remains so over business cycles.

I.62 Infrastructure investment during the Twelfth Plan will need to be funded by both, public and private sectors. Despite increasing participation of the private sector in bridging the infrastructure gap, public investment still has to play a significant role. Fiscal consolidation and reorientation of expenditure towards capital expenditure is required to meet the target. The banking system, despite the risk of asset-liability mismatch while lending long-term for infrastructure projects, has seen high growth in credit to this sector in recent years.

I.63 In the recent past, several measures have been taken to support development of corporate bond market to facilitate long-term finance so that infrastructure investment can pick up. The FII limit on investments in corporate bonds has been raised to

US$40 billion. FIIs can now invest in corporate bonds of residual maturity of over five years issued by companies in infrastructure sector up to US$25 billion within the overall limit. Disclosure norms have been simplified and withholding tax on investment in India Infrastructure Development Fund (IDF) bonds has been reduced. Banks, Primary Dealers and investment banks have all been allowed as market makers. In the secondary market, repos in corporate bonds have been allowed and new 91-day IRF product has been launched. CDS are also expected to be take off in near term. Reporting platform on OTC interest rate derivatives is now in place and DvP has been facilitated through transitory pooling of accounts.

I.64 Further measures are, however, needed to improve the flow of resources to infrastructure sector on a commercial basis. These include, rationalisation of stamp duties across States and re-look at tax treatment of Pass Through Certificates (PTC). Partial credit enhancement by banks is an option, but has its own problems. Alternative means of risk mitigation through CDS or bond insurance are being explored. More players are also needed to help corporate bond market acquire depth and vibrancy.

Promoting financial inclusion and inclusive growth

I.65 Long-term growth sustainability critically depends on achieving inclusive growth. In turn, financial inclusion is a necessary condition for achieving this. Inclusion strategy aims at not just the pace of growth, but its pattern with a view to cover all in the growth process. It allows people to contribute to as well as benefit from economic growth. Financial inclusion refers to delivery of financial services at affordable costs to the low income or disadvantaged groups in a fair and transparent manner by mainstream institutional players. To support inclusive growth through financial inclusion, the Reserve Bank of India has been encouraging banks to open no-frill accounts with inbuilt overdraft facility, developing suitable recurring deposits, remittance facilities suited for pattern of cash flows for poor and rural households, small loans for entrepreneurial activity and offering micro insurance facility.

I.66 Availability of finance is the most important factor in promoting a sustainable model for inclusive growth. However, there are several barriers to inclusive growth. Investments in agriculture, infrastructure, human capital formation through education, health and skill formation are critical to inclusive growth. For instance, about one crore people will seek to enter the workforce each year over the next decade, posing challenges for employment and skilling. The demographic dividend will turn out to be a threat if skill formation does not gather pace. Recognising this, a National Policy on Skill Development is now being implemented. Finance is important for supply of all these activities. Inclusive finance is necessary for supporting the demand for these activities, so that these can be paid for.

I.67 Financial inclusion is an important priority of the Reserve Bank as only 30 per cent of the commercial bank branches are in rural areas and only 61 per cent of the country's population has bank accounts. It is both a national commitment and a policy priority especially when a large section of population lacks access to even the most basic formal financial services. The Reserve Bank has taken the task of financial inclusion in mission mode and has fostered an enabling regulatory and policy environment by liberalising branch licensing, mandating banks to open 25 per cent of new branches in unbanked rural centres, permitting large number of entities including corporates to function as Business Correspondents (BCs) and Business Facilitators (BFs), introducing innovative products and encouraging use of technology for reaching the unbanked.

I.68 The list of medium-term challenges discussed above is not exhaustive. They, however, illustrate that while demand management through counter-cyclical monetary and fiscal policies has a role to play in containing inflation and in stabilising growth around its trend, an increase in the trend growth would require

policies that remove structural constraints over the medium term. India remains a country with substantial growth potential, given the natural resources, human capital endowment, demographic dividends, its knowledge base and increasing openness. However, the potential can only be reaped through technology improvements, productivity enhancements, reducing energy deficits, development of infrastructure, stepping up saving and investment, pursuit of inclusive growth and lowering inflation on an enduring basis. It should be possible to target a higher growth under the Twelfth Plan than the current trend. However, to maintain macro-economic stability with faster, more inclusive and sustainable growth, the Plan would need to address the medium-term issues upfront.

II ECONOMIC REVIEW

Growth rebounded strongly in 2010-11, after the dip in 2008-09 in the wake of the global financial crisis and the recovery in 2009-10. However, inflation rose and remained stubbornly high throughout 2010-11 as supply-side shocks got generalised amidst strong aggregate demand. With added risks to growth from inflation above the threshold level where growth-inflation trade-off can work, the Reserve Bank responded with eleven rate hikes between March 2010 and July 2011. This lifted effective policy rates by 475 basis points in the current interest rate cycle. As a result of monetary tightening and deteriorating global economic conditions, some moderation in growth and significant moderation in inflation from the later part of the year is anticipated going forward. However, risk to demand compression remains from likely slippage on envisaged fiscal consolidation.

II.1.1 2010-11 marked the completion of the process of recovery from the adverse impact of the global financial crisis and the consequent slowdown of the global economy. Slack in the advanced economies, with their output gap estimated at 3.4 per cent in 2010, as also the uncertainty about their future growth, employment and debt still impinge upon the activity levels in India. However, growth in India was back to the earlier high growth path.

II.1.2 Starting in double digits, headline inflation remained elevated throughout 2010-11. With vegetable prices spiking following unseasonal rains after a good monsoon and global commodity prices firming up in the second half of 2010-11, inflation expectations started to feed on themselves and cost-push factors from the manufacturing side exerted pressures on inflation. Inflation turned persistent and generalised as a result. The stance of monetary policy continued to be anti-inflationary during the course of 2010-11 and in the year so far to contain inflation and anchor inflation expectations.

I. THE REAL ECONOMY

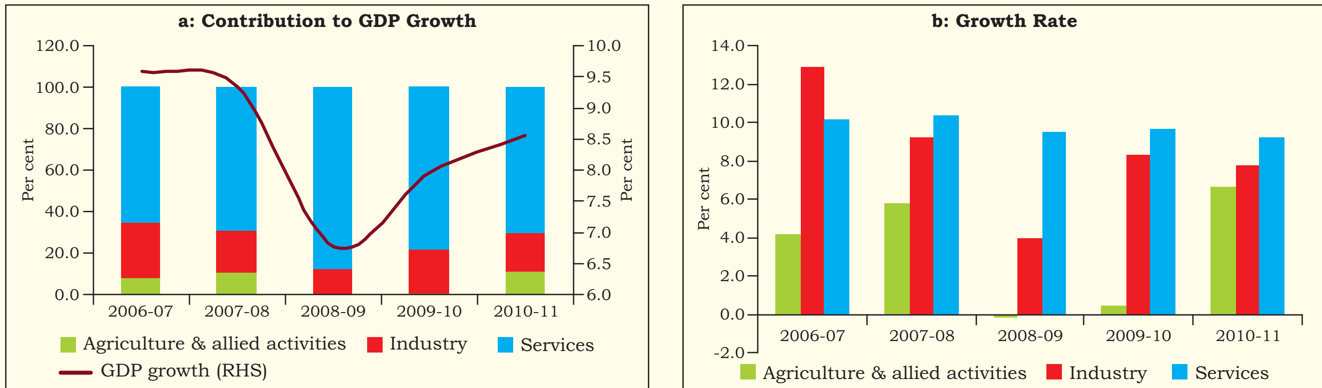
Growth rebounds strongly in 2010-11

II.1.3 Real GDP growth at factor cost increased to 8.5 per cent in 2010-11 from 8.0 per cent in 2009-10 (Appendix Tables 1 and 2). At this pace, the real GDP growth rate increased for the second successive year after the global crisis-induced sharp slowdown in 2008-09.

II.1.4 The main impetus to growth during 2010-11 emanated from agriculture which rebounded to above-trend growth rate on the back of a normal monsoon. Reflecting this, the contribution of the agriculture sector to overall GDP growth increased sharply in 2010-11 (Chart II.1). Services sector continued to be the predominant driver of growth, though its growth was slightly lower than the average in the pre-crisis high growth phase of 2003-08.

Sustainability of high growth – enabling conditions

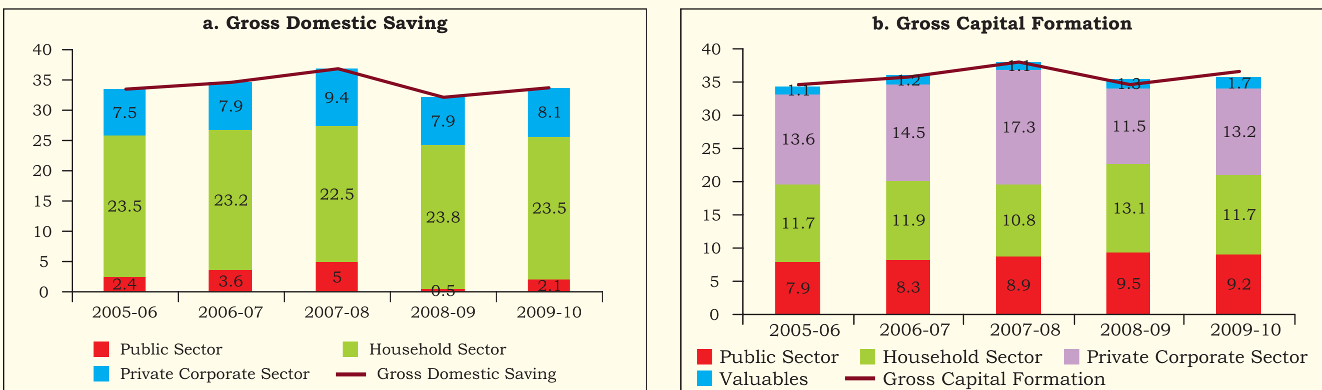
II.1.5 Growth is expected to moderate to the trend level of about 8 per cent in 2011-12. If global conditions worsen, downside bias to this projection may arise. This raises concern about sustainability of the high growth over the medium to long-term. The Planning Commission in its paper on Issues for the Approach to the Twelfth Plan (2012-17) proposed a growth target of 9.0-9.5 per cent. A pre-requisite for high growth is upfront removal of structural constraints with close attention on legal and institutional framework, as also execution and governance. In the short run, growth will have to contend with risks from low agricultural productivity, poor infrastructure, high global commodity prices, quality of corporate governance and low productivity



enhancement in the manufacturing sector. Furthermore, the substantial increase in oil prices in 2010-11 and 2011-12 so far, has raised concerns about the near-term growth (Box II.1).

II.1.6 Calculations suggest that aggregate saving and investment rates need to be stepped up from 33.7 per cent and 36.5 per cent of GDP in 2009-10, in order to achieve GDP growth of 9.5 per cent, envisaged for the Twelfth Five Year Plan. An investment rate of around 38-39 per cent with an ICOR of around 4.1(as was envisaged for the Eleventh Five Year Plan) would be required. Thus, the investment rate needs to be stepped up by 2.5-3.0 percentage points. The gross domestic saving rate needs to be augmented to 37 per cent or more. This underscores the importance of at least attaining the high levels of private corporate and public sector savings reached in the past. Furthermore, there is a need for stepping up of household savings, which have stagnated in recent years, largely reflecting the reallocation of savings between financial and physical assets as well as the near synchronous movement of changes in financial assets and financial liabilities (Chart II.2 and Appendix Table 3).

II.1.7 Preliminary estimates based on latest available information show that net financial savings of the household sector moderated to 9.7 per cent of GDP at current market prices in 2010-11 from 12.1 per cent in the previous year (Chart II.3 and Appendix Table 4). The decline in the net financial savings rate of the household sector reflected the slower growth in households' savings in bank deposits and life insurance fund as well as an absolute decline in investment in shares and debentures, mainly driven by redemption of mutual fund units. Even so, there was a shift in favour of small savings and currency



Box II.1

Would Firming Oil Prices Cringe Growth?

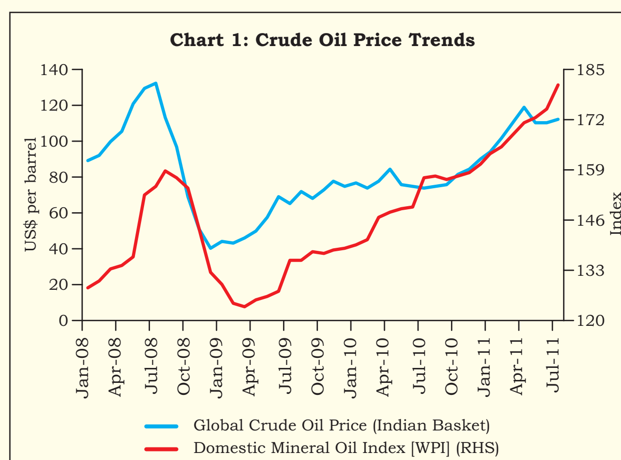
The oil price shocks of 1970s were associated with sharp output losses and large inflationary pressures. In the 2000s, even larger increases in the price of oil were associated with much softer impact on these macroeconomic variables. The 1973 oil embargo in the wake of the Arab-Israeli War and the 1979 oil price surge following the Iranian Revolution saw the supply of oil falling. In contrast, the 125 per cent rise in oil prices during 2002-06 was driven primarily by excess global liquidity and rising demand for oil.

That raises the question whether we need to worry about the rising oil prices in 2011. Blanchard and Gali (2007) found that the oil prices are no longer correlated with business cycle as structural changes have weakened and modified the transmission mechanism of oil shocks. Further work suggests that this change is attributable to wage rigidities and anchored inflation expectations in recent period. Also, economic agents have viewed the recent episodes of firming oil prices as temporary and volatile movements.

The impact of oil prices on growth is, however, corroborated by the IMF's World Economic Outlook, April 2011. It estimated that if global oil prices average US$ 150/barrel in 2011, it would lower real GDP growth in advanced economies by 0.75 per cent, while output loss in emerging and developing economies could vary from 0.75 per cent in Asia and sub-Saharan Africa to 0.5 per cent in Latin America. There is, thus, good reason for not being complacent about the macroeconomic adjustment that may become necessary if global oil prices firm up significantly. Bodenstein, *et al.* (2007) demonstrated that the impact differs from country to country and ultimately depends on the oil dependence, the structure of financial market and risk-sharing, critically hinging on structural parameters.

Trading environment in the oil markets in 2011 remains uncertain with hedge funds liquidating and re-building positions causing volatility in prices. Event risks such as the political turmoil in the Middle East and North Africa (MENA) region, the Japanese quake shutting oil refineries and the sovereign default risks in the Euro zone have time and again reversed the otherwise firming oil prices on the back of global recovery broadly staying on track. The price of the Indian basket of crude rose from an average of US$ 69.8/barrel in 2009-10 to US$ 85.1/barrel in 2010-11 and further to US$ 118.5/barrel in April 2011, before declining to US$ 110.6/barrel in May 2011 on expectations of weaker global growth (Chart 1). Oil prices moderated temporarily in June 2011 on account of the decision of the International Energy Agency (IEA) members to release 60 million barrels of crude from their strategic reserves to offset supply disruptions, but edged up again, averaging US$ 112.4/barrel during July 2011. Following the US sovereign rating downgrade by S&P, oil prices fell again averaging US$ 106.6/barrel in the first fortnight of August 2011. Even with this, the August price of the Indian basket of crude is 25 per cent higher than its average during 2010-11.

In the case of India, imports accounted for 87.3 per cent of total domestic oil requirement in 2010-11. Net oil imports (oil import less oil export) accounted for 65.3 per cent of total merchandise trade deficit in 2010-11. Though it is difficult to precisely quantify the impact of oil price on growth, a small macro model developed to evaluate the impact of oil price shock on India's economic growth suggests that the impact could be somewhat significant. The model comprises seven structural equations pertaining to consumption, investment, government consumption expenditure, net exports and prices of non-oil commodities and two major identities relating to national income and aggregate wholesale price index (WPI) comprising prices of oil and non-oil commodities. Results showed that a 10 percentage point increase in oil price inflation, if passed through fully, would lead to a reduction in real GDP growth by about 0.3 percentage point. It would also raise WPI inflation by 1.0 percentage point through direct impact, with total impact after subsequent rounds of feed through estimated at about 2.0 percentage points. These reflect broad approximations and actual impact may depend on several factors. With existence of non-linearities, the adverse impact is greater if oil prices change above the 10 per cent threshold.



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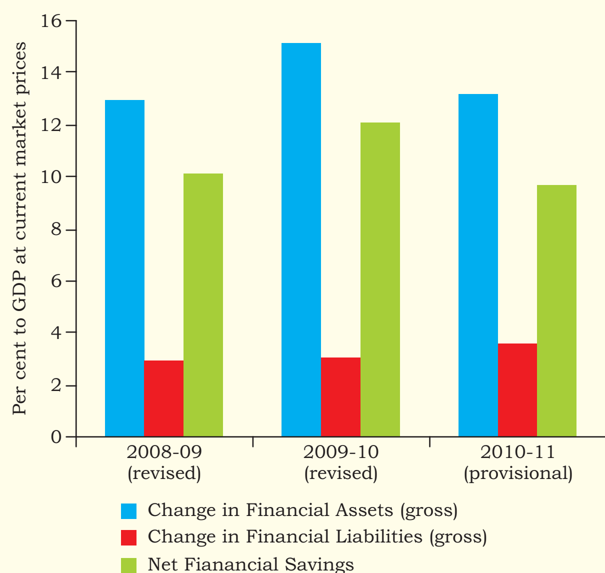
Petroleum Planning and Analysis Cell, GoI.

during the year. Households' financial liabilities, however, increased reflecting higher borrowings from commercial banks. Notwithstanding the pick-up in the real GDP growth rate during 2010-11, persistently high inflation, relatively slower adjustment of bank deposit rates and the volatility in the Indian equity market



impacted by global macroeconomic uncertainties, affected the level and composition of net financial savings of the household sector.

Strong rebound in agriculture growth in 2010-11

II.1.8 After two consecutive years of subdued performance, agriculture turned into a significant driver of growth in 2010-11. The simultaneous occurrence of a normal and well-distributed south-west monsoon and excess north-east monsoon, the first occasion in the last one decade, enabled both *Kharif* and *Rabi* sowings to be above normal. Consequently, there was record foodgrain production in 2010-11 (Appendix Table 5).

II.1.9 The progress of monsoon so far during 2011 has been on the whole satisfactory. The monsoon arrived on time and by July 9, 2011 had covered the entire country; a week earlier than scheduled. As on August 17, 2011, cumulative rainfall since the start of the monsoon season was normal at 1 per cent below the Long Period Average (LPA). The India Meteorological Department (IMD) had revised its initial forecast of normal monsoon in 2011-12 to slightly below normal monsoon at 95 per cent of the LPA, with a model error of ±4 per cent. Spatially, the monsoon has been reasonably well-distributed, though it has been so far deficient in Haryana, Orissa and some parts of North East, Maharashtra and Andhra Pradesh.

II.1.10 Though it is still early to predict the impact of monsoon on agricultural output, *Kharif* sowing is progressing well and till August 12, 2011 was marginally higher than last year. However, sowing deficiency is observed in case of coarse cereals, pulses, groundnut and sunflower. If this stays, supply management would be needed to keep price pressures at bay. Overall, the agricultural prospects remain encouraging, even though growth is likely to decelerate on a high base.

Technology breakthroughs key to maintaining demand-supply balances

II.1.11 There are several factors constraining agriculture supply response thereby impacting inflation. The foremost relates to low productivity and monsoon dependence. Presently, productivity levels remain low and productivity differentials across States and crops continue to persist. The target growth rate of 4 per cent for the agriculture sector (Twelfth Five Year Plan), in relation to the trend growth rate of around 3 per cent, will require considerable technological and institutional improvements.

II.1.12 Productivity in Indian agriculture is low compared with productivity at the world level and major producers such as China and the US (Chart II.4). Even the most productive States in the country fall short of the world standards in terms of yields of major crops, namely, foodgrains, pulses and oilseeds. Further, there exists a wide variation in productivity of these crops across States/regions (Chart II.5). This is significant given the import dependence for edible oils and pulses. Increase in foodgrain productivity can be realised by ensuring soil conservation, which has been neglected and use of optimal and locale-specific agricultural practices and introduction of precision agriculture.

II.1.13 India's self-sufficiency in food and other agro-products can be endangered if technology

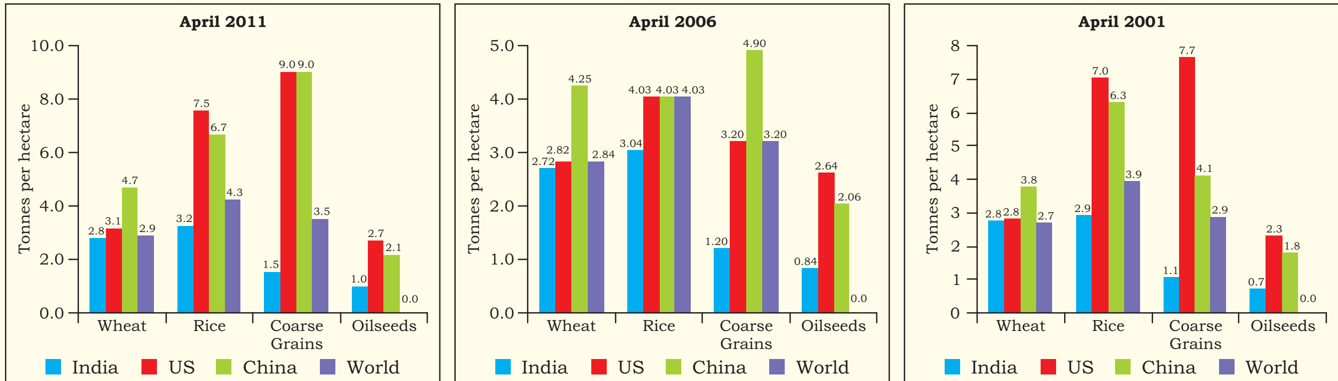


Chart II.4: Comparative Yield: India and the World

advancements do not keep pace with growing demand stemming from rising population and income levels. Policy interventions are required to support sustainable growth in crop production and environmental protection through development of improved and diversified cultivars, eco-friendly and cost-effective pest management practices, efficient seed supply systems, and commercialisation of the diversified and alternative uses of crop produce. This, in turn, would improve farm incomes and food security, while helping to keep food inflation low.

II.1.14 Notwithstanding the sharp decline in the share of agriculture in GDP from an average of 53 per cent in the fifties to 19 per cent in the 2000s, 52 per cent of the work force continues to be engaged in agriculture. With just around 44.6 per cent of the gross cropped area irrigated (as per the latest data available for 2007-08), the dependence of Indian agriculture on rainfall remains preponderant (Chart II.6). It is in this backdrop that public policy interventions to step up investment and productivity enhancements for augmenting food supplies, assumes importance.

Higher demand for protein-based items calls for urgent actions

II.1.15 In recent years, the demand for other agricultural products, particularly, protein-based products such as meat, eggs, milk and fish, and fruit and vegetables, have increased substantially. This can be attributed to rising income levels of a fast growing economy leading to a change in the dietary habits of the people. The demand-supply mismatches in the case of these items resulting from inadequate supply response to structural changes in demand pattern have led to rising prices. Steps have been initiated to address the growing imbalance. The National Mission for Protein Supplements through

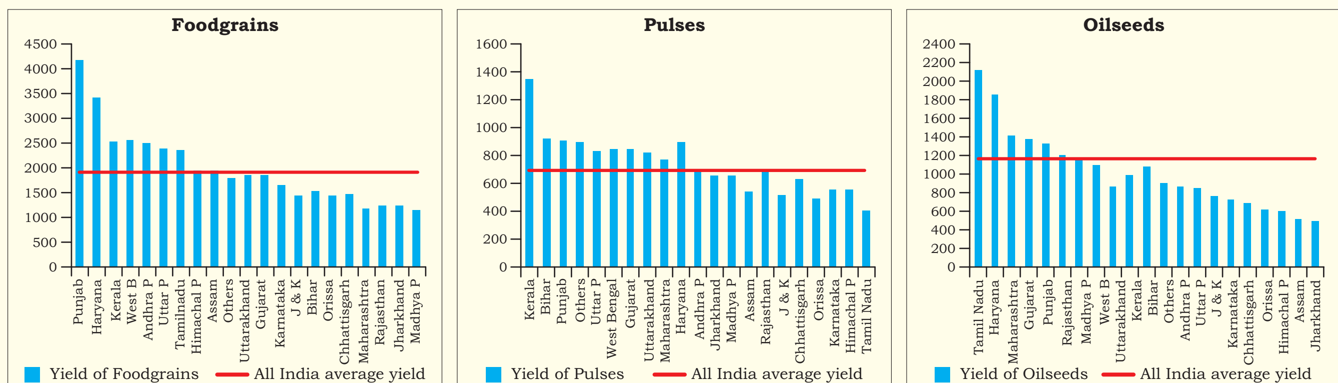
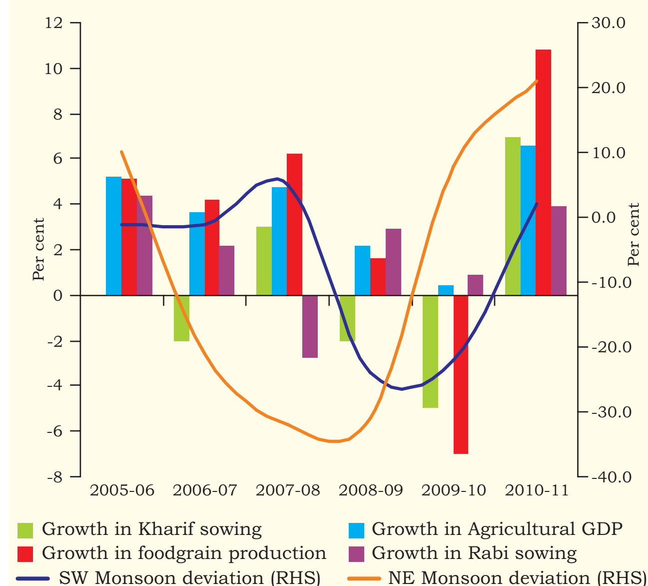


Chart II.5: 2010-11 Yield Differential – State-wise



livestock development, dairy farming, piggery, goat rearing and fisheries is expected to help bridge the gap between increasingly divergent demand and supply of animal-based proteins. To achieve self-sufficiency in pulses production, increase productivity and strengthen market linkages, the Government launched a scheme for integrated development of 60,000 villages in rain-fed areas.

II.1.16 Even though the per capita availability of milk has increased from 194 grams per day in 1994-95 to 258 grams per day in 2008-09, there is a need to address the structural constraints ailing the sector. The productivity of Indian bovine compares unfavourably with the world average mainly due to gradual genetic deterioration, poor fertility, as well as poor nutritive value of feed and fodder. To sustain production of milk, Accelerated Fodder Development Programme intended to benefit farmers in 25,000 villages has been launched. There is need for research focused on ecological adaptability of cattle and developing the disease resistance of cross-bred species.

Need to focus on food management in times of high food inflation, production and wastage

II.1.17 In recent years, large food stocks have co-existed with high food inflation. This may sound paradoxical. However, food inflation in recent period has come from food items that are outside the ambit of public distribution system (PDS) and reflect a demand shift with rising income levels. Food stocks with public procurement agencies have remained above the buffer stock norms and food security reserve requirements and have contributed to mitigating price pressures (Appendix Table 6). However, the current storage capacity is inadequate for the stocks, which reached the vicinity of 66 million tonnes as on June 1, 2011. Therefore, augmentation of storage capacity is an important aspect of food management in India. At the same time, it is imperative to increase the off-take through the existing PDS. This would keep a check on price pressure and also ensure more equitable distribution and food security. The demand-supply gap leading to price pressures in case of important food items such as fruit and vegetables and protein-based products, continue to persist due to near stagnant supply owing to lower yield and increase in demand. Hence, it is also equally important to gradually move away from the cereal-centric policy towards these items, with supportive policy framework and required infrastructure. For effective food security, better management of food stocks is imperative (Box II.2).

New base IIP shows that industrial growth accelerated in 2010-11

II.1.18 The Index of Industrial Production (IIP) data with the revised base (2004-05=100), released in June 2011 is better representative of the current industrial structure. It suggests a sharper dip in industrial growth in 2008-09 amidst global financial crisis than was captured by the old base (1993-94=100). Importantly, it also suggests that industrial performance recovered much less in 2009-10 than was thought earlier. The recovery was sustained in 2010-11, with IIP growth accelerating to 8.2 per cent from 5.3 per cent in the preceding year (Chart II.7 and Appendix Table 7).

II.1.19 The old base IIP data suggested that the industrial growth decelerated in the second half of 2010-11. Under the new base, IIP growth remained

Box II.2
Food Management – What Needs to Improve?

The draft National Food Security Bill (NFSB) seeks to give legal right to every below poverty line (BPL) family in India to get 35 kgs. of wheat or rice per month at the rate of ₹3 per kg for rice and ₹2 per kg for wheat by way of central allocation to the States to be distributed through the targeted PDS. In this backdrop a holistic review of food management would be helpful.

Food management in India, as it stands now, entails procurement of foodgrains from farmers at minimum support prices (MSP), distribution of foodgrains to consumers, particularly the vulnerable sections of society at affordable prices and maintenance of buffers for food security and price stability. It has been reasonably successful in warding off the threat of famine, though has had limited success regarding certain other objectives such as price stability, equitable access and food security.

Procurement and Pricing

Procurement of foodgrains, in particular, wheat and rice, is an open-ended operation. The Food Corporation of India (FCI) procures foodgrains at the MSP, which are based on the recommendations of the Commission for Agricultural Costs and Prices (CACP). In addition, in recent years, a number of states have opted for Decentralised Procurement Scheme introduced in 1997, under which foodgrains are procured and distributed by the State governments themselves. Between 2006-07 and 2010-11, MSP of rice and wheat were hiked at an average annual rate of 14.1 per cent and 14.6 per cent, respectively**.** On average, agricultural price policy has provided a margin of around 20 per cent over total costs to both rice and wheat farmers (Dev and Rao, 2007). This has ensured sufficient and steady procurement of foodgrains which can cater to the demand for the PDS and various welfare schemes of the Government. Price interventions alone are, however, inadequate for ensuring better food management and greater focus on non-price interventions is necessary. Skewed incentives have affected land use and cropping pattern. Spatially, bulk of the public procurement remains confined to a few States for want of access to take-in windows.

The off-take of foodgrains has not kept pace with procurement despite the Central Issue Price (CIP), the price at which foodgrains are lifted by States for distribution under various welfare schemes, being constant since 2002. This has resulted in stocks of foodgrains building up to a level much higher than the quarterly buffer norms and food security reserve requirements. Basu (2010) is of the view that lack of adequate storage is not the central problem for food management. He underscored the need to look at the entire system of food production and procurement, and its release and distribution.

Production and Food Security

Foodgrain production in India grew at an average rate of 1.6 per cent annually between 1990 and 2010, lower than the decadal rate of population growth of 1.8 per cent. Resultantly, per capita net availability of foodgrains per day declined from 510 grams in 1991 to 444 grams in 2009. This is despite the fact that food stocks have been at their peak in the 2000s. This may have implications for food security in future.

The NFSB has been approved by the Empowered Group of Ministers (EGoM) on food security. If the Bill is implemented, the total requirement of foodgrains will increase. Given the limitation to expanding the area under crops, increased supply of foodgrains would thus have to come from increase in productivity. This has implication for capital expenditure in agriculture, including that on storage facilities. Further, it could pose a fiscal challenge through significant increase in food subsidy bill, estimated at about ₹92,000 crore by the Expert Committee (GOI, 2010).

Distribution and Delivery Mechanism

Distribution and delivery have been the most intricate and challenging aspects of food management in the country. The existing PDS in India with roughly 0.5 million Fair Price Shops (FPS) is plagued with deficiencies such as low margins that create perverse incentives for diversion of foodgrains. Surveys conducted in the past revealed significant inclusion and exclusion errors in PDS coverage. The Planning Commission, in early 2000s, found that the total leakage of grains meant for BPL population was 58 per cent. Pending unanimity in approach for identification of beneficiaries, *Aadhaar* smart cards could help reduce identification errors and leakages significantly. Smart cards have the ability to store and record a large amount of programmed and authorised biometric information that can be matched to the actual fingerprint or signature of an individual involved in a transaction, including eligibility for rations, quantity, price and time intervals at which he/she could be supplied rations. These features of the proposed smart card are expected to immensely help the existing food coupon or food-stamp system, introduced on a pilot basis in select districts in Andhra Pradesh, Arunachal Pradesh and Bihar. Greater use of Information and Communication Technology (ICT) in PDS, such as GPS tracking of movement of vehicles transporting PDS commodities, CCTV monitoring of FPS and computerisation of various operations of PDS could also improve its efficiency. Other reform measures for food management which could be considered include allowing food coupons to be redeemed at approved private food retailers, thus providing freedom to choose quality of grains and thereby reducing incentive for adulteration of foodgrains. An even bolder measure would be direct cash transfer that offers households the choice of purchase of any mix of grains, pulses or other household basics up to the value of the coupon.

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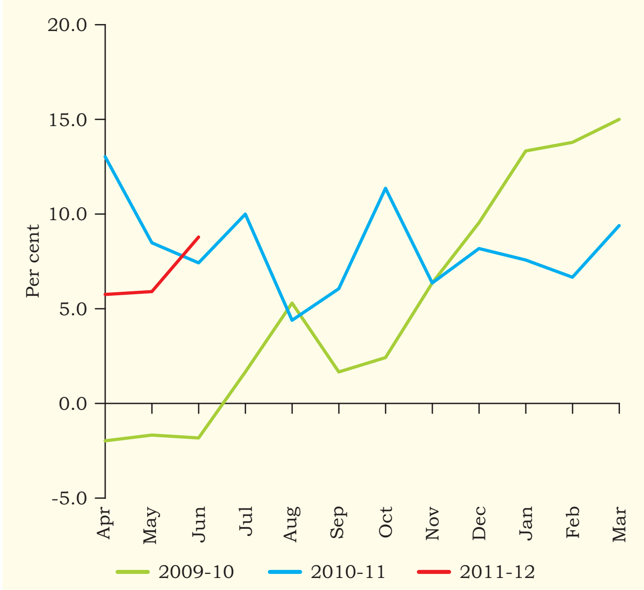
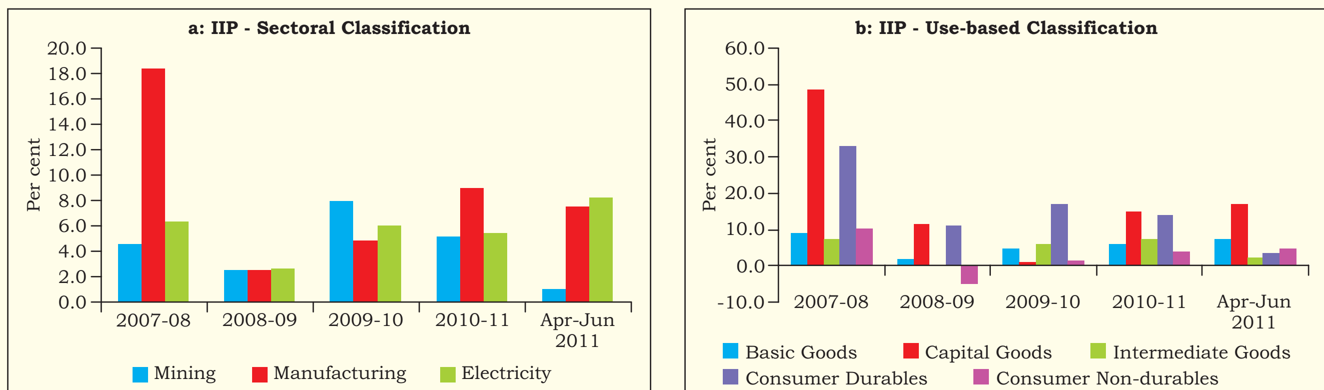
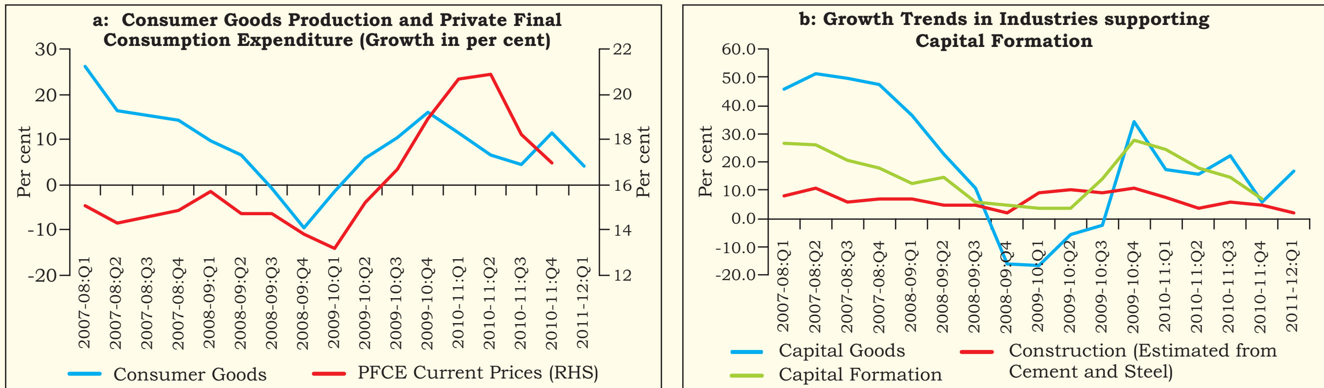


broadly unchanged across the two halves of 2010-11, recording 8.2 per cent growth in the first half and 8.3 per cent in the second half. The new base has better coverage and is reflective of the more recent production structure based on 399 item groups as against 303 in the old base. The Reserve Bank in its report on 'Macroeconomic and Monetary Developments' accompanying the Monetary Policy Statement of May 2011 had indicated that the recent IIP slowdown was exacerbated by a few volatile items. The analysis adopting the trimmed mean approach to compute IIP growth excluding volatile items showed that the industrial growth had not dropped as much as appeared from the headline numbers. The new base data confirms the view and shows that the IIP growth was in fact higher.

II.1.20 Further analysis of the IIP growth suggests some deceleration in mining and electricity in 2010-11 emanating from poor performance of coal and consequent lower thermal power generation. The use-based classification exhibits strong performance of capital goods and acceleration in growth across all sectors except consumer durables (Chart II.8 and Chart II.9). The IIP growth during April-June 2011 shows some deceleration, but this was substantially on a high base.

II.1.21 Despite the emphasis on manufacturing sector in India's planning process, its share in real GDP, as of 2010-11, was only 15.8 per cent. There is a need to boost this sector, not only to increase output but also to gainfully employ a larger number of people. A number of recent studies have highlighted the growth of total factor productivity in the organised manufacturing sector in the past three decades. There, however, exists wide differentials in productivity between different States and different industry groups. Also, there is a large difference in productivity between the organised and unorganised sub-sectors of manufacturing. Considering that the latter accounts for almost four-fifths of total employment in the manufacturing sector, there is an urgent need to bridge the gap.

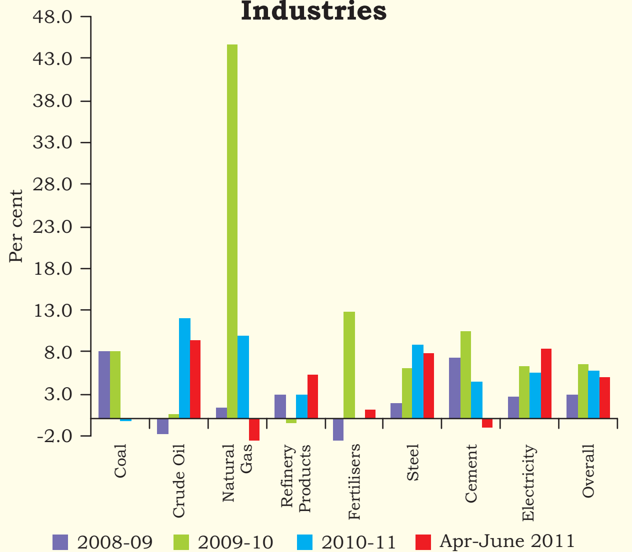




Infrastructure sector registers moderation in growth amidst capacity concerns

II.1.22 During 2010-11, the eight core infrastructure industries posted a moderate performance compared to the previous year (Chart II.10). Infrastructure industries such as crude oil, natural gas, petroleum refinery and steel recorded strong growth while cement production and electricity generation witnessed moderation in growth. Production of fertilisers was stagnant and coal output declined. The core infrastructure sector recorded lower growth of 5.0 per cent during April-June 2011 due to decline in natural gas and cement production.

II.1.23 The high deficit in power generation is a constraining factor for growth. Currently atomic energy and solar power are expensive options compared to coal. Hence, for the time being, rapid increase in power generation would have to be through the conventional systems.

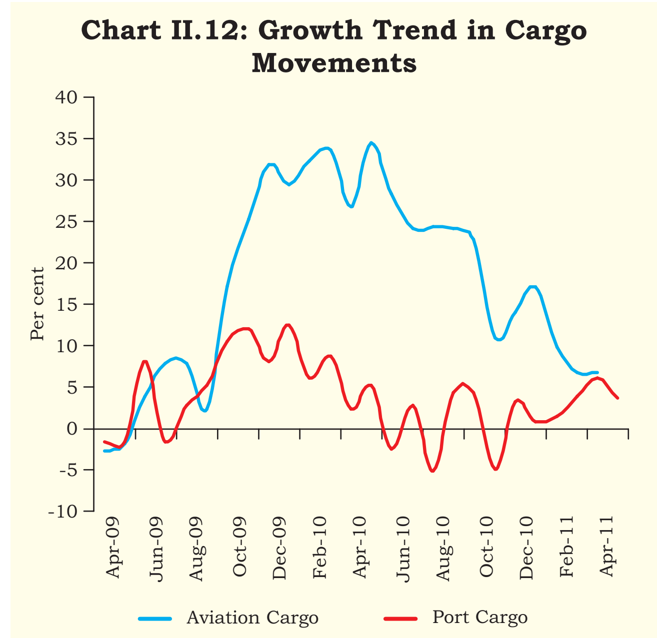


II.1.24 The recent slowdown in the production of crucial infrastructure industries such as coal and natural gas, given the large growth in demand raise concerns about sustaining growth. The current level of natural gas production in the country is inadequate to meet the industrial demand, particularly of the power and fertiliser industries. In view of unfavourable demand-supply balance of hydrocarbons in India, acquiring oil and gas assets overseas is one of the important components of enhancing energy security. Towards this end, the Government is also encouraging national oil companies to aggressively pursue equity oil and gas opportunities overseas. There is also a need to speed up exploration in the KG basin.

II.1.25 Capacity utilisation, which is an indicator of demand pressure in the economy, differed across the various infrastructure industries. During 2010-11, capacity utilisation in petroleum refining remained stretched at 109.3 per cent, while that in cement and thermal power generation eased in line with the production trend for these two industries. Capacity addition in power sector during 2010-11 was 12,161 MW, 56.7 per cent of the target for the year. Capacity constraints in coal, ports and railways raise major concerns about sustaining growth.

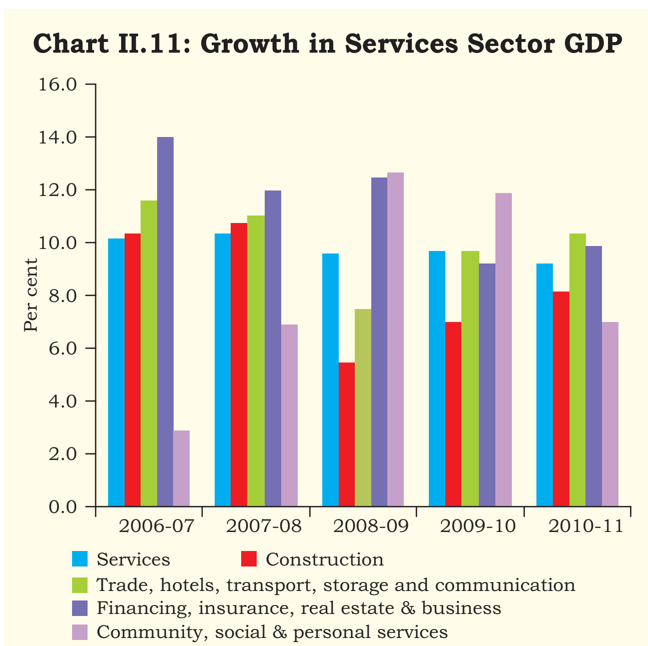
Services sector sustains momentum, albeit with marginal deceleration

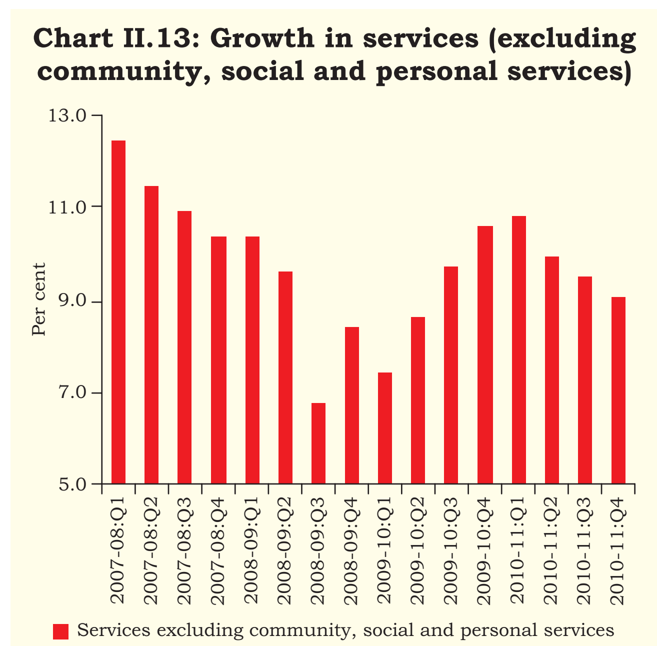
II.1.26 Services sector growth of 9.2 per cent in 2010-11 was marginally lower than that in the previous year largely due to deceleration in 'community, social and personal services' reflecting fiscal consolidation (Chart II.11). Services dependent on external demand such as tourist arrivals, passengers handled at international terminals, export and import cargo showed acceleration in growth during 2010-11, indicating improvement in global economic conditions. Cell phone connections also registered double digit growth, though lower than the previous year. Cargo movements in sea ports and railway freight traffic showed signs of moderation during 2010-11 on account of capacity constraints (Chart II.12).



Vulnerabilities that could impede sustained high growth of services sector remain

II.1.27 Being the largest sector of the Indian economy, the services sector has significant implications for growth. It is export-intensive, employment-oriented and attractive for foreign direct investors. In view of the above, the sustainability of the services sector growth is important. One major challenge for its sustainable growth arises from its dependence on external demand. This increases its vulnerability to global economic developments, as was witnessed during the global financial crisis (Chart II.13). India is facing increased competitiveness in IT/ITeS and telecommunications of late. The sector has responded well so far, but in future the wage price pressures may pose a threat to growth and profitability. Another area where other countries have gained





tremendously is tourism. India has potential but infrastructure such as road connectivity to tourist areas is a major challenge. Globally traded services, *viz.*, financial services, health care, education, accountancy and other business services, also have vast potential for growth which is yet to be tapped.

II.1.28 The Indian Health Care Federation has prepared a roadmap for making India a world-class destination for medical tourism. For this, accreditation of Indian hospitals is paramount as it will help in ensuring quality standards across a spectrum of speciality and super-speciality hospitals. In addition, to encourage medical tourism, there is a need to provide supportive infrastructure such as improved air connectivity, streamlining of immigration process along with developing health support infrastructure.

Private consumption and investment continue to drive growth

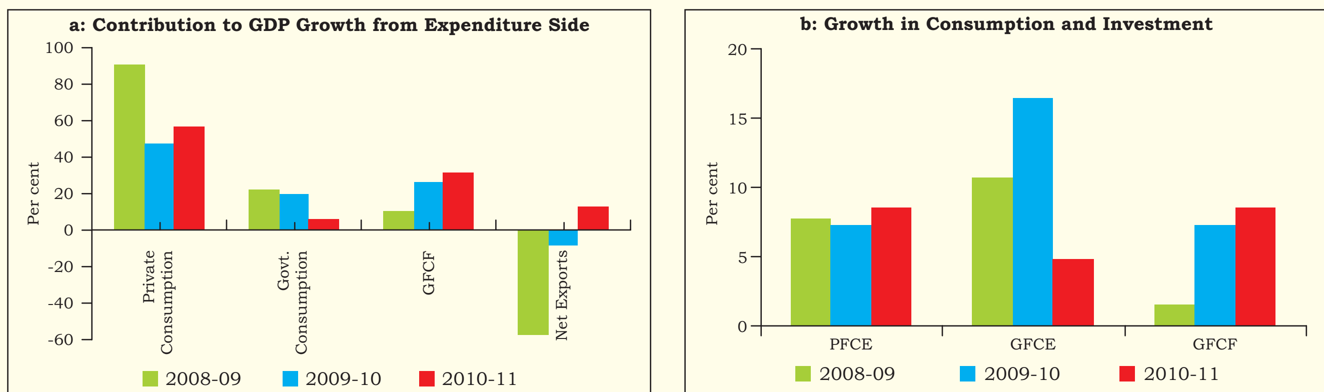
II.1.29 The drivers of growth from the demand side[1] revealed the continued predominance of private final consumption expenditure (PFCE) in driving growth, followed by gross fixed capital formation (GFCF). On the other hand, the growth of government final consumption expenditure (GFCE) moderated sharply in 2010-11 reflecting the re-emphasis on fiscal consolidation following the gradual withdrawal of fiscal stimulus measures that had to be undertaken in the previous two years to support the economic recovery. The rebalancing in government expenditure could be maintained in 2011-12 by staying on the path of fiscal consolidation. External demand improved in line with the global recovery process, and as a result, the contribution of net exports turned positive in 2010-11 (Chart II.14).

II.1.30 Even though aggregate expenditure, in real terms, accelerated in 2010-11 with private consumption as well as investment expenditure growing at a brisk pace, some moderation in expenditure is expected going forward in response to high inflation and demand-side policy measures. There was a perceptible slowdown in investment in the second half of 2010-11. Recovery from the soft patch, would depend on pick-up in execution of large infrastructure projects.

Employment situation improved in the recent years

II.1.31 High growth rate along with subdued or marginal increase in employment generation has been a pressing concern in the post-reform period. Available data provides evidence of creation of additional employment opportunities, though at a slower pace when compared with the high economic growth experienced in recent years. According to the results of latest quinquennial survey by the National Sample Survey Office (NSSO, 66th round), employment situation improved in both rural and urban areas in 2009-10 compared to the previous round (2004-05). The overall unemployment rate, measured by current daily status, declined from 8.2 per cent in 2004-05 to 6.6 per cent in 2009-10 and the decline in unemployment rate was more

Chart II.14: Expenditure Side of GDP



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

pronounced for men than for women. The overall work participation rate (usual status), however, declined to 39.2 per cent in 2009-10 from 42.0 per cent in 2004-05, largely driven by decline in women work participation rate.

II.1.32 High industrial growth, with a rate of growth in real value added in organised manufacturing of about 10 per cent per annum during 2003-09, also was associated with increase in employment in this sector. The latest Annual Survey of Industries (ASI) data reveal that between 2003-04 and 2008-09, employment in the organised manufacturing sector increased by 7.5 per cent per annum, as against decline of 1.5 per cent per annum between 1995-96 and 2003-04. This marks a clear difference from the previous phases of high growth in manufacturing output when there was no major contribution to employment generation.

II.1.33 Labour Bureau has been conducting a series of quarterly quick employment surveys since January 2009 to study the impact of the global economic slowdown on employment in eight major industries of the Indian economy. As per the latest data available, employment increased by 9.8 lakh during 2010-11 with the major share accounted by the IT/BPO sector.

II. PRICE SITUATION

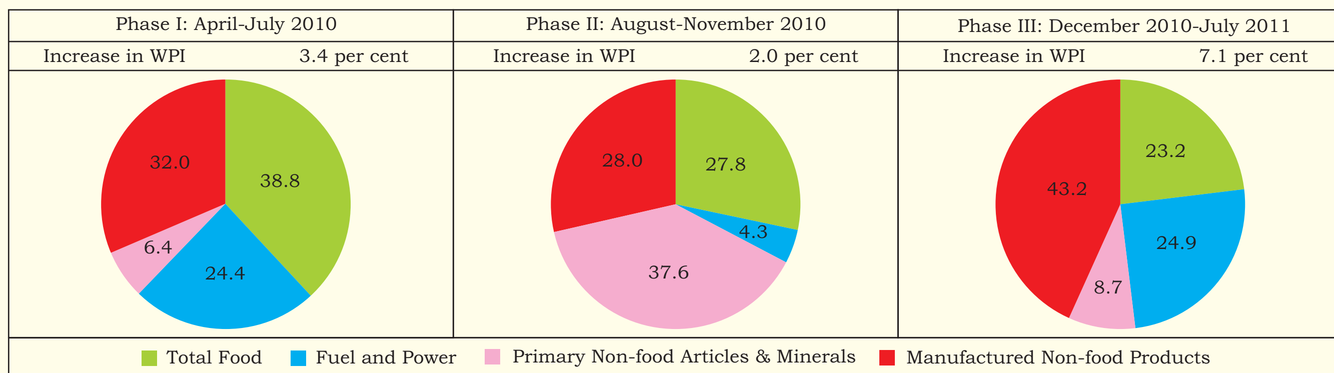
High inflation persisted through the year

II.2.1 With growth consolidating around the trend, inflation emerged as the dominant policy challenge for the Reserve Bank during 2010-11. Inflation remained high throughout, while the underlying drivers changed during three distinct phases during the year (Chart II.15). Price pressures were both external and domestic, with changing relative roles of supply and demand side factors. The monetary policy response of the Reserve Bank was accordingly calibrated based on assessment of the changing drivers of inflation and assessment about the role monetary policy could play in dealing with different sources of inflation. Monetary policy was, however, continuously tightened during the course of the year, reflecting normalisation of crisis time stimulus, to begin with, but subsequently conditioned by the rising inflationary pressures. In the absence of anti-inflationary monetary policy response, the inflation condition and inflation expectations would have deteriorated further.

Drivers of inflation shifted over three different phases

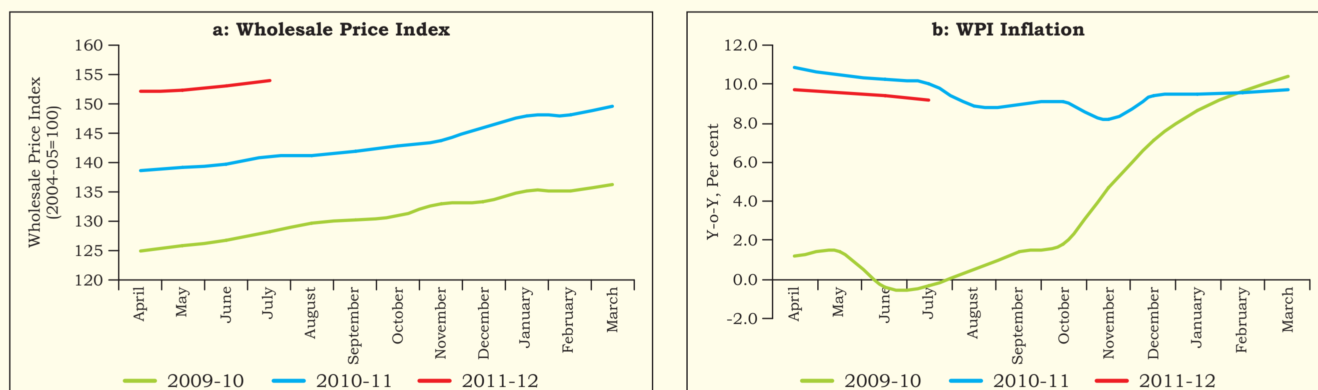
II.2.2 The changing inflation dynamics during 2010-11 could be evident from changes in weighted contributions to increase in WPI over three distinct phases. During the first period April-July 2010, the increase in WPI was quite significant (3.4 per cent) and was largely driven by high food prices. In spite of good *Rabi* arrivals, food inflation remained high as prices of protein-rich items firmed up, perhaps reflecting continuing demand shifts with rising income levels. During the second phase between August and November 2010, the magnitude of price rise was moderate (2.0 per cent) but primary non-food articles

Chart II.15: Changing Weighted Contributions to Increase in WPI



Note: Pie Chart Represents the Contribution of Different Sub-groups to Increase in WPI (adjusted for rounding up).

Chart II.16: Trends in Wholesale Price Inflation



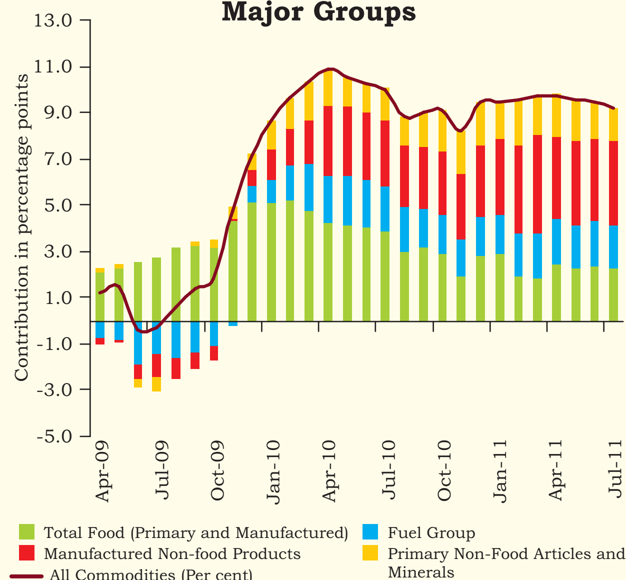
witnessed strong price pressures and became the major driver of inflation during this phase. Cotton prices firmed up reflecting global supply shortages and spiked in September. Mineral prices also rose. During the third phase between December 2010 and July 2011, inflationary pressures rebounded strongly. WPI rose by 7.1 per cent, driven largely by broad price pressures in the manufactured products group, indicating generalisation of price pressures. Price pressures have remained strong during 2011-12 so far, largely reflecting faster transmission of input cost pressures to manufactured product prices and revision in administered fuel prices.

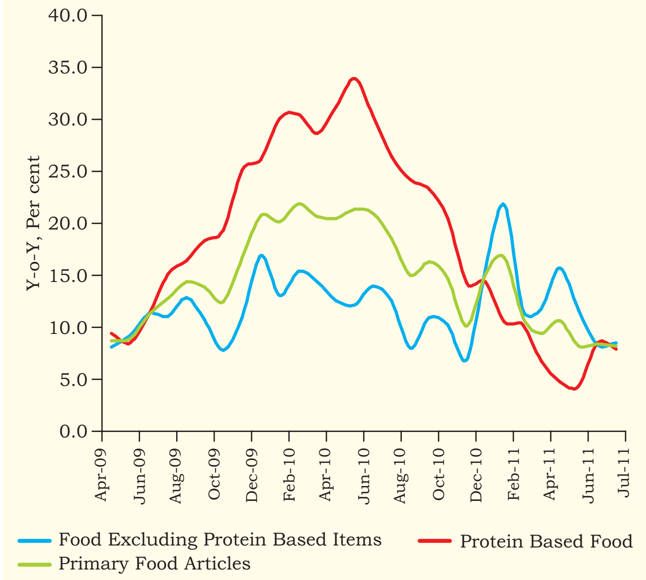
II.2.3 The WPI increased persistently during 2010-11 (Chart II.16). The moderate softening of inflation (y-o-y) witnessed up to November 2010 was led by decline in contribution of food inflation to overall inflation (Chart II.17). During the last quarter of 2010-11, the contribution of non-food manufactured products to overall inflation increased, as higher input costs transmitted to output price increases, in a robust growth environment. The new IIP series (base 2004-05) confirmed that industrial growth did not decelerate in spite of waning base effects. This is likely to have contributed to build-up of non-food manufactured products inflation.

Supply shocks and rigidities in the supply chain sustained the price pressures

II.2.4 The significant role that supply side factors played in keeping inflation elevated was visible from the trends in food and fuel inflation during the course of the year. Despite a normal monsoon, inflation in primary food articles did not moderate on the expected lines as the contribution to food inflation largely emanated from the protein-rich items, whose output is less responsive to monsoon in the short-run (Chart II.18). The recent NSSO survey results on consumer expenditure of households in India suggest that with rising per-capita income, the share of income spent on food has declined. Within food, however, the share of protein-rich items has increased in both urban and rural areas from 2004-05 to 2009-10. This trend is also reflected in pressures on prices being largely in non-cereal food-items that have deviated sharply from the trends in recent years without trend reversion to mean.

Chart II.17: Contribution to Inflation-Major Groups

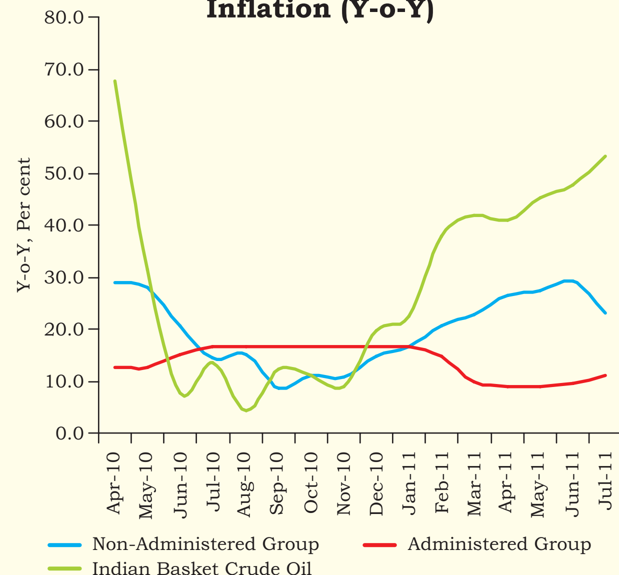




II.2.5 During November-December 2010 unseasonal rains in certain parts of the country led to significant loss of output of perishable food articles, especially vegetables, leading to further pressures on prices. Food inflation moderated from January 2011, reflecting the arrival of fresh crop in the market as also Government's measures to ease price pressures. The Government took fiscal measures such as removing import duties on rice, wheat, pulses, edible oils and sugar and reduced import duties on some other agro-commodities. It also took several steps to pave way for more sugar imports. In addition, it took many administrative measures, including enhancing allocation of wheat and rice to States and for distribution by NAFED and NCCF through their outlets, besides more wheat for open market sales by FCI. The Government also banned export of non-Basmati rice, edible oils and pulses (except Kabuli chana). Supply augmenting measures become crucial to deal with food inflation, in view of the known limitations of monetary policy in dealing with such inflation. Demand for food is not very sensitive to interest rate actions, though these actions may still be required to prevent generalisation of inflation.

II.2.6 Fuel inflation was driven by both increases in administered and freely priced products under the fuel group (Chart II.19). One important development during the course of the year was the deregulation of petrol prices in June 2010 along with the upward revision in administered prices of other petroleum products. As international crude oil prices increased significantly during the year, freely priced products exhibited significant pick-up in inflation during the second half of the year. Administered price increases, however, significantly lag behind the trends in international crude prices indicating the presence of suppressed inflation. This was partly corrected with increases in diesel, LPG and kerosene prices in June 2011. Since then, global crude oil prices have softened somewhat after S&P's sovereign rating downgrade of the US, they still remain high. The Indian basket price for crude oil averaged US$ 106.6 per barrel during the first fortnight of August 2011. Even at this level, the under recoveries are estimated at over ₹90,000 crore, of which a major portion may have to be borne by the Government.

II.2.7 Lags in price adjustment of petroleum products lead to suppressed inflation and build-up of inflation expectations when discrete price adjustment is made. These lags impact fiscal deficit and inflation. There is a need for free pricing of all petroleum products with better targeting of subsidies in order to ensure necessary demand adjustment in an import



dependant item and also encourage investment in alternative sources of energy. Any short-term price stabilisation objective could be attained through a separate fund created for that purpose with a provision for annual fiscal transfers from the budget within the limits of fiscal prudence.

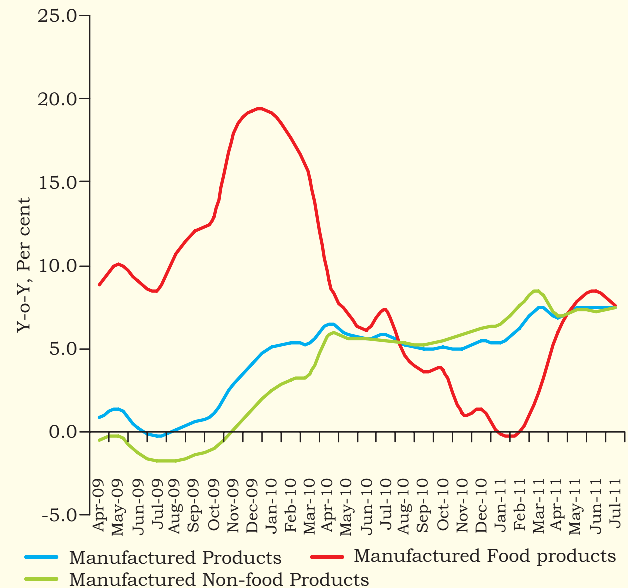
Generalisation of price pressures accelerated, necessitating sustained anti-inflationary monetary policy actions

II.2.8 Inflation in non-food manufactured products remained range-bound between 5.3 to 5.9 per cent in the first eight months of 2010-11, which was still higher than the average over the last decade at about 4 per cent. In the last quarter of the year, however, inflation in this category increased significantly reaching 8.5 per cent in March 2011, indicating stronger pass-through of input costs than expected, as also pricing power of producers amidst strong private consumption demand that supported momentum in industrial growth (Chart II.20). Manufactured food products inflation declined sharply during the initial period of the year reflecting largely decline in sugar prices and strong base effects, but reverted course subsequently.

Global commodity prices hardened during 2010-11, partly reflecting geo-political developments and weather related disturbances

II.2.9 International commodity prices moderated somewhat during the first quarter of 2010-11 as greater uncertainty relating to recovery in advanced economies impacted commodity markets (Chart II.21). However, prices rebounded significantly thereafter, both on account of weather related supply disruptions in a number of primary commodity producing countries and geo-political tensions in the Middle East and North Africa (MENA) region. The increase in global food prices was also significant, with severe welfare implications for low income countries. Some softening of global commodity prices, however, was witnessed during the initial months of 2011-12. The impact of increase in international commodity prices on domestic inflation has been different for different commodity groups (Box II.3).

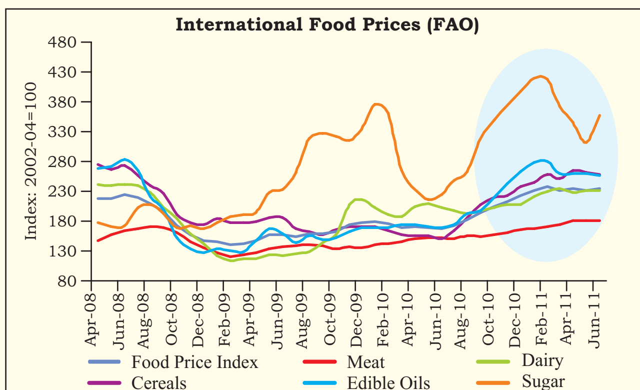
Chart II.20: Manufactured Products Inflation

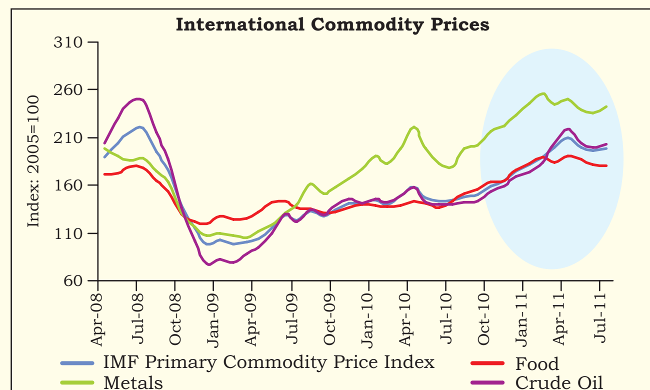


WPI and CPIs exhibited convergence

II.2.10 The year 2010-11 started with significant divergence between inflation as measured by WPI

Chart II.21: International Commodity Prices





Box II.3
Transmission of Global Commodity Price Shocks to Domestic Inflation

With a surfeit of liquidity as a result of very low levels of interest rates and successive measures of quantitative easing by global central banks, global commodity prices recovered faster than the global economy supported by leveraged trades. This has become a major source of pressure on headline inflation in India during 2010-11. The significant reversal in the commodity price cycle was also broad based, covering food, oil, metals and other commodities. The FAO food price index increased through 2009 and 2010 to regain the pre-crisis peak by February 2011. Oil prices crossed US$ 100 per barrel mark in the last quarter of 2010-11 and have remained high thereafter.

The global food price pressures reflect the combined impact of growing demand and weak supply response. Robust growth in EMEs and growing population have boosted the demand for food items. Rising per capita income is changing food habits resulting in higher demand for protein-rich food items, such as meat and dairy products. On the supply side, the availability of arable land is shrinking, due to increasing urbanization as well as diversion of land for bio-fuels production. Recent spikes in oil prices have also raised the input costs for farms, including transportation and fertilizer costs. Climatic changes and weather related disturbances are also impacting global food prices. Import barriers and large farm subsidies in advanced economies are influencing the supply response through price distortions.

Low energy efficiency and policies on oil subsidies have also contributed to the demand growth. The pace of urbanisation in EMEs with emphasis on physical infrastructure has increased demand-supply imbalances. The demand for metals and minerals, particularly steel, copper, aluminium, oil and coal have increased. In the case of oil, the peak oil hypothesis seems to suggest that global production may be peaking. Progress on alternative sources of energy also lags behind the demand trends. The recent concerns on nuclear power post-Japanese earthquake can only worsen the energy supplies. Financialisation of commodities has added a new dimension to the commodity price cycle. Geo-political factors continue to be an important factor behind sudden and sharp increases in oil prices, as has been the case since the beginning of 2011.

The actual impact of global commodity shocks on consumer price inflation in developing countries depends on government policy measures (Jongwaninch and Park, 2011). The spillover effects to domestic prices depend on the degree of import dependence in a commodity, domestic supply-demand trends, administered price interventions and pricing power at the wholesale level. The impact ultimately depends on the weight of respective commodities in the WPI and the linkages with other commodities that determine the second round effects (Table-1). The second round effect reflects response of wages and prices aimed at protecting real wages and profit margins as input costs rise. The estimates presented for different commodities in Table-1 reflect the combined impact, with the direction of causation presumed from global prices to domestic prices. Given the uncertain outlook for commodity prices, despite the softening of price pressures so far in the year, upside risks to India's inflation path could persist.

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Table 1: Impact of Global Commodity Price Movements on Domestic Prices

Item	2010-11 (Y-o-Y Increase in Per cent, March)			July 2011 over March 2011 (Increase in Per cent)		Estimated Elasticity	
	Weight in WPI	International Prices	Domestic Prices (WPI)	International Prices@	Domestic Prices (WPI)	Short-run#	Long-run$
1	2	3	4	5	6	7	8
Rice	1.8	-1.9	2.3	8.8	1.8	0.01	--
Wheat	1.1	65.7	0.2	-4.0	-1.2	0.02	--
Maize	0.2	82.7	25.3	3.5	7.5	0.02	--
Soyabean Oil	0.4	42.8	19.2	2.3	3.2	0.06**	0.47
Sugar	1.7	40.6	-7.1	7.5	-0.2	0.05**	0.66
Cotton	0.7	167.6	103.0	-46.9	-31.5	0.17**	0.98
Rubber	0.2	63.8	44.8	-12.8	-1.8	0.34**	1.08
Coal	2.1	33.6	13.3	-4.9	0.0	0.03**	0.48
Petroleum	9.4	37.0	6.3	-0.7	33.4	0.07**	0.55
Fertilizers	2.7	28.5	9.9	29.0	5.1	0.00	--
Aluminium	0.5	15.9	2.1	-1.2	0.9	0.03**	0.42
Copper	0.1	27.3	3.2	1.5	-2.5	0.03**	0.53
Gold	0.4	27.9	36.2	10.4	5.4	0.28**	1.00
Silver	0.0	109.6	90.3	6.0	2.4	0.41**	1.00

Source: World Bank and Ministry of Commerce and Industry, GOI.
: Estimated using Partial Adjustment Model
$: Long-run elasticities are not reported for products where short-run elasticity is not significant.
** : Significant at 1 per cent level of significance.

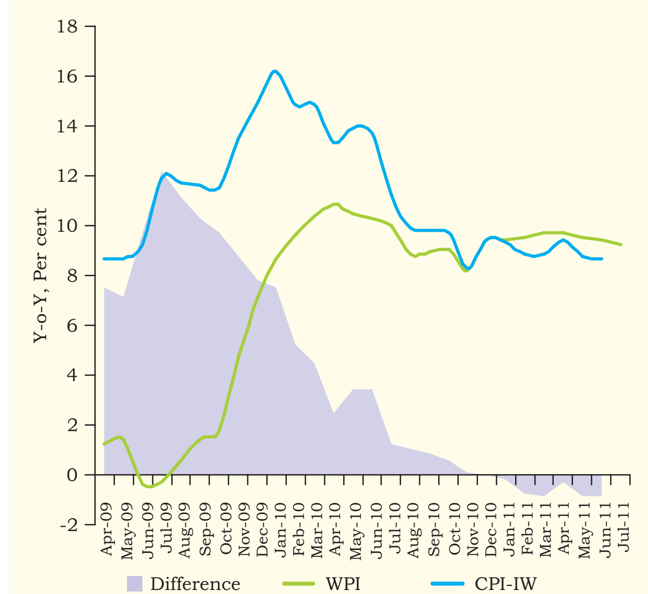


Chart II.22: CPI and WPI Inflation

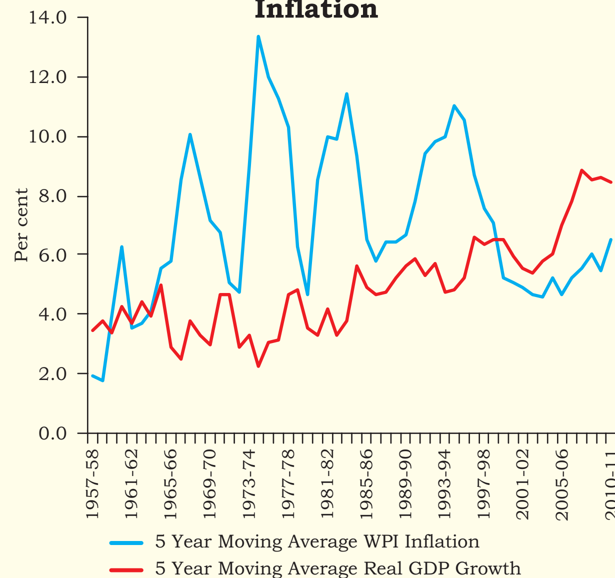


Chart II.23: Trends in GDP Growth and Inflation

and CPIs, which in turn became a source of contention in terms of the relevant measure of inflation used in India for conduct of policies (Chart II.22). During the course of the year, however, this gap narrowed significantly. While the decline in CPI inflation primarily reflected lower food inflation, the high WPI inflation reflected increasing generalisation of price pressures.

Growth-inflation trade-off acquired the centre stage of policy debate

II.2.11 As inflation persisted at above the comfort level of the Reserve Bank through the year, a decision on the difficult choice of sacrificing some growth to contain inflation became inevitable. Historical experience does not provide much evidence for any conventional growth-inflation trade-off in the Indian case that could support inflation tolerance as a means to higher growth. In fact, long-term data show that high inflation has generally been associated with lower, not higher, economic growth (Chart II.23).

II.2.12 In the debate on growth-inflation trade-off and the role of monetary policy, the empirical evidence and theoretical justifications over time have led to a shift in the mainstream thinking from “inflation tolerance can grease growth” to “inflation hurts growth and hence must be contained”. While some still subscribe to the conventional view (influenced by the Philips curve) that higher inflation tolerance could yield higher growth, others view that inflation itself is a risk to growth, especially when inflation is high and above a threshold. As such, “low and stable inflation” remains a dominant policy objective for the Reserve Bank.

II.2.13 If inflation is a risk to the medium-term growth, it is important to recognise the transmission channels through which the impact on growth could materialise, and also the possibility of a threshold level of inflation beyond which the risks from inflation to growth could magnify. In the Indian case, three important factors that contributed to the high growth performance prior to the global crisis can be expected to be adversely affected by persistent high inflation. These three factors have been: (a) growing openness (and the resultant competition on a global scale), (b) strong growth in investment demand led by the private sector, and (c) fiscal consolidation.

II.2.14 High persistent inflation is a risk to external competitiveness, because of the associated real appreciation of the exchange rate, which could weaken growth by impacting export prospects. Moreover, in an open economy, domestic producers could find it difficult to pass on higher input costs in

the form of higher output prices, because of the competition from imports resulting in pressures on earnings and dampening of investment plans. Private investment is particularly impacted by distortions through both high inflation and inflation volatility. Private investors have to spend time and money to understand and manage the effects of inflation on their business. Moreover, foreign investors may also see inflation as a risk factor, which could affect capital flows.

II.2.15 The fiscal situation may not improve in an environment of high inflation, despite planned intention for consolidation. In an environment of rising inflation government expenditure may continue to grow at a pace exceeding the rate of inflation but revenue collections may not keep up with inflation. This would especially occur when global commodity prices drive inflation, necessitating much larger subsidies than may be planned. While delayed fiscal consolidation could dampen growth impulses and also increase the risk of inflation, a high inflation environment may in itself become a constraint to faster fiscal consolidation.

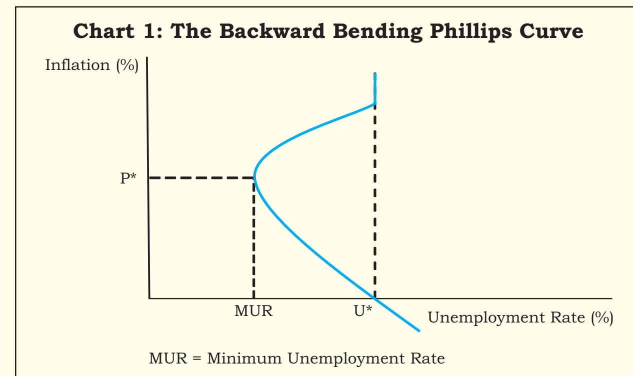
II.2.16 Inflation could also work against growth through other channels, the most important one being monetary policy response to inflation and the associated increase in the interest cost of capital. Fall in asset prices in response to high inflation which involve wealth and income effects also may not be congenial to growth. In pursuing the anti-inflationary policy, however, it is important for a central bank to identify the threshold level of inflation, which may be consistent with the highest sustainable growth path. Inflation higher than the threshold level would have to be contained to avoid the welfare loss arising from both high inflation and lower growth. Estimates on threshold inflation for India are found to be in a range of 4-6 per cent (Box II.4). Desirable level of inflation

Box II.4
Growth Inflation Trade-off and Threshold Inflation

The growth-inflation trade-off debate in economics is a long standing one. The Phillips curve relationship – the empirically observed negative relation between change in nominal money wages and rate of unemployment – gained popularity in the late 1950s and 1960s, but has been long discredited by economists. The stagflation of the 1970s destroyed faith in it. Phelps and Friedman helped explain the existence of stagflation by distinguishing the 'short-run Phillips curve', also called the 'expectations-augmented Phillips curve'. Even though short-run Phillips curve shifts up when inflationary expectations rise, in the long run monetary policy cannot affect unemployment, which adjusts back to its 'natural rate'. So Phillips curve becomes vertical in the long run, as expected inflation equals actual inflation. The long-run Phillips curve is known as the Non-Accelerating Inflation Rate of Unemployment (NAIRU).

In the policy debate on the trade-off, a common distinction is often made between the short-run Phillips curve and the long-run NAIRU. At NAIRU, inflation is fully anticipated. If a central bank uses the trade-off in the short-run and gives an inflation surprise (which was not anticipated) in its attempt to allow growth to remain above potential, then the actual inflation will exceed the expected inflation, and the trade-off relationship may work in the short-run. But the adaptive expectation process could soon lead to revision in inflation expectations, causing an upward shift in the short-run Phillips curve, at which higher inflation will co-exist with NAIRU. If expectations are rational, then the trade-off relationship may not exist even in the short-run.

Chart 1: The Backward Bending Phillips Curve



Following the work of Palley (2003), it is now being realised that the Phillips curve relationship may be lot more complex, with the likelihood of the relationship changing from low inflation to high inflation. In these models, inflation expectations are a positive function of actual inflation. Phillips curve is negatively sloped at low levels of inflation, becomes positively sloped at high levels of inflation and turns vertical if inflation expectations converge to actual inflation (Chart-1). Thus, there is a threshold inflation at P*, which could be country specific and is an important guidepost for monetary policy in terms of when it could use the short-run trade-off, and when it has to just focus on containing inflation even at the cost of sacrificing growth. At inflation lower than P*, relying on short-run trade-off could make sense. But at inflation rates above P*, there would not be any exploitable trade-off

(Contd...)

(...Concld.)

relationship for policy, and by containing inflation a central bank could best contribute to sustainable employment and growth levels in the medium-run (Gokarn, 2011).

Different techniques have been used in the literature to estimate threshold inflation. Three broad approaches have been: (1) running a series of spline regression to find threshold value of inflation which maximises adjusted R^2 and minimises Root Mean Square Error (RMSE), following Sarel (1996), (2) to estimate the unknown threshold inflation along with other regression parameters using non-linear least squares (NLLS) (Khan and Senhadji, 2001) and (3) estimating threshold using Logistic Smooth Transition Regression (LSTR) model (Espinoza *et.al,* 2010). Empirical estimates for threshold inflation for India using these alternative techniques are found to be in 4-6 per cent range.

Estimated threshold level, however, need not completely condition the inflation objective of monetary policy, since even at the threshold level, the welfare costs of inflation particularly for the poorer section of the society, have to be contained. Keeping in view the distributional consequences and the macro-economic requirements of an open economy to keep inflation low relative to the rest of the world, the Reserve Bank's medium-term inflation objective has been 3 per cent. The average of the non-food manufactured products inflation in the last one decade has been about 4 per cent. Anchoring inflation expectations to check inflation has been an important element behind monetary policy actions. This has motivated Reserve Bank's emphasis on containing perceptions of inflation in the range of 4.0-4.5 per cent. Clear communication has been made in the policy statements to this effect. The importance of containing inflation even at the cost of some marginal sacrifice of growth in the short-run appears to be consistent with the estimates of growth-inflation trade-off for India, as also the distributional and other objectives behind containing inflation.

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may be even lower than any estimated threshold level in view of the distributional consequences of inflation and other macro-economic considerations. In the age-old policy debate on growth inflation trade-off, the emphasis has always been on the short-run stabilisation role for monetary policy. This is because the natural trend growth of the economy is conditioned by structural factors.

Price statistics improved, with a revised WPI base and new indices of CPI

II.2.17 Two significant improvements in database on prices during the year were the revision of WPI base from 1993-94 to 2004-05 and the introduction of a new Consumer Price Index for 'rural', 'urban' and 'All India' from January 2011 (Box II.5). The new series of WPI marks a major improvement in terms of scope and coverage of commodities and is also more representative of the changing underlying economic structure. It captures the present underlying economic structure, which is consistent with changes in the production and consumption patterns. The introduction of new CPIs provides a nationwide price index which is more comprehensive both in coverage across regions and commodity groups. The weighting pattern also reflects more recent consumption pattern as compared to the existing CPIs. As year-on-year inflation data based on the new CPI become available from January 2012, it will be closer to the measure of inflation that is being commonly used in other countries for the conduct of monetary policy.

Anti-inflationary thrust of policy sustained in 2010-11 amidst changing dynamics of inflation

II.2.18 The changing dynamics of inflation had a major element of uncertainty throughout the year, which added significant complexity to the Reserve Bank's forward looking assessment of the inflation outlook. Significant revisions of provisional data over successive months also widened the information lags, particularly the information on the extent of generalisation of price pressures. High inflation and repeated supply shocks impacted the inflation expectations adversely, and the Reserve Bank

Box.II.5
Towards Better Price Statistics

Revision of WPI Base Year

One significant development during 2010-11 relating to prices data was the revision of base year of WPI from 1993-94 to 2004-05. The weight of primary articles declined in the revised WPI, while the weight increased for fuel group and manufactured products (Table 1). Although the changes in the weights for manufactured products are not substantial for the group as a whole, there has been a shift in weights towards non-food manufactured products. A substantial increase in the number of new items added/revised reflects the changes in production pattern during the decade. The new series has 417 new commodities, of which 406 are new manufactured products. These include items from unorganised manufacturing activity. Also the new series has wider coverage as the price quotations have increased from 1,918 in the old series to 5,482 in the new series.

The average overall inflation rate, according to the new series and the old series, is about 5.5 per cent for the overlapping period for which data are available (*i.e.,* 2005-06 to 2009-10) indicating that there is not much difference in the rate of inflation between the two series. This, however is marked by differential inflation rates for food and non-food products in the old and new series. Higher food inflation (both primary and manufactured) in the new series is largely offset by the lower inflation in the non-food manufactured products leading to smaller difference in the overall inflation.

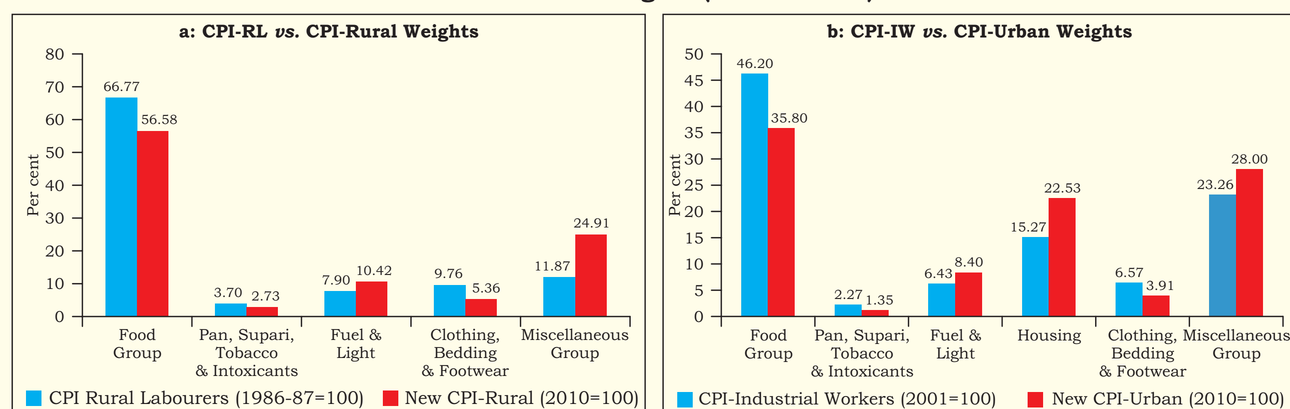
Introduction of new Consumer Price Index

The Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation introduced a new series of Consumer Price Indices (CPI) for all-India and States/ UTs separately for rural, urban and combined. Indices are being released from the month of January 2011 with 2010 as the base year. The weighting pattern is derived from the NSSO's Consumer Expenditure Survey of 2004-05. A comparison of the new CPI series against the existing series suggests that while the weight of food group has declined significantly for both rural and urban groups, the miscellaneous group, largely including services, has shown increase in its share (Chart 1).

Table 1: Major Changes in the Weights and Commodities in the Revised WPI Series

Items	Weights		Number of Commodities		
	New Series (Base:2004-05)	Old Series (Base:1993-94)	New Series (Base:2004-05)	Old Series (Base:1993-94)	New Items added/ revised
1	2	3	4	5	6
All Commodities	**100.00**	**100.00**	**676**	**435**	**417**
I. Primary Articles	**20.12**	**22.03**	**102**	**98**	**11**
Food	14.34	15.40	55	54	1
Non-Food and Minerals	5.78	6.63	47	44	10
II. Fuel and Power	**14.91**	**14.23**	**19**	**19**	**0**
III. Manufactured Products	**64.97**	**63.75**	**555**	**318**	**406**
Food	9.97	11.54	57	41	25
Non-Food	55.00	52.21	498	277	381

Chart 1: CPI Weights (Old and New)



sustained its anti-inflationary thrust of monetary policy to anchor inflation expectations and contain demand induced pressures on inflation. The focus of medium-term inflation management, however, must be to ease supply constraints in key sectors where demand could be expected to continue to grow.

III. MONEY AND CREDIT

II.3.1 During 2010-11, the Reserve Bank's monetary policy stance became strongly anti-inflationary. Money growth was moderate during the year but picked up during the last quarter of 2010-11. Liquidity remained in deficit mode for a major part of the year on account of both structural and frictional factors. The tight liquidity helped in strengthening the monetary policy transmission, reflected in rise in deposit and lending rates of the banks during the latter part of the year. Credit to the commercial sector increased rapidly during the first quarter of 2010-11, reflecting mainly the borrowings by telecom companies to pay for spectrum auctions. Notwithstanding some deceleration in the second quarter of 2010-11, credit growth remained strong throughout the year, in line with the strong growth of the economy.

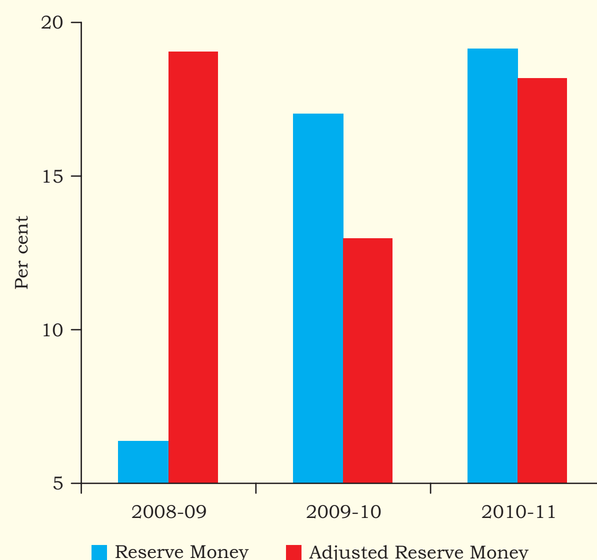
II.3.2 In 2011-12 till July, as liquidity eased and was broadly within the desirable level of deficit (one per cent of NDTL of banks), the pace of injection of primary liquidity declined leading to a deceleration in base money growth. Money supply, on the other hand, remained strong on the back of strong growth in deposits.

Strong growth in reserve money in 2010-11 reflected increase in currency demand and large injection of primary liquidity

II.3.3 Trends in reserve money largely reflect the impact of the monetary policy changes and liquidity management operations. There was strong growth in reserve money during 2010-11 due to large injection of primary liquidity in response to the tight liquidity conditions that prevailed since end-May 2010. Even adjusting for the policy-induced change in the cash reserve ratio (CRR), reserve money growth in 2010-11 was higher than that in 2009-10 (Chart II.24 and Appendix Table 9).

II.3.4 Currency in circulation is the largest component of reserve money and is primarily determined by demand. There was acceleration in currency in circulation in 2010-11, due to increased demand on account of economic growth, high inflation and low yield on deposits for most part of the year (Box II.6).

Chart II.24: Growth in Reserve Money



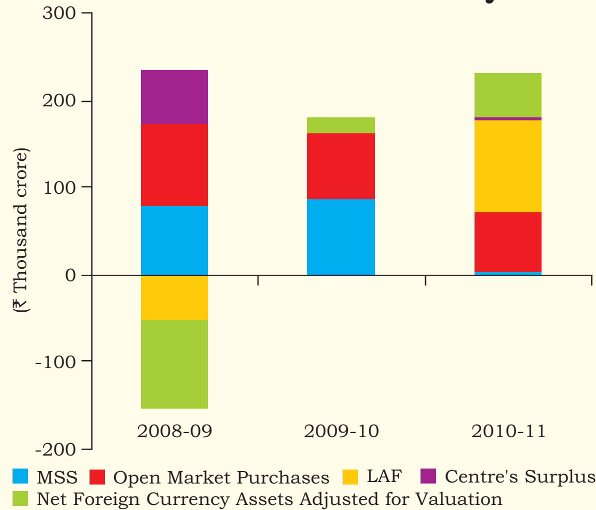
II.3.5 On the sources side, net Reserve Bank credit to the Centre[2] has been the dominant source of increase in reserve money since 2008-09 (Chart II.25). This is because government borrowing shot up significantly in the wake of the global financial crisis and necessitated active management of liquidity in the form of unwinding/de-sequestering of market stabilisation scheme (MSS) balances (in 2008-09 and 2009-10). Besides, there were large scale injections under liquidity adjustment facility (LAF) and open market operations (OMO) purchase auctions during times of liquidity duress in these three years.

Primary liquidity injected mainly in the form of large scale repo and OMO in 2010-11

II.3.6 The most notable source of increase in net Reserve Bank credit to the Centre during 2010-11

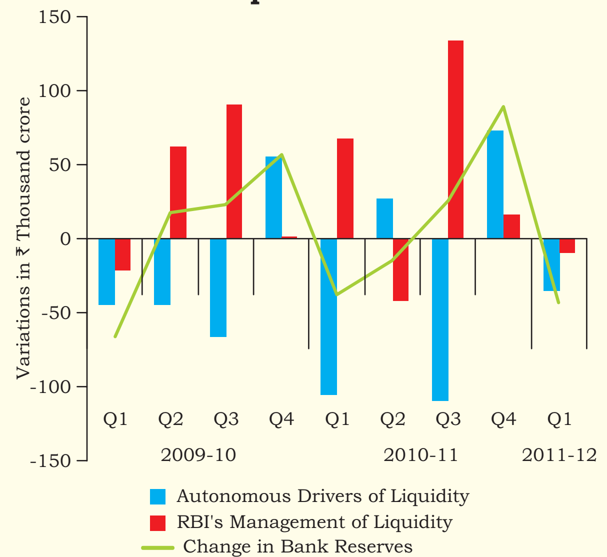
[2] Changes in net Reserve Bank credit to the Centre primarily reflect the combined impact of the Reserve Bank's liquidity management operations conducted through OMO, operations under the MSS, LAF and Marginal Standing Facility (MSF - introduced in 2011-12) as also the government's cash management operations. Increase in repo under LAF/OMO purchases/availment of MSF and decline in reverse repo under LAF/MSS balances/government's surplus balances with Reserve Bank lead to increase in net Reserve Bank credit to the Centre, and *vice versa*.

Chart II.25: Important Sources of Variation in Reserve Money



Note: Net Reserve Bank Credit to the Centre represents the combined impact of changes in MSS, Open Market Purchases, LAF and Centre's Surplus Balance.

Chart II.26: Liquidity Management Operations



was LAF operations. This reflected the change in the mode of the LAF from reverse repo (absorption of liquidity) to repo (injection of liquidity). The other major source of injection of liquidity was open market purchases worth about ₹67,000 crore conducted mainly through the auction route. The OMO was confined to the second half of the year. The Reserve Bank also unwound the remaining MSS balances amounting to ₹2,737 crore by July 2010.

II.3.7 Even though LAF operations and open market purchases explain almost the entire fiscal variation in net Reserve Bank credit to the Centre, the most significant liquidity impacting variable intra-year was the Centre's surplus balances with the Reserve Bank, which is an autonomous determinant of liquidity. From June 2010, there was a significant increase in government's balances with the Reserve Bank reflecting the higher-than-expected proceeds from auctions of telecom spectrums. The balance was further boosted by the quarterly advance tax collections. The government balances continued to build up till the end of the third quarter of 2010-11. The sharp drawdown of government balances during the fourth quarter improved the liquidity situation.

II.3.8 Overall monetary conditions reflected significant changes in the autonomous drivers of liquidity as well as the offsetting discretionary liquidity management operations of the Reserve Bank. During the third quarter of 2010-11, large liquidity deficit occurred amidst tight monetary policy stance. The Reserve Bank undertook liquidity injections through LAF repos that peaked at nearly two times more than the level conforming to the comfort zone of the Reserve Bank. The aggregate outcome of variations in autonomous and discretionary components of liquidity match with the changes in banks' reserves (Chart II.26). Detailed discussions on liquidity management operations of the Reserve Bank are presented in Chapter III.

Slower pace of deposit mobilisation and dip in multiplier led to low rate of money growth in 2010-11

II.3.9 Broad money (M_3) growth decelerated for the third successive year in 2010-11, though the pace of deceleration was lower than that of the previous year, reflecting the resurgence in economic activity (Appendix Table 10). On the components side, the deceleration was mainly on account of contraction in demand deposits. There was a slowdown in the growth of time deposits initially, which though reversed trend during the latter part of the year as banks raised interest rates markedly (Chart II.27). The stronger transmission of monetary policy led to a substitution from demand deposits to time deposits during the last quarter of 2010-11 and in 2011-12 so far. Currency

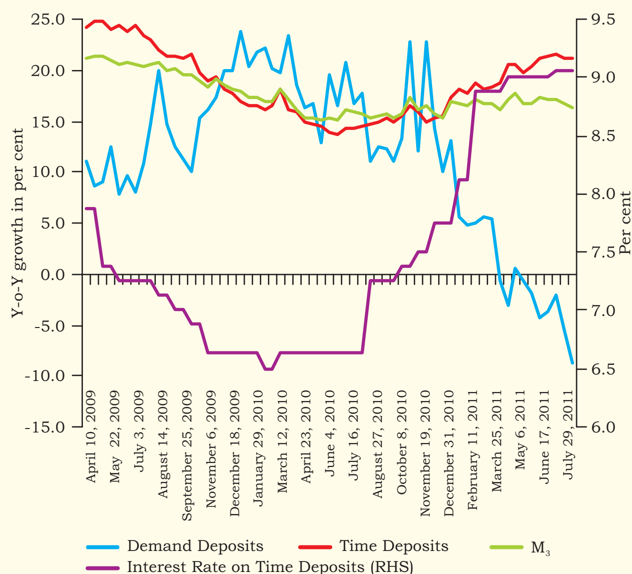


Chart II.27: Money and Deposit Growth

with the public, however, increased at a rapid pace and accordingly, the share of currency in the annual increment in M_3 also increased in 2010-11 (Chart II.28).

II.3.10 The significant increase in currency with the public was on account of prevalence of high inflation, real income growth and low return on deposits for most part of the year (Box II.6). In 2011-12 so far, currency demand, however, decelerated due to the increase in opportunity cost of holding cash as interest rates on time deposits increased.

II.3.11 The strong growth in currency coupled with the subdued growth in deposits led to an increase in the currency-deposit ratio in 2010-11. Moreover, the Reserve Bank increased the CRR in April 2010 leading to an increase in the reserve-deposit ratio. The increase in these two behavioural ratios led to a dip in the money multiplier. This explains the rather subdued growth in broad money despite high growth in reserve money in 2010-11. Concomitant with the dip in the money multiplier, there was an increase in the velocity of money in successive quarters of 2010-11, reflecting heightened nominal activity (Box II.7).

Share of bank credit to the commercial sector in the annual increment in M_3 increased significantly

II.3.12 On the sources side, net foreign assets registered an increase in 2010-11 as against a decline in the previous year. Net domestic assets, however, remained the dominant source of increase in M_3 during the year. The share of bank credit to the commercial sector in the annual increment in M_3 increased significantly reflecting the strong growth in credit to the commercial sector. This is also reflected in the strong growth in non-food credit during the year (Chart II.29). In 2011-12 so far (up to July),

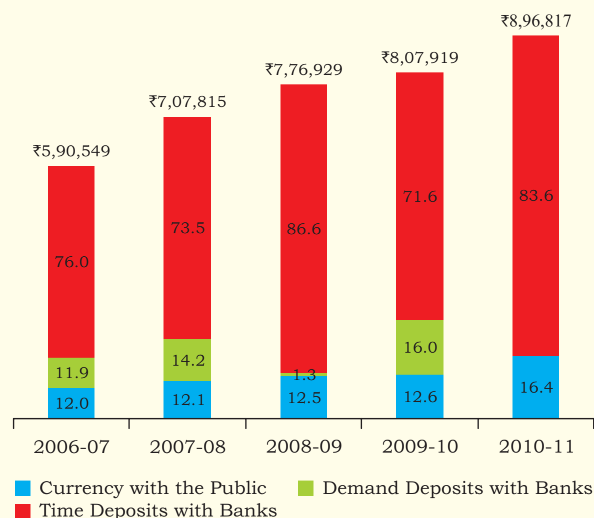


Chart II.28: Variations in M_3 in ₹ crore and per cent share of Major Components of M_3 in the Variation

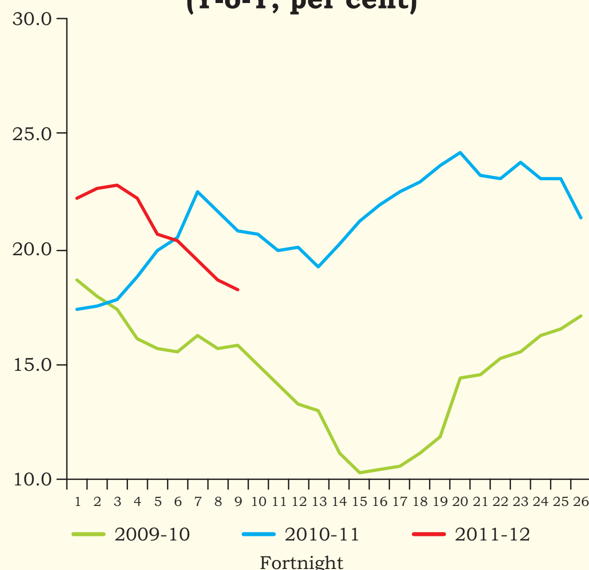


Chart II.29: Non-food Credit Growth (Y-o-Y, per cent)

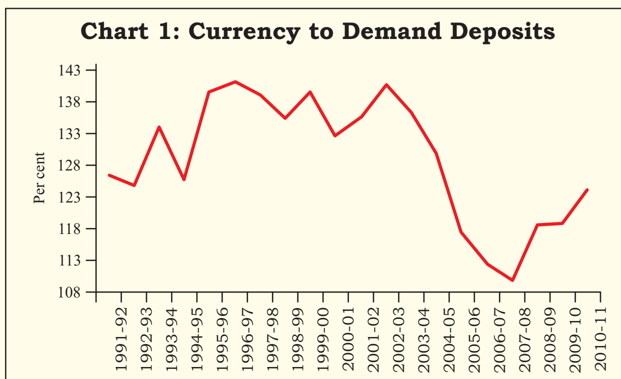
Box II.6
Determinants of Currency Demand – What Caused the Shift in Trend?

The demand for currency is determined by a number of factors such as income, price level, the opportunity cost of holding currency, *i.e.,* the interest rate on interest bearing assets and the availability of alternative instruments of transactions, *eg.* credit/debit cards, ATMs, cheque payments, *etc.*. Currency is also used as a store of value, particularly in countries with low inflation or large shadow economies. Currencies such as the US dollar, euro, yen and pound have large off-shore demand as medium of international transactions.

Several factors could explain the growth in currency demand in India in 2010-11. Inflation remained high, often in double digits, in respect of commodities such as foodgrain, pulses, fruits and vegetables, and milk during 2009-10 and 2010-11 – where transactions are expected to be cash-intensive. Consequently, after a long period of secular decline, the share of agriculture and allied activities in nominal GDP increased from 17.6 per cent in 2008-09 to 19.0 per cent in 2010-11. Second, there was a step-up in real economic activity from 6.8 per cent in 2008-09 to 8.5 per cent in 2010-11. Third, the interest rate on bank deposits was generally lower than inflation during 2010-11, implying a negative real rate of return on deposits.

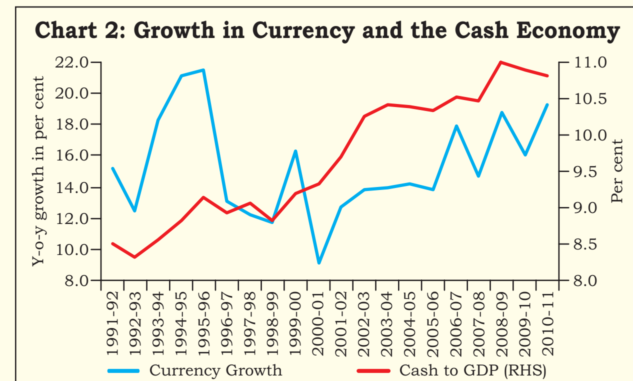
A study of the decadal trend reveals that even as income elasticity of currency demand has stayed relatively stable, price elasticity increased significantly in the decade of 2000s, which experienced a low and stable inflation for a major part. In the remaining years, when inflation was relatively high, currency demand shot up significantly. In theory, increase in ATM network (increase in number of ATMs as well as access usage rules such as freer access to ATMs of other banks) decreases show leather costs. However, cross-country evidence suggests that the attractiveness of currency as a medium of exchange can increase as against card payments. This is observed in India also (Chart 1). This could have facilitated the substitutability between currency and demand deposits in recent years.

Chart 1: Currency to Demand Deposits



During the 2000s, the acceleration in per capita real GDP growth, commercialisation of agriculture and allied activities and urbanisation, and availability of higher denomination notes appear to have maintained the increasing growth trend of the cash economy operating from both the demand and the supply sides. The social sector expenditure by the Government, particularly in rural areas (MGNREGS, *etc.*) also seems to have boosted demand for cash, particularly in 2008-09 when the currency to GDP ratio peaked. Also, currency use, being anonymous, facilitates tax evasion. With increasing importance of KYC and CBS and reporting of large value bank transactions for tax purposes in the recent years, currency demand can potentially rise, reflected in uptrend in the currency to GDP ratio (Chart 2).

Chart 2: Growth in Currency and the Cash Economy



Over the long term, an estimated relationship using VECM, relating to demand for currency in India for the period 1972-73 to 2010-11 reveals that a 1 per cent increase in the real income (GDP) leads to a 1.24 per cent increase in the demand for currency. The price effect on the demand for currency is also found to be close to unity. A 1 per cent increase in the prices (WPI) leads to a 1.05 per cent increase in the demand for currency. Further, it was found that interest rate *per se* is not a significant determinant of currency. However, in the years when the real return on term deposits is negative (the average inflation being higher than the average rate on deposits of one-three year maturity), the interest rate seems to be a significant determinant of currency demand.

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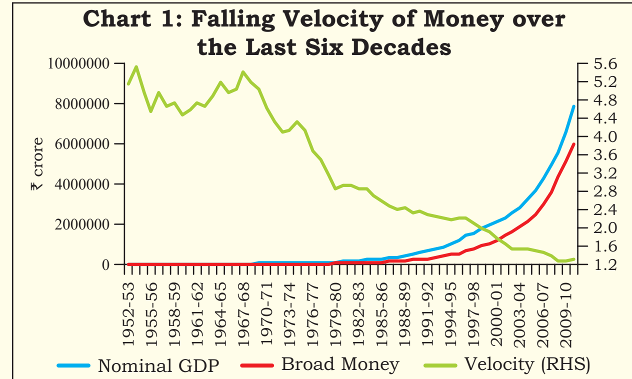
Box II.7
Short-run Shocks to Money Velocity and the Behaviour of Money Growth

M_3 growth, for most part of 2010-11, remained below the Reserve Bank's indicative trajectory. This deceleration in money growth alongside both a robust pick-up in growth as well as a high inflation environment, would suggest a corresponding increase in the velocity of money (following the conventional quantity theory of money equation MV=PY). In a theoretical framework, the velocity of money is generally presumed to be stable, if not constant, especially in the short run. Any breakdown in its stability, particularly due to significant short run shocks, and the volatility therein could either amplify or dampen the expected relationship between money, output and prices (as set out in the conventional monetary arithmetic above). Also anticipated and unanticipated shocks to money demand and the resultant shift in the velocity pattern could add further noise to the trend in money growth.

In almost every country, velocity of money has exhibited significant deviations from its respective medium-term trend post the global crisis, thereby complicating the analysis of monetary trends *vis-à-vis* those of output and prices. The sharp fall in velocity for the US (because of the financial crisis) despite the massive quantitative easing in the aftermath of the Great Recession and the ensuing "velocity crowding out of quantitative easing" highlights that external developments, especially contagion risk arising from crises, could add significant instability to domestic money demand.

In India, the velocity of money, computed as a ratio of the nominal income to broad money, has declined since the late 1960s. Bordo and Jonung (1987) in their pioneering study identified a "U" shaped velocity pattern across countries with distinct phases corresponding to the level of development. In the initial developing phase of a country, due to the increasing monetization of the economy, money demand

Chart 1: Falling Velocity of Money over the Last Six Decades

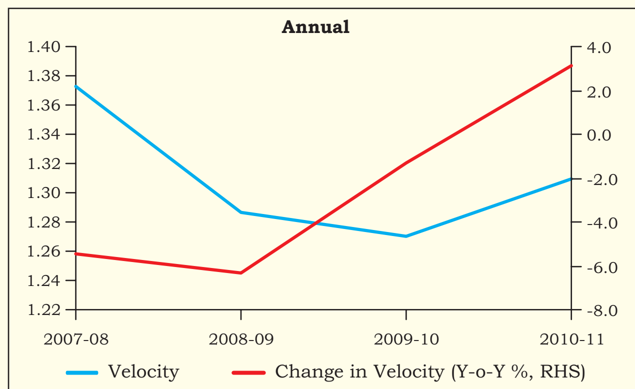


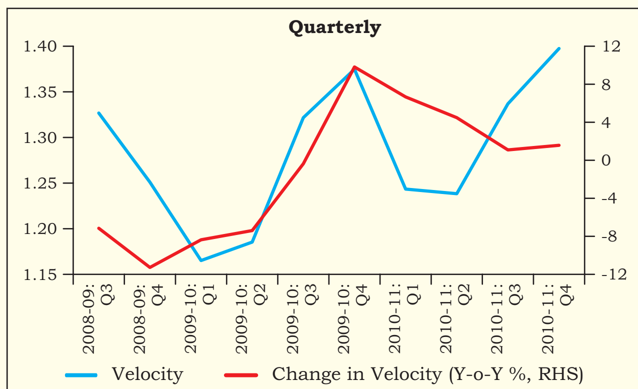
rises (reflected in money supply growth) and velocity falls. Once the financial system deepens accompanied by financial and technological innovations, as the country develops, increasing confidence in the stability of the financial system lowers the income elasticity of money demand which can be seen as the rising phase of velocity.

In the Indian context, both annual and quarterly data correspond to the initial falling phase of velocity which could be ascribed to the increasing monetization of the economy (Chart 1). Despite the financial sector reforms and the enhanced financial deepening, the economic growth of the last decade has plausibly accelerated the monetisation process so much that it more than offset the gains from the financial sophistication. Hence the continued decline in velocity.

In recent years, however, the rate of decline in velocity had accelerated. Accentuated liquidity preference and slack credit demand in the aftermath of the crisis were reflected in sharp fall in velocity (Chart 2). Subsequently, with the return of confidence in the financial system and the economy, velocity

Chart 2: Money Velocity Trends Since the Global Crisis





(Contd....)

(...Concld.)

increased to its normal trend. This increase in velocity following the fast paced fall witnessed in the past two years, explains the subdued growth in M_3 in 2010-11.

A Vector Error Correcting Model (VECM) estimation of some determinants of velocity as suggested by theoretical and empirical literature – output [Y - GDP at factor cost (constant price)], interest rate (R_1 - Annual SBI lending rate; R_2 - Quarterly 91-day T-Bill rate), inflation expectations (WPI), financial deepening indicator proxied by bank credit to GDP ratio (CY), and a dummy variable (D1 - Annual; D2 - Quarterly) capturing the impact of short run disturbances on velocity – yielded the following results.

Annual Data:

$$V = 54.38 - \underset{(9.81)}{4.03\,Y} + \underset{(1.39)}{0.04\,R_1} + \underset{(6.29)}{1.28\,D_1}$$

Quarterly Data:

$$V = 39.52 - \underset{(5.06)}{3.19Y} + \underset{(6.34)}{0.05\,R_2} + \underset{(6.96)}{1.90\,WPI} + \underset{(2.65)}{2.30\,CY} - \underset{(6.98)}{0.18D_2}$$

Money growth trajectory projection involves the conditional predictability of velocity. Hence, money growth in the absence of reference to velocity trends could at times be misleading, even in the short run. Empirical estimates suggest that the conventional determinants of velocity (GDP, interest rate and financial deepening) as well as the short term shocks are statistically significant for Indian data. But in times of major uncertainty velocity could significantly deviate from its medium trend and weaken any forward-looking assessment.

Short-run trends in money growth should be seen along with expected changes in velocity. In the medium run, however, velocity could be expected to remain anchored to the long run trend, and hence, money growth in the medium-term is more likely to be consistent with the inflation and output trends than in the short-run.

Reference:

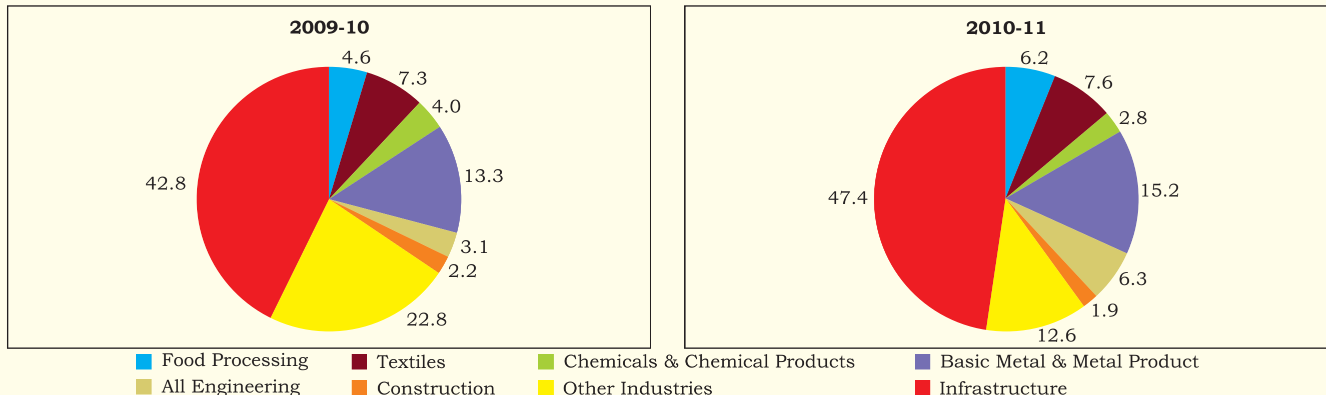
Pattanaik, Sitikantha and Subhadhra S (2011), “The Velocity Crowding-out Impact: Why high money growth is not always inflationary”, *RBI Working Paper*, May 2011.

Bordo, Michael D., and Lars Jonung, *The Long-Run Behavior of the Velocity of Circulation: The International Evidence*, Cambridge: Cambridge University Press, 1987.

even as credit growth is decelerating, it remains above the Reserve Bank’s indicative trajectory for the year.

II.3.13 Disaggregated data suggest that the flow of credit to industry during 2010-11 remained strong while that to services and personal loans increased significantly (Appendix Table 11). Within industry, even though infrastructure continued to account for the largest share of industrial credit, the share of other industry groups such as food processing, basic metal and metal products and engineering in incremental credit to industry increased (Chart II.30). During the first quarter of 2011-12, while the dominant share of incremental industrial credit went to infrastructure sector, basic metal and metal products, petroleum and mining and quarrying also together accounted for one third of the incremental industrial credit during the quarter.

Chart II.30: Share of Various Sub-sectors in Incremental Industrial Credit Flow



Growing disparity between credit and deposit growth added to the strain on liquidity for most of 2010-11

II.3.14 The continued strong growth in credit juxtaposed with subdued growth in deposits for a large part of the year was a structural factor that constrained liquidity in the system. The difference between the growth rate of credit and deposits peaked in mid-December 2010, and declined thereafter as credit growth showed slight moderation and bank deposits increased following hike in deposit rates reflecting stronger monetary policy transmission (Chart II.31).

The incremental funding for the commercial sector in 2010-11 was entirely accounted for by banks

II.3.15 Even as bank credit to the commercial sector recovered strongly during 2010-11, the flow of resources from non-banks, both domestic and foreign, declined (Chart II.32). The sharp decline in domestic non-bank funding was mainly on account of a decrease in resources raised through private placements. Subscription to commercial papers by non-banks also declined. As for the foreign sources, while external commercial borrowings and short-term credit from abroad increased, there was a decline in FDI inflow leading to an overall dip in foreign funding for the commercial sector. The moderation in non-banking sources of finance subdued the pace of increase in the total flow of resources to the commercial sector in 2010-11, notwithstanding the near 49 per cent increase in resource flow from banks.

Chart II.31: Aggregate Deposits and Bank Credit of SCBs

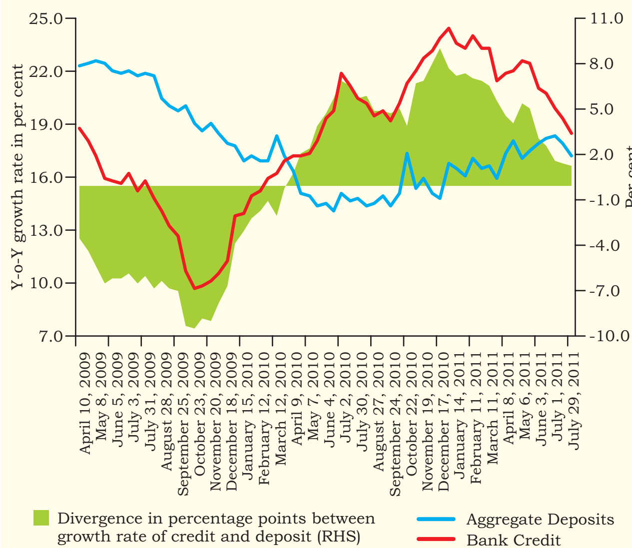
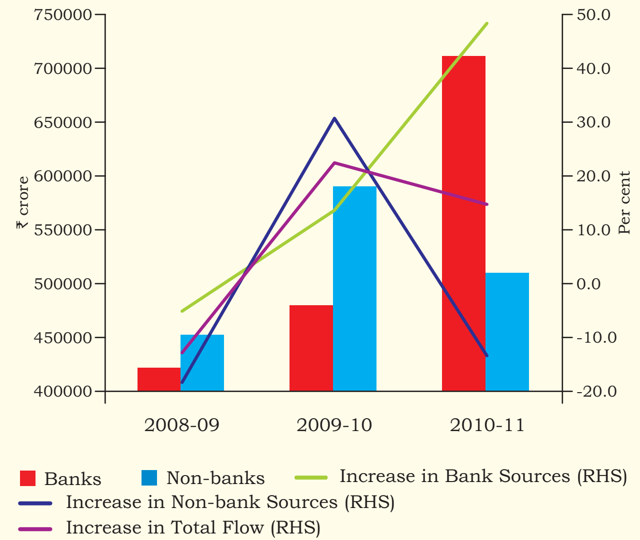


Chart II.32: Flow of Financial Resources to the Commercial Sector



II.3.16 During the first four months of 2011-12, non-banking sources, however, accounted for nearly 70 per cent of the funding for the commercial sector. This was mainly on account of revival of FDI inflow.

II.3.17 Banks' investments in liquid schemes of debt-oriented mutual funds had grown manifold in the recent period. The mutual funds, on the other hand, are large lenders in the over-night money markets where banks are large borrowers and in certificates of deposit (CDs) of banks. Such circular flow of funds can lead to systemic risk in times of stress/liquidity crunch. Even though SCBs' investment in instruments issued by mutual funds declined marginally in 2010-11, it increased by nearly 1.5 times between end-March 2011 and early May 2011. The Monetary Policy Statement for 2011-12 imposed limits on total investment in debt-oriented instruments of mutual funds by SCBs. Resultantly, the investment in such schemes moderated from mid-May 2011, with some reversal seen in July 2011.

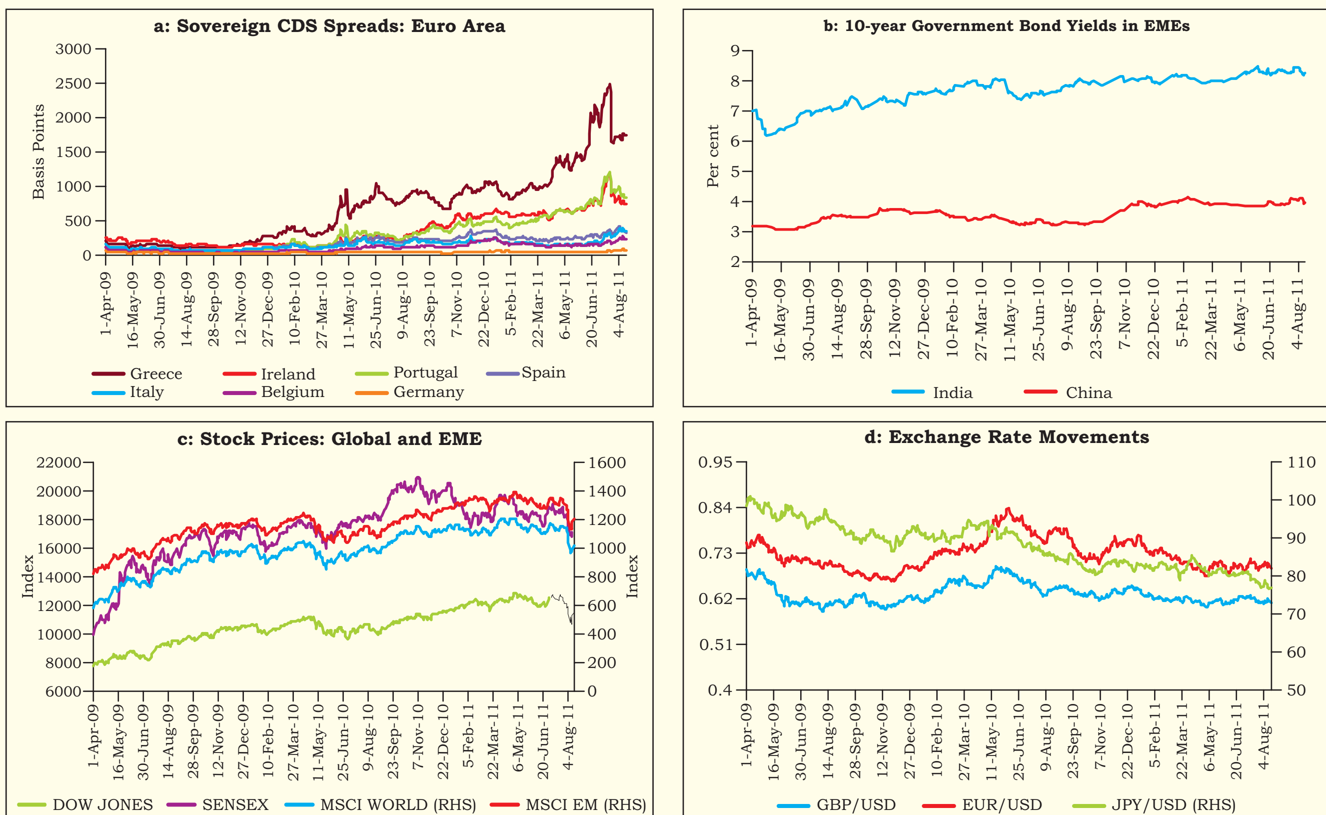
IV. FINANCIAL MARKETS

Sovereign risks come to fore in the international financial markets

II.4.1 International financial markets witnessed frequent re-pricing of risks during 2010-11, reflecting persisting uncertainties. Sovereign risk concerns, particularly in the Euro Area affected the financial markets for a greater part of the year, with the contagion of Greece's sovereign debt problem spreading to other economies in the Euro Area, notably Ireland, Portugal and Spain, despite transient stability resulting from the significant European rescue package. As a result, sovereign CDS spreads widened in the region (Chart II.33a to d). The multi-paced global recovery led to divergent policy responses. While advanced economies (AEs) either maintained or further eased their monetary policy to stimulate economic growth, a number of EMEs resorted to monetary tightening in response to inflationary pressures. During 2010, EMEs attracted greater portfolio flows given the easy availability of liquidity in AEs, especially after the announcement of the second round of quantitative easing (QE2) by the US Fed. These flows, in turn, exerted upward pressures on EME currencies and asset prices, prompting some of these economies to take recourse to macro prudential measures and soft capital controls.

II.4.2 Towards the end of 2010 and early 2011, however, there was a rebalancing of global portfolios on the back of strengthening economic recovery in AEs, particularly the US, and equity prices in these economies increased. While credit spread narrowed down considerably in many AEs, bond yields firmed up reflecting the post-crisis rise in debt to GDP ratio as well as incipient signs of inflationary concerns. By end-February 2011, geopolitical risks in Middle East and North Africa (MENA) region and the repercussions on oil prices affected investor sentiments and sovereign CDS spreads increased in a few vulnerable economies in the Euro Area. AEs

Chart II.33: Indicators of Global Financial Market Developments



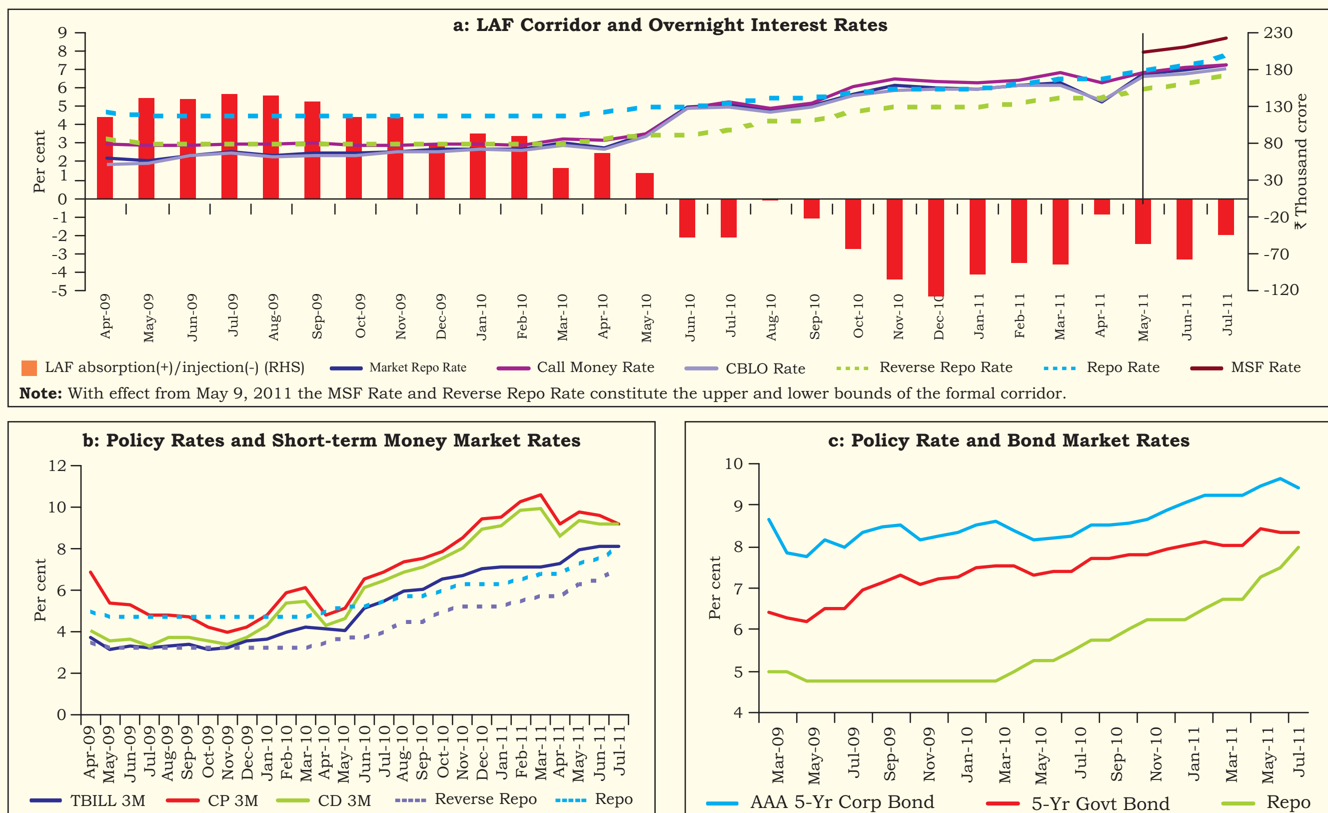
continued to be weighed down by stagnant real estate markets, high unemployment and weak sovereign balance sheets. Yield curves in both AEs and EMEs flattened, particularly since end-March 2011 indicating economic growth moderation. Global financial markets have, by and large, been in a corrective mode since end-April 2011 but risks have been on the rise. The second half of 2011 could be more volatile in an environment of widening interest rate differentials between AEs and EMEs and enhanced financial risks following downgrade of US sovereign debt and apprehension of lower growth in AEs. The developments in the global markets had their spillover effect on equity and foreign exchange markets in India.

Monetary policy transmission strengthens with liquidity shifting to a deficit mode

II.4.3 With the Indian economy reverting to its pre-crisis growth trajectory during 2010-11, the primary concern of the Reserve Bank was to anchor inflationary expectations through policy rate hikes. The effectiveness of the police rate hikes would hinge on the transmission of the same to the financial markets. The Working Group on Operating Procedure of Monetary Policy (Chairman: Shri Deepak Mohanty) observed that monetary policy transmission is the strongest in the money market and is more effective in a deficit liquidity situation than in a surplus liquidity situation. As part of its calibrated exit from the crisis driven expansionary monetary policy stance, the Reserve Bank raised its repo rate by 175 bps and its reverse repo rate by 225 bps during April 2010 – March 2011. Liquidity conditions transited from a surplus mode to a deficit mode during the year, resulting in an effective policy rate hike of 325 bps.

II.4.4 The money market rates movement during the year was mainly influenced by the underlying liquidity conditions and the policy rate changes (Chart II.34). During the liquidity surplus phase (April-May 2010), in response to the hike in the repo rate by 25 bps, the average daily call money rates increased by 32 bps.

Chart II.34: Transmission of Policy Rates to Financial Markets

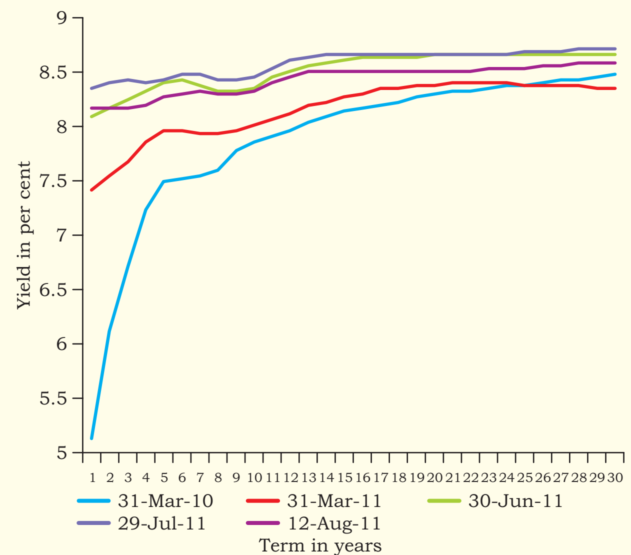


The certificates of deposit (CD) rates declined. At the medium to longer end, the yields on 5-year and 10-year G-secs too declined by 21 bps and 38 bps, respectively.

II.4.5 During the liquidity deficit phase, monetary transmission strengthened. With a repo rate hike of 150 bps during the period June 2010-March 2011, the average daily call rate increased by 332 bps and hovered around the upper bound of the corridor. The higher call money rates also reflected the skewed SLR holding across the banks. The rates in the collateralised segment generally moved in tandem with the call rate, but mostly remained below it. The other money market rates also increased. In tune with the monetary policy stance, the yield curve shifted up reflecting the hardening of the short to medium-term rates. The lower than budgeted market borrowing programme for the second half of 2010-11, increase in the investment limits of FIIs in government securities, OMO purchases by the Reserve Bank during the third quarter of 2010-11, as also the lower than expected market borrowings announced for the first half of 2011-12 improved the market sentiment. These factors, along with a well-anchored medium to long-term inflation expectations and a moderation in growth outlook contributed to the flattening of the yield curve. Accordingly, the rise in the medium term (5-year) and long-term (10-year) yields was lower than that of money market rates (Chart II.35). In view of the flattening of the yield curve at the longer end, the share of the primary issuances of the longer dated securities was raised during the year.

II.4.6 The transmission of policy rate hikes to the credit markets, which remained weak during the first quarter of 2010-11, strengthened significantly thereafter following the introduction of the Base Rate in July 2010 and the prevailing deficit liquidity conditions turning tight from end-May 2010. Banks increased deposit rates by 25-500 bps across various maturities between end-June 2010 and end-March 2011 to accommodate the accelerated growth in credit. Several banks increased their Base Rates by 25-250 bps between end-July 2010 and end-March 2011. Base Rates ruled in a narrow range reflecting a greater convergence of rates across banks. The Base Rate system has improved the transmission from the policy rate to banks' lending rates (Please refer to Box III.1 of Chapter III on monetary policy transmission after the switch over to the Base Rate).

Chart II.35: Movement in Government Securities Yield Curve



Monetary transmission strengthens further during 2011-12 so far.

II.4.7 The transmission mechanism strengthened further during 2011-12 so far. Following a cumulative increase of 125 bps in the repo rate during April-July 2011, money market rates moved in step with the policy rate hikes. The issuances of cash management bills to the tune of ₹58,000 crore during April-July 2011 to meet temporary mismatches between Government receipts and expenditure also exerted pressure on money market rates. The yields on dated Government securities increased across maturities during 2011-12 (April-August 12) rising more at the shorter end than at the longer end, reflecting the impact of policy rate hikes and larger issuances at the short-end. Interestingly, the yield on 10-year securities was lower than the yields at the shorter end, reflecting the preferred market habitat and the liquidity of the 10-year segment resulting in a kinked yield curve.

II.4.8 In the credit market, banks increased their deposit and lending rates in response to the increase in the policy rate by the Reserve Bank. During 2011-12 (April-August 11), 52 major banks with a credit share of around 99 per cent raised their Base Rates by 50-175 bps and 23 major banks accounting for around 75 per cent of bank deposits raised their deposit rates in the range of 25-250 bps. The rise in deposit rates was relatively sharper for maturities up to 1 year for all categories of banks.

II.4.9 The Indian capital market witnessed some revival in April 2011, aided by steady FII inflows and strong global cues. However, relatively better performance of equity markets in AEs weighed on market sentiments. The persistence of sovereign debt problems in the Euro Area and the delay in finalising a higher public debt ceiling in the US on the global front, and lower than expected earnings by some of the major corporates on the domestic front, adversely affected the markets and the stock markets remained subdued since May 2011.

II.4.10 Since an excessive liquidity deficit can destabilise the financial markets and impede credit flow to the commercial sector, the Reserve Bank drew a distinction between its monetary stance and its liquidity management and undertook liquidity enhancing measures to promote orderliness in the financial markets (Please see Table III.3.1 of Chapter III for details of the measures taken by the Reserve Bank.)

Divergent volume growth across market segments

II.4.11 As the financial market conditions normalised post global financial crisis, the various segments of financial markets witnessed further recovery in trading volumes during 2010-11 (Chart II.36). The collateralised segment of the overnight money market accounted for around 85 per cent of the total volume during 2010-11. The CP market witnessed large issuances in the immediate post-Base Rate environment and reached a peak in October 2010 mainly on account of sharp increase in issuances by leasing and finance as well as manufacturing companies. The issuances of CDs increased sharply during the second half of the year reflecting banks' efforts to mobilise more funds to meet the increased credit demand. The volumes in G-secs market declined in a rising interest rate environment.

Reduced volatility in financial markets

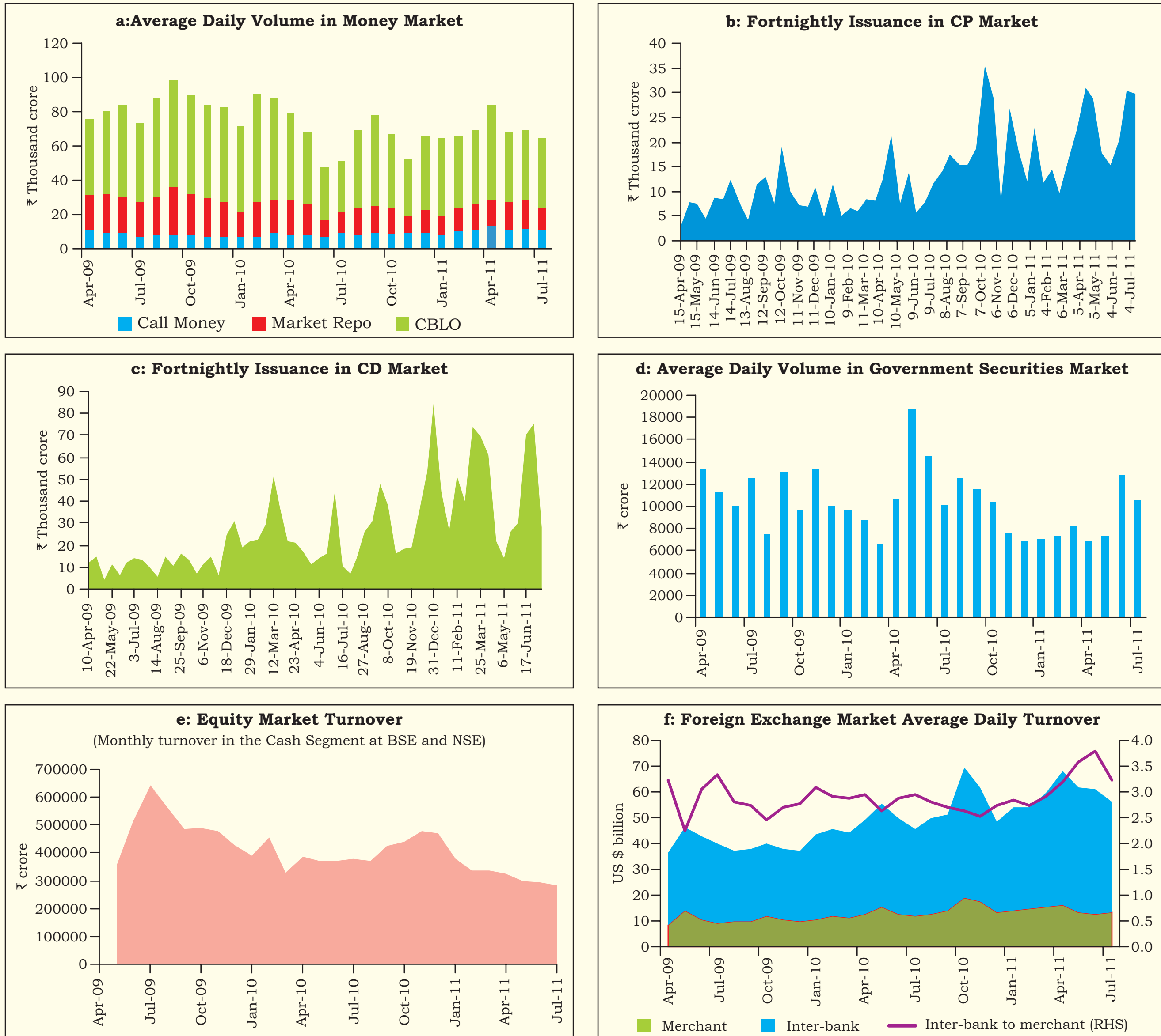
II.4.12 The volatility[1] in the Indian financial markets was generally lower in 2010-11 than in the previous year, barring a brief spell of heightened volatility during May 2010 (Chart II.37). The increased volatility during May 2010 could be attributed to the transition of the liquidity situation from surplus to deficit mode for the money and G-sec markets and to the resurfacing of sovereign debt concerns in the Euro Area for the equity and forex markets.

Equity markets remain range bound in absence of improved earnings visibility

II.4.13 Equity markets remained range-bound during 2010-11 (Chart II.38). Much of the gains during Q2 and Q3 of 2010-11 were offset by a correction during Q4 of 2010-11. Equity markets, which were negatively impacted by the sovereign debt crisis in the Euro Area in May 2010, rallied during July-December 2010 on the back of large FII investments, better corporate performances and relatively strong economic growth. During Q4 of 2010-11, equity markets were weighed down by concerns over domestic corporate profitability, weakening investment climate and global uncertainty. In the primary market, resource mobilisation through public issues was higher than a year ago, reflecting mainly follow-on public offers (FPOs) and rights issues (Appendix Table 12). Although the number of IPOs was higher in 2010-11 than a year ago, the individual issue size was lower. Resources raised by mutual funds in the equity market, however, turned negative, reflecting muted participation by retail participants and corporates. However, the resources raised by mutual funds in the debt segment increased during 2010-11 over the previous year, reflecting

[1] Volatility has been measured by using Generalised Autoregressive Conditional Heteroskedasticity (GARCH) model.

Chart II.36 : Activities in Domestic Financial Markets



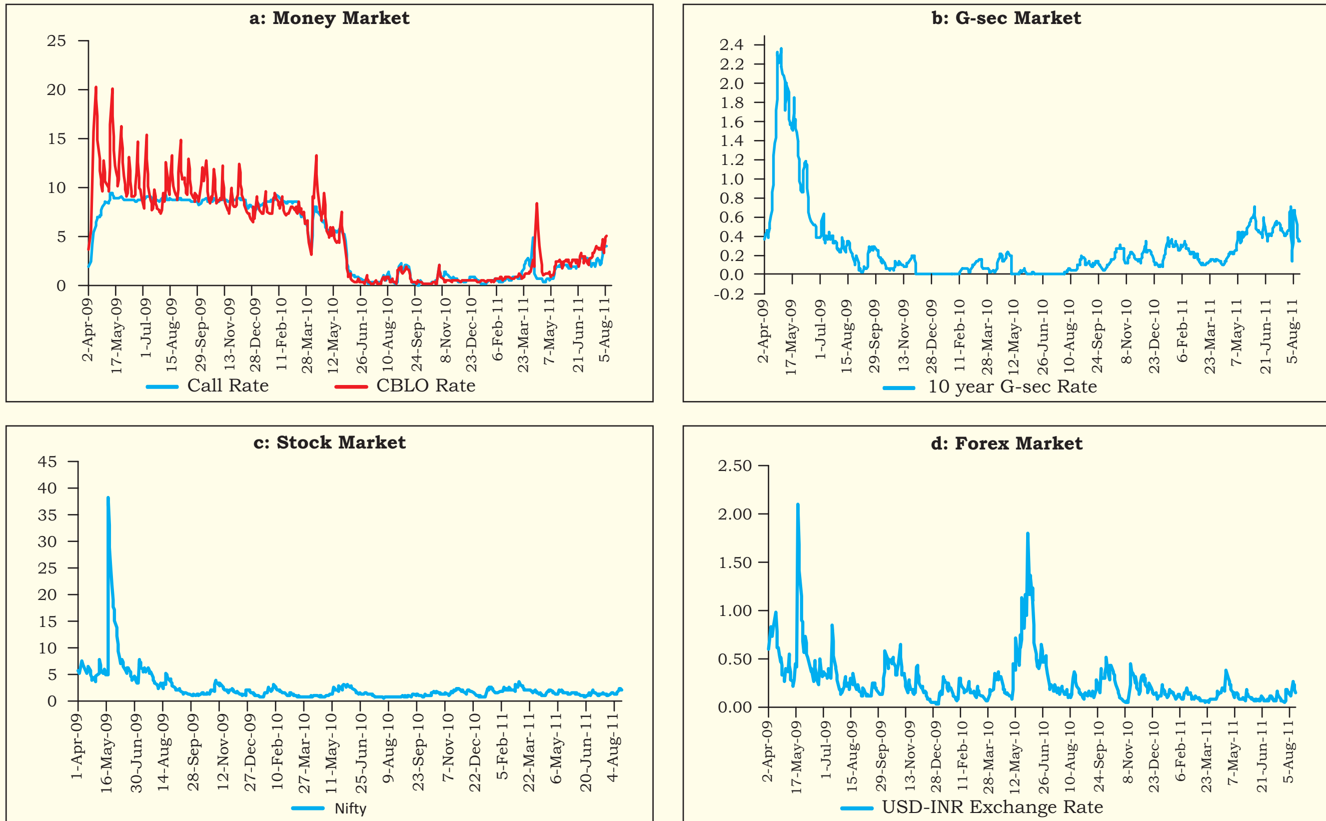
institutional investor preference in a rising interest rate environment.

Volumes rising in equity and currency derivatives

II.4.14 The presence and role of derivative segments - OTC and exchange traded - has been increasing steadily over the years (Box II.8 and Chart II.39). The volumes of the derivatives segment of the equity market increased substantially during 2010-11 and their volumes were considerably higher than those of the cash segment. The increased turnover in the equity derivatives during 2010-11 was associated with reduced volatility in the stock price indices.

II.4.15 In the currency futures segment, the volumes increased sharply in September 2010, with the commencement of operations by the United Stock Exchange (USE), which introduced currency futures in four currency pairs (Appendix Table 13). The daily trading volumes in currency futures exhibited a gradual secular uptrend thereafter. The increased

Chart II.37: Volatility in the Indian Financial Markets

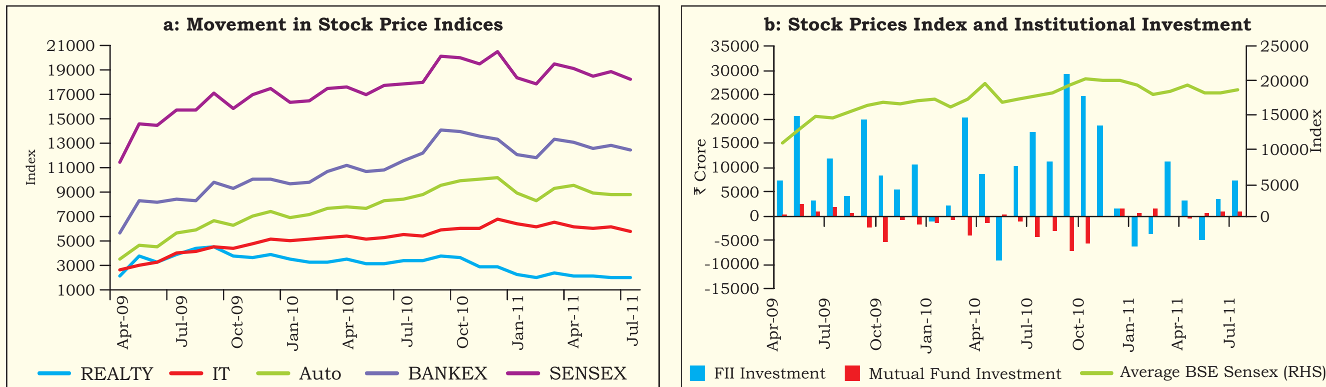


volumes in the currency futures market are mainly attributable to the cash settlement (which obviates the need for payment of the principal amount), the speculative interest in the backdrop of non-requirement of underlying exposure and the absence of restrictions on cancellation and re-booking.

Housing prices remain firm and volumes decline

II.4.16 Housing prices continued to remain firm during 2010-11, barring a brief phase of moderation in the metros during Q3, despite the hardening of mortgage rates in response to policy rate hikes as evidenced by the Reserve Bank's Quarterly House

Chart II. 38: Movement in Equity Markets



Box II.8
Financial Derivatives in India - Current Status

Derivatives instruments in India are regulated by the Reserve Bank of India, Securities and Exchange Board of India (SEBI) and Forward Markets Commission (FMC). The Reserve Bank of India Act, 1934 (as amended in 2006) empowers the Reserve Bank to regulate OTC derivative products as long as at least one of the parties in the transaction is regulated by it; exchange-traded derivatives are governed by the rules of the respective exchanges and overseen by the SEBI. Financial institutions in India can use OTC derivatives for their own balance sheet management while non-financial firms are only permitted to hedge their exposures.

OTC derivatives

Over the years, the Reserve Bank introduced various plain vanilla interest rate and foreign currency derivatives. Certain products like swaps having explicit/implicit option features such as caps/ floors/ collars are not permitted. The Reserve Bank has, however, permitted the use of cross currency swaps, caps and collars and FRAs for specific purposes. The Reserve Bank has issued guidelines on credit default swaps and securitisation to develop the credit derivative market.

The Reserve Bank issued the guidelines on forward rate agreements (FRAs) and Interest Rate Swaps (IRS) in 1999 to enable banks, primary dealers and all-India financial institutions to use these products for their own balance sheet management and corporates to hedge interest rate risks. Overnight index swaps (OIS) based on overnight Mumbai Interbank Offered Rate (MIBOR) benchmark registered significant growth over the years, although other benchmarks beyond the overnight have not become popular possibly due to the absence of a vibrant inter-bank term money market. Foreign banks dominate the IRS market. It is mandatory for entities regulated by the Reserve Bank to report their IRS/FRA trades on the reporting platform developed by the Clearing Corporation of India (CCIL). CCIL has been providing non-guaranteed settlement of FRA/IRS trades since November 2008. Guaranteed settlement in IRS/ FRA segment is expected to be started soon by CCIL. CCIL has also started providing portfolio compression exercise in the OTC interest rate swaps aimed at reducing the overall notional outstandings and the number of outstanding contracts.

Within the OTC foreign currency derivatives market, the swap segment is the most active. Rupee-foreign exchange options allowed in July 2003 is gradually picking up.

Exchange Traded Derivatives

The experience of exchange traded derivatives in India has been mixed. Equity derivatives like Index futures were introduced in June 2000, followed by index options in June 2001, and options and futures on individual securities in July 2001 and November 2001, respectively. Equity derivatives have grown rapidly since their inception. These derivative contracts are settled by cash payment and do not involve physical delivery of the underlying product. FIIs have an increasing presence in the equity derivatives markets and currently contribute around 21 per cent of the market turnover.

Currency futures witnessed substantial increase in volumes since it was launched in NSE in August 2008 on Rupee-USD pair. Following the guidelines issued by the Reserve Bank and the SEBI in January 2010, the NSE and MCX subsequently launched futures trading in three new currency pairs, namely, EUR-INR, GBP-INR and JPY-INR in February 2010. Currency options - introduced in the Indian stock exchanges in October 2010 - saw a significant increase in volume and open interest.

Trading in Interest Rate Futures (IRF) was re-activated in August 2009 on a 7 per cent notional coupon bearing 10-year Government of India security settled through physical delivery. IRF Trading on 91-day Treasury bills issued by the Government of India has been permitted by the Reserve Bank in March 2011 with cash settlement. The May 2011 Annual Policy Statement has proposed the introduction of IRFs for 2- and 5-year tenors also.

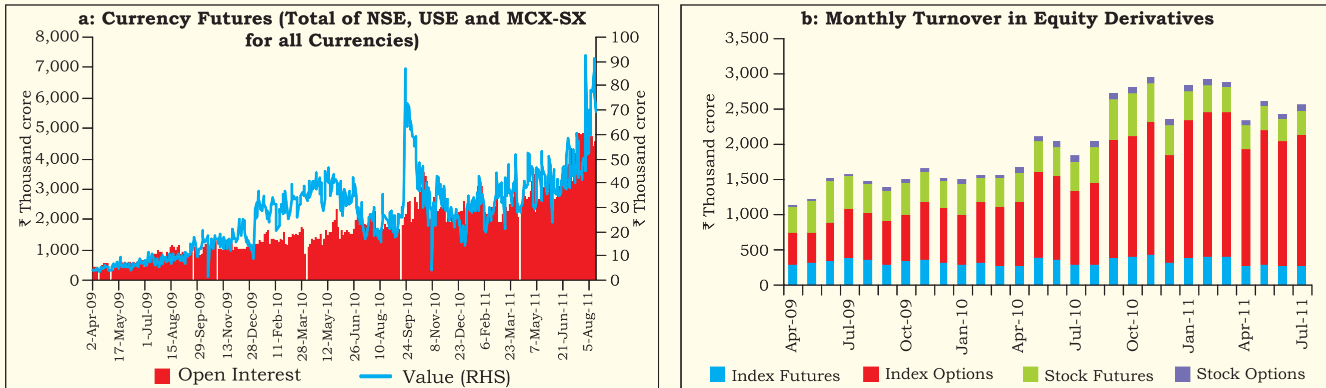
As compared to the exchange traded equity and currency derivatives segments, the IRF segment remains dormant in India despite the fact that globally it occupies 70 per cent of the overall derivatives turnover in the stock exchanges.

Exchange-traded commodity derivatives have been trading in the commodities exchanges since 2000. Currently, the 22 commodities exchanges operating in the country mostly trade in futures.

Price Index (HPI)[2] (Chart II.40 a and b). The volume of transactions, however, exhibited a declining trend during the second and third quarters of 2010-11 but revived during the Q4 in most cities. On a y-o-y basis, out of the seven cities, while housing prices increased in six cities, transactions volumes fell in five cities. Housing prices and transaction volumes in Mumbai and Delhi continued to increase on a y-o-y basis. Quarterly credit deployment in the housing sector continued to increase during 2010-

[2] The Reserve Bank's housing price and volume indices are based on data in respect of seven cities collected from the Department of Registration and Stamps (DRS) of the respective State Governments.

Chart II.39 : Activity in Financial Derivatives Market



11, notwithstanding increase in interest rates and macro prudential policy measures such as increase in provisioning requirement for housing loans with teaser interest rates, increase in risk weights for high value housing credit and the stipulation of a higher margin.

Real exchange rate appreciates reflecting inflation differential

II.4.17 During 2010-11, while several Asian countries resorted to capital control, India hardly intervened through purchase/sale of foreign currency or active capital account management. The rupee dollar exchange rate showed two-way movement in the range of ₹44.03-47.58 per US dollar (Chart II.41). The rupee appreciated by 4.0 per cent on an average basis against the U.S. dollar during the year. Most of this appreciation occurred during Q2, on the back of strong equity inflows. On an average basis, the 6-currency real effective exchange rate (REER) appreciated by 13.1 per cent in 2010-11, the 30-currency REER by 4.5 per cent and the 36-currency REER by 7.7 per cent. The 6-currency index showed the maximum appreciation compared to other indices reflecting higher inflation differential with these countries (Appendix Table 14).

Financial system remains bank dominated

II.4.18 The Indian financial system is primarily a bank-dominated system. The dominance of banks has increased further during the post-crisis period, which essentially reflected an increasing preference for safer avenues of savings (Box II.9).

Financial markets may imperfectly track banking indicators

II.4.19 The banking system is usually closely integrated with the financial market developments

Chart II.40 : Movement in Housing Prices and Transactions

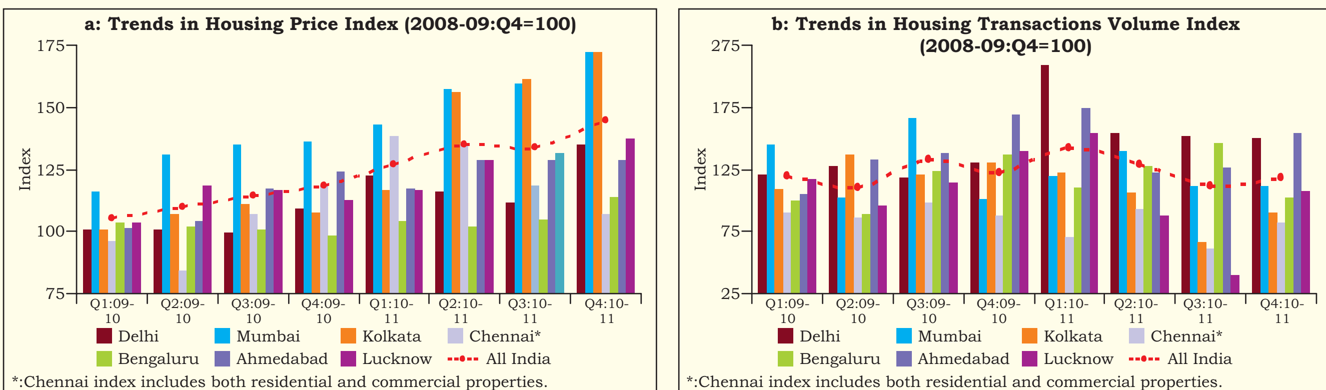
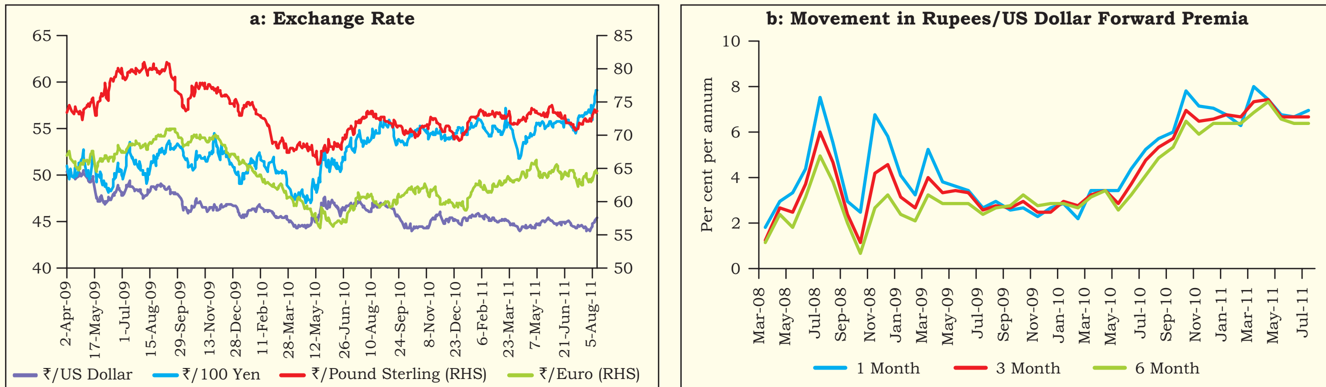


Chart II.41 : Exchange Rate and Forward Premia



owing to its interface with market forces, which can generate market risks, impact on profitability and even lead to defaults. Banks in India, however, remained resilient even during the crisis period and did not face funding and maturity risks to the extent faced by the global banks (Box II.10). This is,

Box II.9
Trends in Non-Bank Financing - Is the Financial System still Bank Dominant ?

In India, commercial banks account for more than 60 per cent of the total assets of the financial system (Chart 1). The other major components of the financial system include, *inter alia*, insurance institutions, Non-Banking Financial Companies (NBFCs), cooperative banks and mutual funds in a descending order of their assets share.

About 72 per cent of total assets of the banking sector were held with public sector banks at end-March 2009. Evidently, the perceived sovereign backing triggered an inflow of assets into the public sector banks. The dominance of banks in the financial system is also evident from the flow of financial resources to the commercial sector (Table 1). The flow of bank credit to the commercial sector picked up phenomenally in 2010-11 to 58.2 per cent, registering a growth of 47.7 per cent.

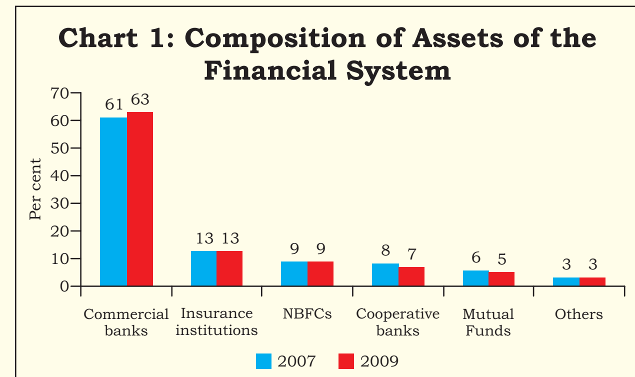


Chart 1: Composition of Assets of the Financial System

Table 1: Flow of Financial Resources to the Commercial Sector

Amount in ₹ crore

Item	2007-08	2008-09	2009-10	2010-11
1	2	3	4	5
A. Flow from Banks	4,44,807 (44.5)	4,21,091 (48.3)	4,78,614 (44.8)	7,11,031 (58.2)
B. Flow from Non-banks (B1+B2)	5,54,333 (55.5)	4,51,399 (51.7)	5,88,784 (55.2)	5,11,0 06 (41.8)
B1. Domestic Sources	2,47,926 (24.8)	2,58,132 (29.6)	3,65,214 (34.2)	2,92,084 (23.9)
B2. Foreign Sources	3,06,407 (30.7)	1,93,267 (22.2)	2,23,570 (20.9)	2,18,922 (17.9)
C. Total Flow of Resources (A+B)	9,99,140 (100.0)	8,72,490 (100.0)	10,67,398 (100.0)	12,22,037 (100.0)

Source: RBI.
Note: Figures in brackets indicate percentage share in total resources.

Box II.10

Impact of Financial Market Developments on Financial Soundness Indicators of the Banking System

While the Indian banking sector has significantly grown in size in the recent years, its soundness has largely been maintained even during financial crises. The impact of sub-prime crisis on banks was almost negligible due to limited exposure to toxic assets owing to the counter-cyclical prudential norms prescribed by the Reserve Bank.

The impact of financial market developments on banks is reflected by the trends in their various soundness indicators, namely, Return on Asset (RoA), Capital to Risk Weighted Assets Ratio (CRAR) and Non-Performing Assets (NPAs). Some of these major soundness indicators of the banking system showed significant resilience even during the times of the crisis (Table 1). The Returns on Advances and Investments moved in opposite directions during phases of rising and falling interest rates. As a result, banks could earn a stable RoA in a volatile market environment by making appropriate adjustments to their portfolios, while ensuring sound asset quality and high levels of CRAR.

The stable performance and sound health of the Indian banking system, however, does not preclude important initiatives that need to be taken in order to further increase operational efficiency of banks. There is also a need to strengthen the countercyclical prudential regulatory framework and step up capital adequacy to meet unforeseen risks emanating from developments in the financial markets.

Table 1: Size and Soundness of the Indian Banking Sector

(in per cent)

Year	Banking assets to GDP	RoA	Return on Investments	Return on Advances	Gross NPAs	CRAR
1	2	3	4	5	6	7
2004-05	72.4	1.01	7.9	8.1	5.2	12.8
2005-06	75.6	1.01	7.7	8.2	3.3	12.3
2006-07	80.6	1.05	7.2	8.9	2.5	12.3
2007-08	86.8	1.12	7.3	8.9	2.3	13.0
2008-09	93.8	1.13	7.0	9.9	2.3	13.2
2009-10	92.0	1.05	6.6	9.3	2.4	13.6
Average	83.5	1.10	7.3	9.2	3.0	12.8
Standard Deviation	8.7	0.05	0.46	0.95	1.14	0.51

Source: Reports on Trend and Progress of Banking in India, various issues.
Statistical Tables Relating to Banks in India, various issues.

however, not borne out from the CDS spreads and the stock prices of the banks in India which largely paralleled the global trends, reflecting increasing integration with the global financial markets.

Financing of infrastructure poses challenge ahead

II.4.20 The development of the financial markets and healthy balance sheets of the financial sector entities are prerequisites for financial intermediation with a view to bridging enormous infrastructure deficit (Box II.11).

Box II.11

Infrastructure Financing

Infrastructure deficit remains a major stumbling block in the growth process of the Indian economy. It is widely recognised that poor and inadequate infrastructure is adding to production costs, affecting productivity of capital and eroding competitiveness of productive sectors of the economy (Subbarao, 2009). The Planning Commission has projected the investment requirement for the infrastructure sector for the Twelfth Five Year Plan (2012-2017) to be of the order of ₹40,99,240 crore (about US$ 1,025 billion), which cannot be met by the public sector alone due to fiscal constraints.

Gross Capital Formation (GCF) in infrastructure has hovered around 5 per cent of GDP and is likely to fall short of the 11th Five Year Plan's (2007-2012) target of raising it to 9 per cent of GDP by 2012, which is also the level attained in some of the Asian economies. In India, there has been a significant increase in the share of bank credit to infrastructure from 2.2 per cent of gross bank credit as at end-March 2001 to around 13.4 per cent as at end-March 2011. Credit extended by commercial banks is, however, constrained by the risk of asset-liability mismatch.

Globally, the corporate bond market plays a significant role in financing infrastructure development. In India, the corporate bond market is underdeveloped and the stock of listed non-public sector debt at 2 per cent of GDP is

(Contd...)

(...Concld.)

significantly lower as compared with that of other EMEs, such as, Malaysia, Korea, and China. In order to develop the corporate bond market, some of the measures which need consideration include exemption from withholding tax for FIIs, rationalisation of stamp duties across states, tax treatment of pass through certificates, reconciliation of definitional differences in respect of bonds and debentures, enhancement of scope of investment by insurance companies and provident /pension /gratuity funds, permission to FIIs to invest in to-be-listed bonds, repo lending by insurance companies and mutual funds, single unified database to ensure reporting by all entities and partial credit enhancement by banks.

Securitisation of infrastructure bonds/loans is an important way of increasing the quantum of debt financing of infrastructure projects by banks/FIs/NBFCs. The infrastructure sector has a high potential for bundling of securities of infrastructure bonds/loans and selling them to institutional and retail investors based on their perceived risks. Credit derivatives and credit insurance are also expected to provide efficient risk transfer mechanisms and, thus, play a significant role in the corporate bond market development. In this context, the Reserve Bank has come out with credit default swap (CDS) guidelines, which will come into effect from October 24, 2011. CDS would allow corporate entities including insurers, FIIs and mutual funds (MFs) to hedge the risk of default in repayment of corporate bonds. Private equity and venture capital funds may have to be encouraged to accept higher levels of risk in return for higher expected returns. Take out financing, which is another important and innovative way of enhancing the quantum of banks'/NBFCs' financing of infrastructure projects and which also facilitates better asset-liability management, has not taken off despite efforts by the Reserve Bank and the government and needs to be pushed further.

Foreign sources are supplementing the domestic finance in financing infrastructure in recent years. The share of FDI in infrastructure sector as a percentage of total FDI has increased significantly from around 4 per cent in 2002-03 to around 16.7 per cent in 2010-11.

Public-Private Partnership (PPP) has been an important mode of financing infrastructure worldwide. PPPs have received a somewhat lukewarm response in India except in the case of telecom, airport and roadways, despite their potential to attract private investments. A number of factors, which need to be addressed expeditiously in order to bring down the time and cost overruns in a significant way, are responsible for this, *e.g.*, deficiencies in the project appraisal skills, problems in developing an optimal risk sharing mechanism, lack of transparency in bidding procedures, overlapping regulatory jurisdictions and governance related concerns. PPP projects that are economically essential but commercially unviable are provided financial assistance in the form of Viability Gap Funding (VGF) and long tenor loans through IIFCL (UK), a subsidiary of the India Infrastructure Finance Company Ltd. (IIFCL). The Reserve Bank has significantly relaxed prudential norms for infrastructure projects and has initiated a number of regulatory concessions for infrastructure finance. Additionally, SEBI has raised the FII limit for investment in corporate bonds, with residual maturity of over five years issued by companies in infrastructure sector, to US$ 25 billion.

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V. GOVERNMENT FINANCES

Lower combined fiscal deficit reflects improvement in Central and State finances, but its sustainability requires further reforms

II.5.1 The combined finances of the Central and State governments showed distinct improvement in terms of the key deficit indicators during 2010-11 (RE) as compared with 2009-10. The combined gross fiscal deficit (GFD) of Central and State governments as a ratio of GDP declined markedly to 7.7 per cent in 2010-11 from 9.3 per cent in 2009-10 (Appendix Table 15). The combined revenue deficit (RD) also fell perceptibly. The lower fiscal deficit ratios are the outcome of both Centre and States returning to the path of fiscal consolidation. However, these ratios are still well above 2007-08 levels.

II.5.2 The budgets of the Central and State governments envisage further fiscal consolidation during 2011-12 driven by expected moderation in expenditure growth. The combined GFD and RD as ratios to GDP are budgeted to decline further in 2011-12. However, in order to meet these targets, concerted efforts would be necessary to avoid fiscal slippages in 2011-12, especially arising from higher expenditure on subsidies if global commodity and fuel prices continue at an elevated level.

II.5.3 The sustainability of lower deficits during 2011-12, however, requires substantial new measures in the arena of fiscal reforms, as the 2010-11 improvement was led by the benefit of cyclical upswing and one-off gains in revenue. For a sustainable improvement in fiscal position, further expenditure compression as well as revenue raising measures would be necessary.

Centre's lower deficit ratios reflect one-off unanticipated revenue and higher nominal GDP growth

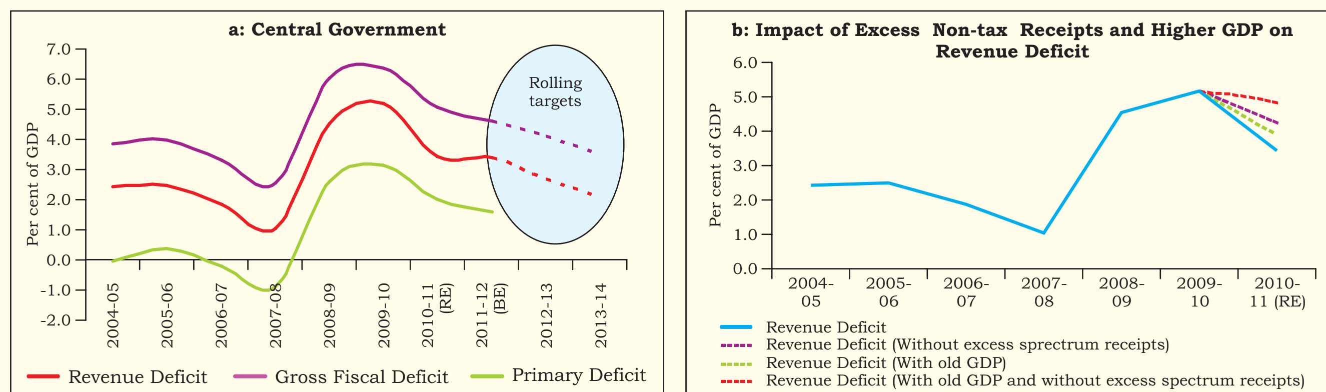
II.5.4 Central government finances had deteriorated significantly during 2008-09 and 2009-10 on account of expansionary fiscal policy stance adopted by the government to address growth concerns as a fallout of global financial crisis. However, with economic recovery during 2010-11, the government reverted to the path of fiscal consolidation with a partial exit from stimulus measures. Benefiting from more than anticipated realisation of non-tax revenue receipts and GDP, the Centre's key deficit/ GDP ratios turned out to be lower in revised estimates than were originally budgeted (Chart II.42 a and b). The revised estimates (RE) for 2010-11 show that the Central government receipts were better than budgeted, reflecting buoyancy in domestic economic activity and the increase in indirect tax rates following partial fiscal exit. Total expenditure, however, exceeded the budgeted level. This was on account of government's decision to utilise higher than anticipated receipts from 3G/BWA auctions for financing increased outlays in key priority areas (rural infrastructure, implementation of Right to Education Act, plan assistance to States and recapitalisation of public sector banks). Nonetheless, benefiting from the better than anticipated GDP outcome, aggregate expenditure-GDP ratio lay within the budget estimates for 2010-11.

II.5.5 Provisional data from the Controller General of Accounts (CGA) confirm the expected improvement in fiscal position of the Central government in 2010-11. The estimates of key deficit indicators, turned out to be lower in the provisional accounts than the revised estimates on account of higher than anticipated revenue receipts and reduction in plan expenditure. Lower fiscal imbalances enabled reduction in government's debt-GDP ratio during 2010-11, thereby containing risks to macroeconomic stability.

II.5.6 However, the fiscal correction is far from over. Enduring correction through expenditure compression and better returns on public investments has to be the cornerstone of an effective fiscal strategy. There are clear limits to one–off revenue generation measures over the medium to long run.

II.5.7 Expenditure growth remained higher than budgeted for 2010-11, thereby maintaining pressures on aggregate demand. The revised estimates of total expenditure on subsidies (mainly on food, fertiliser and petroleum) remained higher than the budget estimates reflecting the impact of higher international prices of these commodities. Capital expenditure,

Chart II.42 : Key Deficit Indicators



both plan and non-plan, remained higher than the budgeted levels in 2010-11. On the whole, expenditure growth not only turned out to be higher than that was budgeted for 2010-11 but also accelerated as compared with that of 2009-10.

State governments resume fiscal consolidation

II.5.8 State governments also resumed the process of fiscal consolidation in 2010-11, after suffering a setback in 2008-09 and 2009-10 (Appendix Table 16). The revised estimates for 2010-11, based on the budgets of 28 States, indicate a reduction in key deficit ratios. This shows State governments' commitment towards fiscal consolidation. Going forward, the States are likely to carry forward the process of fiscal consolidation in 2011-12 as the revenue account is expected to turn into surplus after remaining in deficit during 2009-10 and 2010-11, while the GFD-GDP ratio is expected to decline further.

II.5.9 A disaggregated analysis shows that the budgeted improvement in revenue account of States in 2011-12 is mainly on account of decline in revenue expenditure while revenue receipts-GDP ratio is expected to be marginally higher. However, the moderation in revenue expenditure growth is attributable to a sharp decline in development expenditure growth (comprising social and economic services). In line with the improvement in revenue account, States' GFD-GDP ratio is budgeted to be lower in 2011-12 (BE). Capital outlay as a ratio to GDP at 2.2 per cent in 2011-12 (BE), however, is yet to revert to the high levels achieved during 2006-07 to 2008-09. Overall, the States seem to be committed to bringing their finances on a sustainable path in the medium-term and the present pace appears to be in tandem with the path suggested by the Thirteenth Finance Commission.

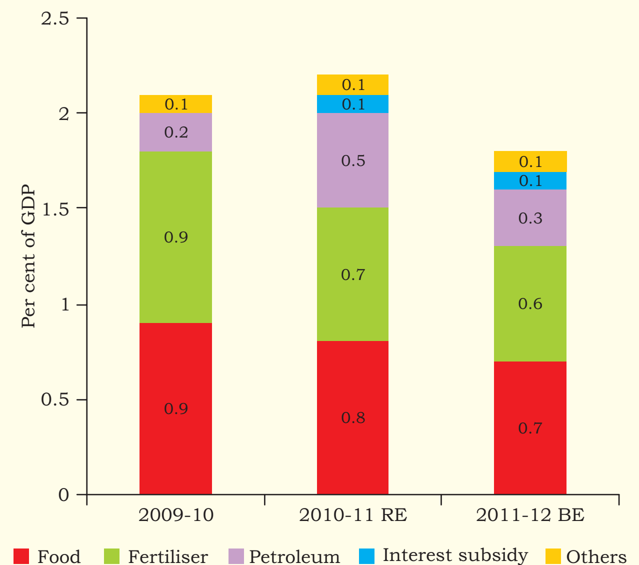
Further fiscal consolidation necessary for macro-stability

II.5.10 The improvement in government finances till 2007-08 under rule-based fiscal consolidation had provided cushion to the Centre and States for undertaking fiscal expansion during 2008-09 and 2009-10 to address the growth slowdown. Notwithstanding an improvement in fiscal position in 2010-11, the fiscal deficit indicators are yet to reach the pre-crisis levels. Lowering of these indicators are necessary for lower inflation and macroeconomic stability. Going forward, it is imperative for the government to strengthen the process of fiscal consolidation. Accordingly, more drastic expenditure reforms alongwith the envisaged tax reforms – Direct Taxes Code (DTC) and Goods and Services Tax (GST) – have to be pursued. Expenditure reforms have to be directed towards restraining built-in growth in expenditure and also to bring about structural changes in its composition (Box II.12).

Expenditure driven fiscal consolidation strategy of the Centre may be challenging

II.5.11 The fiscal consolidation strategy of the Central government for 2011-12 is primarily expenditure driven, reflecting the impact of lower growth in expenditure on salary, pensions and subsidies. In particular, all subsidies except interest subsidy are budgeted to decline in 2011-12 (Chart II.43). There is an urgent need to implement reforms in the system of subsidies. Concomitantly, a conservative stance on revenue projections has been adopted. Although the Union Budget 2011-12 has opted not to further

Chart II.43: Subsidies of Central Government



Box II.12
Revenue and Expenditure Reforms – Improving the Fiscal Environment for Robust and Inclusive Growth

Improving growth, making it inclusive and keeping fiscal deficits low and sustainable are all desirable objectives of economic policies. Yet, they are often thought as irreconcilable. These multiple objectives, however, can best be achieved by adopting sustainable fiscal policies. Growth and equity objectives both can be served by keeping the balance between revenues and expenditures of the government at sustainable levels, which necessitate both revenue and expenditure reforms.

Revenue reforms in India have been pursued for sometime now. Multiplicity of rates have been brought down, tax rates lowered and tax base widened. The standard rates of services and excise taxes have now converged to a single rate of 10 per cent. Peak customs duty has been reduced from over 300 per cent in the late 1980s to 10 per cent as a part of committed stance of converging over the medium term to tariff prevailing in ASEAN countries. Major accomplishments include the introduction of services tax in 1994 and Value Added Tax (VAT) by the States during 2004-08.

The present State level VAT structure still has some element of cascading effect. However, with introduction of GST, cascading effects of CENVAT and services tax are likely to be removed with a continuous chain of set-offs. While benefiting taxpayers, GST is also expected to be a plus sum game for the Governments. Thirteenth Finance Commission (2009) estimated that GST could provide gains to India's GDP somewhere within a range of 0.9 to 1.7 per cent. Revenue gains are also likely to be large coming from additional GDP as well as improved tax compliance. Upscaling of inclusive growth programmes would then be possible through budgetary resources.

Direct Taxes Code (DTC) would contribute to enhance GDP growth, raise tax-GDP ratio and improve allocative efficiency and equity (both horizontal and vertical) of the direct taxes, bringing about reduction in administrative and compliance costs (GOI, 2009). DTC would lead to repeal of the current Income-Tax and Wealth Tax Acts with the objectives of minimising exemptions, widening tax base, moderating tax rates and effective enforcement. The Code also proposes to do away with profit linked deductions and introduce investment linked deductions for priority areas.

Both these important pillars of tax reforms have been deferred for want of political consensus and ironing out the operational details. The federal structure of our fiscal system entails tax reforms to be more challenging which require a pragmatic approach by all stakeholders. However, GST and DTC need to be rolled out without any further delay. Both, States and Centre gain from these tax reforms. In addition to tax reforms, other revenue enhancing measures would be needed. Improved returns on public investment can help. Better governance of public utilities, especially at sub-national level can go a long way in correcting the fiscal imbalances. Appropriate user charges alongwith plugging of leakages are needed. The financial positions of State Power Sector utilities require focused attention.

Revenue reforms alone may not suffice in keeping fiscal position on a sustainable path. Expenditure cutting holds the key to fiscal consolidation in India. While modes and speed of fiscal consolidation have differed across countries, expenditure reforms have formed important component. Barrios, *et al.* (2010) find that public expenditure-cuts-based consolidations tend to be more effective. They send convincing signals regarding the political will of the fiscal retrenchment as well as ensure its medium-run viability. Expenditure reforms in many countries have achieved large fiscal adjustments by reducing spending on transfers, subsidies and public consumption while ensuring that allocations for education and health remain adequate (Hauptmeier *et al* 2007).

Expenditure reforms in India have been directed towards restraining built-in growth in expenditure and also bring about structural changes in its composition. In this regard, various measures over the years were intended to rationalise manpower requirements and assessing the feasibility of on-going schemes. In order to overcome perpetual committed expenditure, the New Pension System has been introduced. The process also involved review of the existing subsidy systems. For instance, the government is gradually moving towards nutrient based subsidy (NBS) regime in fertiliser sector. The government has proposed to move towards direct transfer of cash subsidy to people living below poverty line in a phased manner in order to ensure greater efficiency, cost effectiveness and better delivery for kerosene and fertiliser. With the objective of rationalising petroleum subsidy, government has decontrolled the pricing of petrol in June 2010. However, these measures are not sufficient as oil, fertiliser and food subsidies are still large. Total subsidies constituted 2.1 per cent of GDP in 2010-11, which was much higher than 1.3 per cent of GDP in 2006-07. As such, expenditure reforms need to be pushed more aggressively. Deregulation of diesel and other fuel prices assumes importance in this context.

Revenue and expenditure reforms need to be speeded up to provide fiscal space for achieving the objective of inclusive growth. The government's strategy for inclusive growth is to empower people through legal entitlements in respect of employment, food security, education and information. Fulfilling these commitments would require substantial outlays thereby necessitating a stable, efficient and broad-based tax system which is conducive to overall business environment.

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raise the indirect taxes to the levels prevailing before the crisis and retained the standard rates of central excise duty and service tax at 10 per cent, the Central government announced tax rationalisation measures which would have differential impact on relative prices across sectors.

II.5.12 The moderation in non-plan revenue expenditure growth is welcome as it creates fiscal space for undertaking other expenditures. However, capital expenditure, which is budgeted to be compressed during 2011-12, raises concerns regarding the quality of fiscal consolidation.

II.5.13 The government recognises that fiscal correction for 2010-11 reflected the one-off windfall benefits of higher than anticipated revenue proceeds from spectrum auctions, which is unlikely in 2011-12. The Union Budget for 2011-12 does not take into account any such one-off sources of revenues and remains conservative on tax buoyancy.

II.5.14 Going forward, credible fiscal consolidation strategy will contribute to keeping the debt-GDP ratio at a sustainable level. In this regard, the reduction in Centre's debt-GDP ratio to below 50 per cent in 2010-11 is a positive development. In terms of the revised methodology for compilation of debt, which excludes liabilities not used for financing of GFD and calculates external debt at current exchange rates, the Centre's debt-GDP ratio is budgeted to decline to 44.2 per cent during 2011-12.

Likely expenditure pressures on subsidies pose challenge for fiscal consolidation in 2011-12

II.5.15 In spite of the Central government's commitment towards fiscal consolidation, the progress towards this end hinges upon a few factors. First, the reduction in expenditure growth for 2011-12 is on account of lower subsidy expenditure, which is based on the underlying assumption of no major variation in international fertiliser and petroleum prices during 2011-12. However, the subsequent developments indicated an uptrend in international prices of crude oil which could have significant implications for subsidy expenditure. Even though domestic prices of diesel, PDS kerosene and LPG have been partially revised on June 24, 2011, the projected level of petroleum subsidy is likely to remain higher than the budgeted level for 2011-12. The elimination/ reduction of customs/ excise duty on petrol products would also cause revenue loss and impact the fiscal balance. Second, in view of several domestic and international downside risks to economic growth, moderation in tax revenue collections cannot be ruled out. A slowdown, however, may also result in decline in oil prices, which may help in containing subsidy expenditure.

Pace and nature of fiscal consolidation remains a concern over the medium term

II.5.16 Over the medium-term, the Central government envisages gradual corrections in revenue and fiscal deficits under its rolling targets set out for 2012-13 and 2013-14. Even though, rolling targets set for fiscal deficit seem achievable, at the current juncture achieving the revenue targets appear to be a challenge. There could be a shortfall in achieving the deficit targets prescribed by the Thirteenth Finance Commission for the medium-term. An amendment to the Fiscal Responsibility and Budget Management (FRBM) Act, 2003 is expected during the course of 2011-12, which would lay down the fiscal roadmap for the next five years. Fiscal rules defined during the pre-crisis period are also subject to review in many advanced and developing economies (Box II.13).

Quality of fiscal adjustment has long term growth implications

II.5.17 While restraint on revenue expenditure growth not only ensures that the fiscal consolidation process is sustainable, it also creates a fiscal space for undertaking additional capital outlay, which is essential for infrastructure financing and to provide an enabling environment for sustained economic growth. Nonetheless, going forward, there are certain concerns with regard to fiscal consolidation. First, the ratio of revenue deficit to gross fiscal deficit, which is an important benchmark for assessment of the quality of fiscal consolidation, is expected to remain

Box II.13
Fiscal Indicators in a Rule-based Framework: Cross-country Survey

In the aftermath of global financial crisis, fiscal rules have come under strain across a number of countries as they do not distinguish between economic upturns and downturns. Fiscal rules constrain budget makers by delineating a 'numerical target' on budgetary aggregates over a 'long lasting time period' with a view to guiding fiscal policy (Kopits, 2001). Although countries have not repealed pre-crisis fiscal rules, many of them have either ignored or adjusted their rules and even taken discretionary action to cut revenues, boost expenditures and raise the deficit to address the economic slowdown. High fiscal deficits and sovereign debt risks, however, have necessitated countries to re-examine their fiscal rules so as to anchor their fiscal imbalances even before their economies stabilised. Effective fiscal rules should not only aim for numerical targets that have an unambiguous and stable link with an ultimate objective like public debt sustainability, but also provide sufficient flexibility to respond to shocks.

In practice, fiscal policy under the rule-based framework is anchored to a variety of budgetary aggregates. Conventionally, overall budget balance is targeted for moving towards debt-sustainability whereby debt-GDP ratio converges to a finite level. However, as this indicator provides a low degree of cyclical flexibility for fiscal policy to respond to shocks, countries also target structural or cyclically adjusted balance (CAB), whereby the government pursues the objective of achieving a nominal budget balance *on average* over a full economic cycle. While primary balance rules also exist, they are less linked to debt sustainability as they tend to ignore imbalances being incurred on account of interest payments. Similarly, the golden rules, which target the overall balance net of capital expenditures, are also less linked to debt. Countries may also adopt debt rules (DR) by directly setting an explicit limit or target for public debt (in absolute or as ratio to GDP) either in gross terms or in net terms (after adjusting financial assets). Although DRs are most effective for ensuring convergence to a debt target, they do not provide sufficient guidance for fiscal policy in terms of its constituents and can become misleading at times, when debt level is below the ceiling but rising.

Alternatively, some countries may set permanent limits or ceilings on total, primary, or current spending in absolute terms, growth rates, or in per cent of GDP (expenditure rules: ER) or they may set floors/ceilings on revenues (to boost tax collection/limit tax burden) (revenue rules: RR). While ERs provide flexibility for conduct of fiscal policy through cyclical and discretionary reductions in revenues during an economic downturn, they do not normally permit discretionary expenditure stimulus. On the other hand, RRs do not constrain government spending. Both these sets of rules are not directly linked to the control of public debt. Furthermore, RRs do not generally account for the operation of automatic stabilisers on the revenue side in a downturn (or in an upturn for revenue ceilings). As automatic stabilisers are stronger on the revenue side, these rules *per se* may tend to result in a procyclical fiscal policy. ERs and RRs, therefore, need to be accompanied by debt or budget balance rules for ensuring long term fiscal sustainability.

Historically, the genesis of fiscal rules dates back to the mid-nineteenth century. However, recognising inadequacies in stand-alone rule making, countries (New Zealand in 1994 followed by countries in Latin America, Europe and Asia) started enacting fiscal responsibility legislations (FRLs) as a permanent institutional arrangement for promoting fiscal discipline in a credible, predictable and transparent manner (Corbacho and Schwartz, 2007). The number of countries adopting national and/or supranational fiscal rules has gone up from seven in 1990 to 80 in 2009 (IMF, 2009). Increasingly many (60 per cent) countries including EMEs (Argentina, Indonesia and Mexico) have adopted combination of budget balance and debt targets to improve the effectiveness of their fiscal rules to ensure debt sustainability. Supranational rules also have combined budget balance rules with debt rules (in 41 countries), which were accompanied, particularly in the advanced economies by national rules, such as expenditure ceilings and specific revenue rules in some countries (*e.g.*, tax revenue ceilings in Denmark, and a windfall revenue rule in France).

Rule-based fiscal frameworks have varied across advanced and developing economies depending upon their different needs, institutional capacity, and exposure to global shocks. Advanced economies have tended to favour flexibility in their fiscal rules by either adopting cyclically adjusted balances as target indicators or merely strengthening their fiscal frameworks without emphasising numerical targets. On the other hand, the EMEs have preferred combination of balance budget rules and debt rules for working towards debt sustainability. While in EMEs fiscal rules were accompanied by FRLs, advanced countries have generally not adopted FRLs reflecting strength in the existing legal and institutional framework (Lienert, 2010).

India embarked on FRL framework with the enactment of Fiscal Responsibility and Budget Management (FRBM) Act by the Central government in 2003, followed by the States subsequently. In order to improve the effectiveness of such legislations, the FRLs in India have a combination of targets set for various fiscal indicators such as fiscal deficit, revenue deficit and debt. Notably, India's FRL system of targeting revenue and fiscal balances separately is quite unique internationally as other countries generally tend to target overall budgetary balance. By targeting a zero level of revenue deficit, India's FRLs recognise the importance of

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phasing out the use of borrowed resources for current consumption of the government so as to ensure that borrowings are used only for capital expenditures for long-term fiscal sustainability. This is consistent with the UK's 'golden rule' fiscal framework, whereby borrowing is mandated only for capital expenditure. From Union Budget 2011-12, the Central government has started focusing on reducing 'effective revenue deficit', which excludes capital grants to States from the headline measure of revenue deficit. Recognising that fiscal consolidation is conducive to macroeconomic management, the Central government intends to introduce an amendment to the FRBM Act, 2003 during the course of 2011-12, which would lay down the fiscal roadmap for the next five years.

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significantly higher at 74.4 percent in 2011-12 (BE) than 41.4 per cent in 2007-08. This indicates that a large portion of borrowings are used to finance the revenue deficit, thereby reducing the availability of resources to undertake capital outlays which could have implications for potential growth. With the GFD-GDP ratio budgeted to be lower in 2011-12, higher RD-GFD ratio reflects that fiscal adjustment envisaged during 2011-12 will be mainly through compression in capital outlay. Accordingly, the quality of fiscal adjustment may have long-term implications for growth as fiscal multiplier is generally found to be higher in the case of capital expenditure (Box II.14).

States' own initiatives important for their durable fiscal consolidation

II.5.18 While laying out the revised fiscal roadmap in amended FRBM Acts, States need to take cognisance of changing contours of Centre-State financial relations. With a sharp decline in loans from the Centre, particularly since 2004-05, resource transfers from Centre to States in recent years have been mainly through current transfers, *viz*., tax devolution and grants. While current transfers from the Centre contributed to around one-third of correction in revenue account of States during the pre-crisis period (2003-04 to 2007-08), lower tax devolution due to cyclical downturn in tax collections at the Central level during the crisis was compensated by higher grants.

II.5.19 Keeping in view the cyclicality in tax collections at the Central level, States need to explore own non-tax sources of revenues by undertaking reforms in major sectors, *viz*., power and irrigation. Effective mobilisation of own non-tax revenues, which are expected to be more durable than tax revenues, would facilitate lower dependence of States on Centre especially during the period of slowdown. While the tax base of States is likely to expand with the proposed implementation of GST, States may have to assess its revenue implications based on the structure of their State economies.

II.5.20 The recommended share of States in the form of tax devolution from the Centre has also been raised by the Thirteenth Finance Commission (FC). States, on their part, may have to devolve higher resources to local governments, for facilitating greater decentralisation and undertake fiscal consolidation initiatives so as to benefit from State-specific grants as recommended by the Thirteenth FC. Going forward, taking into cognisance these factors, States need to amend their FRBM Acts to provide revised fiscal roadmap for medium term.

II.5.21 The Central Government had constituted an Expert Committee in July 2010 (Chairperson: Smt. Shyamala Gopinath) for comprehensive review of the National Small Savings Fund (NSSF). The terms of reference of the Committee were, *inter alia*, to recommend mechanisms to make small saving schemes market linked and to recommend on the

Box II.14
Fiscal Multiplier: A Cross-Country Experience

The global financial crisis drew discretionary fiscal stimulus measures almost as reflex actions across countries mirroring an underlying belief about efficacy of government spending or taxation measures for stimulating desired change in aggregate demand. With widespread adoption of expansionary fiscal policy during the crisis, a long standing debate about the size of the fiscal multiplier has resurfaced both in theory and across countries. 'Multiplier effect', originally propounded by Richard Kahn (1930) and later popularised by Keynes, measures the efficacy of government spending or tax measures to bring desired change in aggregate demand. Fiscal multiplier exceeds unity in simple Keynesian framework but it is now known that it can vary considerably with impact varying from even negative values to large positive values. Interaction with a large number of macro-economic parameters ultimately determines the size of the multiplier. If with fiscal expansion, monetary conditions remain accommodative, fiscal multiplier is generally larger. While lower level of leakages in spending increases the value of multiplier, concerns with regard to long term fiscal sustainability may make it less effective and even negative. The composition of expenditure plays an important role in assessing the effect of fiscal stimulus in developing countries. Furthermore, fiscal multiplier calculated as an impact multiplier differs from cumulative multiplier or the peak multiplier. Even though there has been a vast literature on estimating fiscal multiplier, the empirical work on fiscal multiplier, providing a broad range of results, has not settled the theoretical debates.

Typically, in advanced economies, the multipliers are statistically significant and moderately positive. In contrast, the effects on output in the medium-term in emerging economies were found to be consistently negative indicating that discretionary fiscal measures taken in emerging economies might have a positive impact in the immediate period but they appear to be anti-growth in the medium-term as they become more of a structural nature and thus more difficult to phase out in later years.

In the wake of occurrence of global crisis, a number of studies were undertaken to examine the impact of fiscal stimulus under varying conditions. Ilzetzki *et al* (2011) have shown that the cumulative impact of government consumption on output was lower in developing countries as compared with high-income countries. Fiscal expansions that were expected to persist indefinitely have smaller multipliers due to stronger private-sector offsets. In general, during crisis when fiscal stimulus is designed to address recessionary conditions, fiscal multipliers are expected to be larger than in the normal period when monetary and fiscal policies may be working at cross purposes.

An exercise undertaken for estimating the size of fiscal multipliers in respect of government final consumption expenditure (GFCE) and the Central government's capital outlay using VAR framework adopting methodology similar to Espinoza and Senhadji (2011) suggests that fiscal multipliers in India are low. Based on quarterly data for 1996-97 to 2009-10, it was found that government consumption positively impacts GDP growth (both in real and nominal terms) in the short-term. Government consumption multiplier peaks within first three quarters (ranging between 0.11 and 0.20 under alternative specifications), after which the impact is found to peter out. Focusing on impact of Central government's investment as reflected in annual capital outlays (in real terms), the cumulative multiplier works out to around 1.5 when the multiplier peaks. Thus, cross-country findings as well as the results for India show that government consumption leads to crowding out with size of multiplier being significantly lower than one while investment multiplier, working over the long-run, has crowding-in impact with its size more than unity. This calls for improving quality of public expenditure management by increasingly rationalising outlays towards investment as the Central and State governments revert to the rule-based fiscal consolidation path.

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Ilzetzki, Ethan; Enrique G. Mendoza and Carlos A. Végh (2011), "How Big (Small?) are Fiscal Multipliers?", *IMF Working Paper No. WP/11/52.*

Espinoza, Raphael and Abdelhak Senhadji (2011), "How Strong are Fiscal Multipliers in the GCC? An Empirical Investigation", *IMF Working Paper No. WP/11/61.*

lending arrangement of the net collection of small savings to Centre and States, and to suggest alternative investment avenues. The Committee submitted its report to the Government of India in June 2011 (Box II.15). The recommendations of the Committee are aimed at aligning the administered interest rates on small savings instruments with market related rates on government securities. This would reduce the volatility in small savings collections, which would facilitate a more efficient cash and debt management of the Central and State Governments and a smoother transmission of monetary policy signals. The recommendations would also empower the State Governments with greater discretion on borrowings from NSSF keeping in view their cash position and improve the viability of NSSF.

Box II.15
Recommendations of Committee on the Comprehensive Review of the NSSF

The Committee recommended the following measures on the rationalisation of savings instruments: (i) an increase in the rate of interest to 4 per cent p.a. on savings deposits to align with commercial bank savings deposit rate; (ii) measures to improve liquidity on recurring and time deposit schemes; (iii) abolition of maturity bonus on Monthly Income Scheme; (iv) an increase in the annual investment limit on PPF to ₹1 lakh to coincide with the ceiling on Section 80C of the I.T. Act; (v) withdrawal of Section 80C income tax benefit for accrued interest on NSC; (vii) discontinuance of *Kisan Vikas Patra* (KVP) which is prone to misuse being a bearer-like instrument; and (viii) introduction of a longer maturity instrument – 10 year NSC.

The Committee recommended that the secondary market yields on Central government securities of comparable maturities should be the benchmarks for the small savings instruments (other than savings bank deposits). A one-year reference period - taking the average of the month-end secondary market yields in the preceding calendar year - may be adopted; however, the inter-year movement of interest rate fluctuations would be limited to maximum 100 bps on either direction. A positive spread of 25 bps, *vis-à-vis* government securities of similar maturities (as against 50 bps recommended by the earlier Committees) would contribute to the viability of the NSSF. Exceptions were made only in case of 10-year NSC and Senior Citizens' Savings Scheme (SCSS) by recommending a spread of 50 bps and 100 bps, respectively. The date of notification of the rate of interest on small savings by the Government would be April 1, every year, effective 2012-13.

The Committee recommended a reduction in the mandatory share for States to 50 per cent from 80 per cent at present. After the States exercise their options, the balance amount, if any, could either be taken by the Centre or could be on-lent to other States if they so desire, or could be on-lent for financing infrastructure to companies which are wholly owned by Government. With the rule-based improvement in fiscal situation, lower maturity may not involve refinancing risk. Accordingly, to broadly align with the maturity profile of the small savings instruments, the Committee recommended a shorter tenor of 10 years for investments by NSSF that would largely address the asset-liability maturity mismatch of NSSF. The rate of interest on securities issued to the Central / State Governments would be equal to the sum of the weighted average interest cost on the outstanding small savings and the average administrative cost and would be announced every year on April 1. The reinvestments may be as per the same terms as for fresh investments. The negative gap between the outstanding assets and liabilities of NSSF may be funded by the Central Government. These measures would contribute to the viability of NSSF.

VI. THE EXTERNAL SECTOR

Global recovery loses momentum; sovereign balance sheet risks add to uncertainty

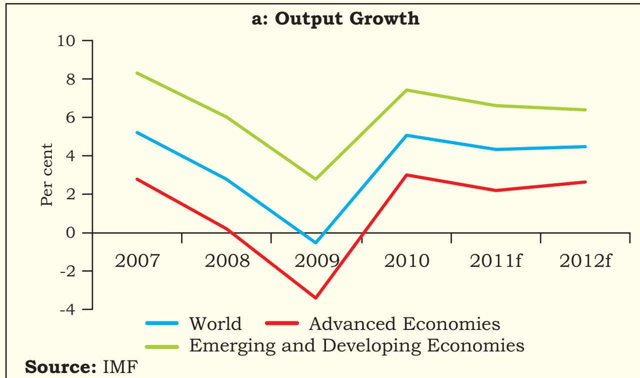
II.6.1 The global economy rebounded in 2010 with a growth of 5.1 per cent after contracting by 0.5 per cent in 2009. The growth in emerging market and developing economies (EMDEs) at 7.4 per cent outstripped the 3.0 per cent growth in advanced economies (AEs) in 2010 (Chart II.44a). China, India, Brazil and the ASEAN-5 grew at a significantly faster pace than the AEs. However, the United States, Germany and Japan had larger swings in growth rates transiting from significant negative to moderately positive growth.

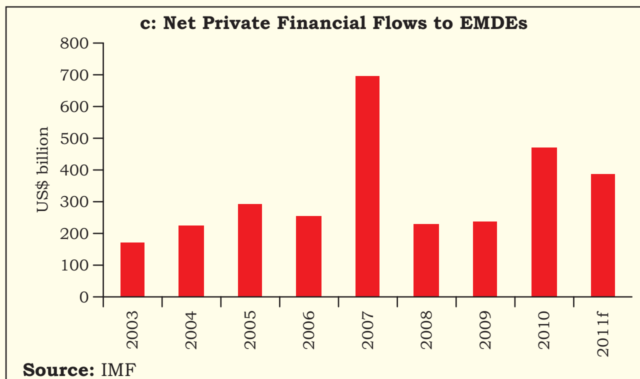
II.6.2 The recovery was marked by continued uncertainty about the durability of the growth process. After recovering strongly in the first half of 2010, the global economy encountered heightened downside risks emanating from concerns relating to the possible sovereign debt defaults in Greece, Ireland and Portugal and the weakening sovereign balance sheets in Italy and Spain. The global recovery lost some momentum in the second half of the year in the AEs, particularly in the US and Japan. Growth in world industrial production also exhibited signs of deceleration after attaining peaks in March 2010. The AEs which faced the prospect of double-dip recession, nevertheless, performed better than expected. However, the recent downgrading of the US sovereign debt by Standard and Poors' (S&P) adversely affected the sentiments in the financial markets across the world, renewing fears of slowdown amidst weakening global economic recovery. Emerging market economies (EMEs) led by China and India continued to grow at a faster rate compared to the AEs.

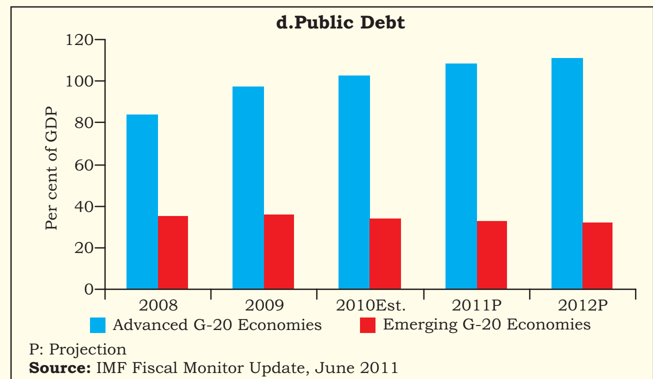
EMEs face rising inflation led by commodity prices

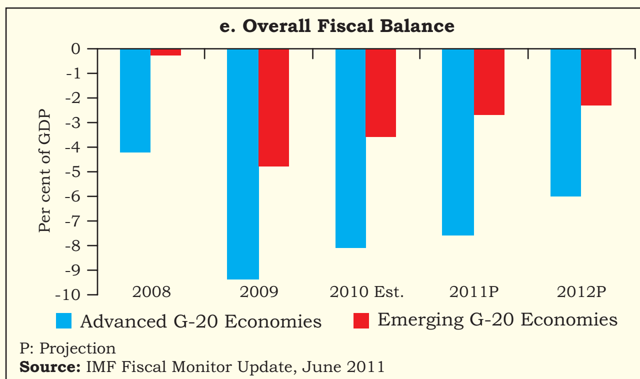
II.6.3 Inflation accelerated in EMDEs during 2010. On an average consumer price basis, it rose to 6.1 per cent in 2010 from 5.2 per cent in the preceding

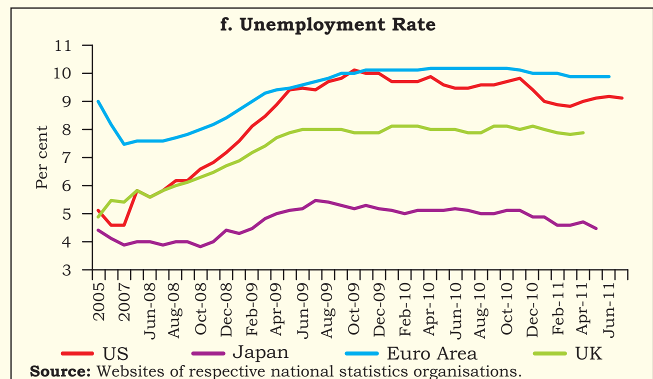
Chart II.44 : Key Global Indicators











year. Both India and China faced considerable inflationary pressures. As a result, Developing Asia's inflation rate nearly doubled to 6.0 per cent in 2010 from 3.1 per cent in 2009. In contrast, consumer price inflation in AEs rose to 1.6 per cent from 0.1 per cent over the same period, but was still well below the long-run average in these countries. The core inflationary pressures remained subdued in these economies, but a stark divergence has occurred in recent months with producer price inflation having risen faster with rising fuel and non-fuel commodity prices.

II.6.4 Global commodity prices firmed up during 2010, owing to rapid growth in EMDEs, stronger-than-expected growth of AEs and weather-related supply shocks. Low global interest rates and large surplus liquidity in the global economy fuelled global commodity prices with players taking long positions. OPEC's lower-than-expected output response during 2010 and unrest in the Middle East and North Africa (MENA) since January 2011 drove up oil prices. Commodity prices are expected to remain firm in 2011. If, however, monetary accommodation

in AEs is progressively withdrawn, the consequent rise in interest rates could reduce leveraged position in commodity markets and deflate commodity prices. Commodity prices could also experience a decline if the pace of global recovery slackens further.

II.6.5 Strong capital inflows induced by the multi-paced global growth and the consequent differential exit from accommodative monetary policy, coupled with the near full capacity utilisation have generated inflationary pressures in many EMEs, including Brazil, China, India, Indonesia, and Russia. In an increasingly interdependent globalised world, options for the pursuit of an independent monetary policy for EMEs like India can get constrained but this could be managed through appropriate policies (Box II.16).

II.6.6 In 2010, the improving demand conditions helped in the recovery of world trade to its pre-crisis level. Exports of EMDEs witnessed higher growth than those of AEs. Exports surged during 2010 and global trade recovered to exceed the pre-crisis high of July 2008 for the first time in March 2011 (Chart II.44b). However, the growth in global trade is expected to moderate due to rising prices of food and other primary products, and unrest in major oil exporting countries. Capital flows are likely to remain strong during 2011, but in view of the recent developments, they do run the risks of turning volatile, with possible episodes of sudden reversals (Chart II.44c).

II.6.7 Fiscal policy continued to support economic activity in the AEs in 2010 (Chart II.44d and e). Going forward, there is an urgent need for adopting fiscal consolidation plans. This need is particularly urgent in countries with debt sustainability issues in the Euro area and also in Japan and the US to avoid contagion spreading from the government balance sheet to the bank balance sheets and the financial markets. Unemployment situation has remained stubbornly high in the AEs throughout 2010 and is improving slowly in 2011 (Chart II.44f).

Balance of Payments improve in 2010-11

II.6.8 The improvement in India's balance of payments (BoP) during 2010-11 primarily reflected pick-up in exports during the second half of the year. Coupled with a higher invisibles surplus, it led to a moderation in the current account deficit (CAD) in 2010-11. While recovery in global growth augured well for pick-up in exports and invisibles, higher international commodity prices, particularly crude oil, impacted the import bill. The improved net capital inflows helped bridge the higher CAD and foreign exchange reserves increased modestly. Key external sector indicators such as CAD, level of external debt and import cover of foreign exchange reserves continued to remain comfortable. On the capital account, the composition of inflows poses some concern as there was slow down in FDI while the volatile components such as FII and short-term trade credits showed some rise that have implications for external debt sustainability. The bilateral nominal rupee-dollar exchange rate showed a two-way movement broadly reflecting demand and supply conditions in the foreign exchange market.

Trade diversification helps narrow trade deficit

II.6.9 India's merchandise exports grew robustly during 2010-11 aided by higher rate of growth in global income and diversification in direction and composition of trade. The Government's export policy in terms of encouragement of Free Trade Zones, Duty Exemption Entitlement Scheme, focus market scheme (FMS) and focus product scheme (FPS) appeared to have contributed to the diversification of exports in terms of products from labour intensive manufactures to higher value-added products in engineering and petroleum sectors and destinations across EMDEs which led to moderation in trade deficit during 2010-11 (Chart II.45). While the share of engineering and petroleum products increased to 27 per cent and 17 per cent in 2010-11 from 21 per cent and 11 per cent, respectively, in 2005-06, the share of labour intensive products declined from 29 per cent to 21 per cent during the same period. The

Box II.16
Has Increasing Globalisation Limited the Effectiveness of National Policies in India?

In the wake of the global financial crisis, financial globalisation has come under scrutiny once again. Critiques of globalisation have re-emphasised that globalisation does not bring any additional gains than what can already come from free trade. In the context of increasing capital flows, it has been time and again pointed out by the critiques that gains from trade in goods (widgets) are of first order, while gains from trade in capital (dollars) are of second order, *a'la* Jagdish Bhagwati. Another observation has been that countries that have benefited most from free-market globalisation are not those that have embraced it wholeheartedly, but those that have adopted parts of it selectively. Open markets succeed only when embedded within social, legal and political institutions that provide them legitimacy by ensuring that the benefits of capitalism are broadly shared (Rodrik, 2011).

Contrarian arguments have been equally strong. Kose, et al.(2009) review a large body of literature to highlight gains from financial globalisation and the various economic policies that could help developing economies effectively manage the process of financial globalisation. They find that policies promoting sound macroeconomy, financial sector development, institutional quality and trade openness appear to help developing countries derive the benefits of financial integration. However, a more recent concern has been: if globalisation is leading to a loss of national policy effectiveness?

The answer is not easy to find. Subbarao (2011) suggests that there is a need to find ways to maximise the benefits of globalisation while minimising its costs. While spillovers occur, we need to deal with them. A typical case has been QE2, which has both positive and negative externalities. Its announcement caused a double whammy on the EMEs through a surge in capital inflows and a rise in commodity prices, both requiring them to tackle inflationary pressures. They put EMEs in a policy bind as higher interest rates to fight inflation could potentially intensify capital inflows further. QE2, however, also helped shore up US recovery, bringing back confidence in financial markets and ultimately helping EMEs through improved trade and capital account flows. Effectiveness of national economic policies goes down in such cases, especially if they are uncoordinated.

The impact of globalisation on national economic policy effectiveness is ultimately an empirical question. Our theoretical understanding of the channels through which national economies are linked is also inadequate. Yet, it would not be correct to say that domestic monetary, fiscal or exchange rate policy becomes redundant with increased openness. Trilemma in policy choice is a well known problem and needs to be managed by adopting less than corner solutions. In fact, under globalisation national policies can be more carefully calibrated and fine-tuned to serve national interests.

For instance, monetary policy takes on new importance under globalisation due to need to contain spillovers and their impact on nominal asset returns. The case for price stability as an optimal monetary rule becomes stronger. Even without nominal price rigidities, price stability is important because it enhances the risk sharing properties of nominal bonds (Devereux and Sutherlands, 2008). It is important to recognise that globalisation represents a shock to relative, not absolute prices. What happens to the general price level depends on what monetary policy makers then decide to do.

It has been argued that *de facto* openness has risen sharply in India and has implied a loss of monetary policy autonomy when exchange rate pegging was attempted (Shah and Patnaik, 2011). It is true that the exchange rate regime has evolved towards greater flexibility as a conscious policy choice, but this has been calibrated to the changing structure and dynamics of the economy without loss of monetary policy independence. Policies had supported this move over a period of time, *inter alia*, by capacity building to withstand volatility and shocks. It has increasingly allowed exchange rate to serve as a buffer, depreciating to help the economy when it was weak and appreciating to reduce excess demand when it was strong. In the past two years, there has been no significant foreign exchange market intervention. The small increase in the Reserve Bank's foreign exchange reserves mainly reflects various accruals, interest earnings and valuation changes. Increased exchange rate flexibility has also minimised the danger that foreign inflows would be attracted by "one-way bets" on appreciation, or that domestic firms would borrow excessively from abroad without hedging their exposure.

Globalisation is a phenomenon that has now acquired a force of its own. Policy interventions can best aim at a right policy mix to reap gains from it while minimising the risks. These gains dynamically can be significant. It may appear that growing global interdependence has increased the Indian economy's vulnerability to external demand and exchange rate shocks. However, misaligned exchange rates amidst balance of payment shocks had a much larger adverse impact on the Indian economy in the earlier crisis episodes. After the Indian economy has become integrated globally, a large shock in the form of a swing of US$100 billion in total net capital inflows in a single year of peak of global crisis had been managed without too much impact on exchange rate, interest rates, external and internal balances.

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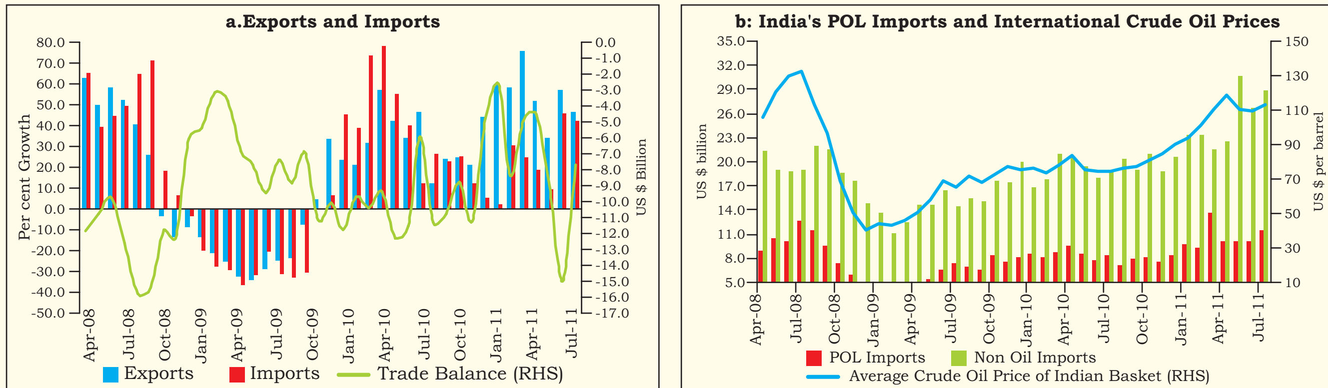
Chart II.45 : India's External Trade

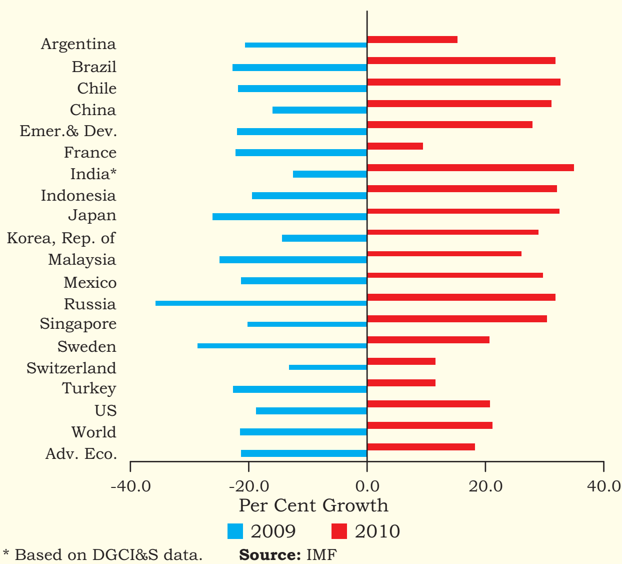


share of developing economies in total exports improved to 42 per cent in 2010-11 from 38 per cent in 2005-06, while the share of OECD countries declined to 33 per cent from 45 per cent during the same period.

II.6.10 Comparing across countries, exports from the group of EMDEs as a whole rose relative to world exports. Countries like India, Brazil, China, Indonesia and Russia witnessed higher growth during 2010 (Chart II.46).

II.6.11 While exports of almost all major groups of commodities improved significantly during 2010-11, performance in case of valued added products such as engineering and petroleum sector has been noteworthy. Engineering products, petroleum products, gems and jewellery witnessed a significantly higher growth (Chart II.47). Moreover, efforts to explore new markets particularly in Africa and Latin America along with added emphasis on exports to EMDEs also contributed to the export performance.

Chart II.46: Year-on-Year Export Growth of India *vis-a-vis* AEs and EMEs

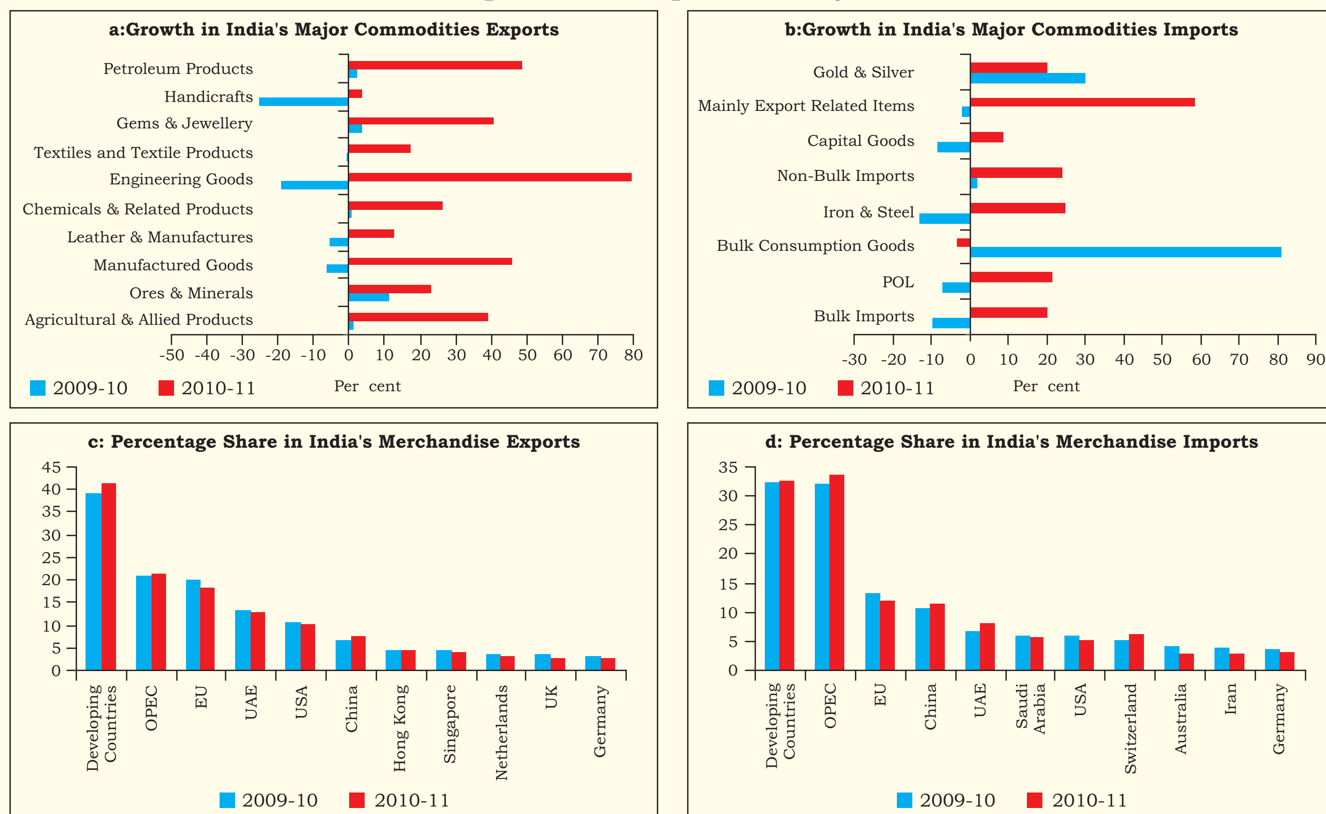


* Based on DGCI&S data. **Source:** IMF

II.6.12 With a view to improving efficiency of export processes, the Union Budget 2011-12 announced the following measures: (i) introduction of a system of self assessment in Customs to enable importers and exporters to assess their duty liabilities; (ii) simplification of tax refunds on services used for exports of goods on the lines of duty drawback schemes; (iii) allowing tax-free receipt of services wholly consumed within the SEZs along with simplified refunds procedures; and (iv) setting up of seven mega leather clusters and a handicraft mega cluster.

II.6.13 Imports grew at a lower pace than exports during 2010-11. There was an increase in the share of industrial inputs in total imports (non-oil imports net of gold and silver, bulk consumption goods, manufactured fertilisers and professional instruments), which was indicative of some qualitative shift in the pattern of imports. Imports of export related items recorded a steep rise of about 59 per cent during the year. The share of gold and silver in total imports remained almost same as that of the previous year's level despite the rise in the price of gold and silver in the international market.

Chart II.47: Exports and Imports of Major Commodities



II.6.14 During 2010-11, as per DGCI&S data, India's merchandise exports and imports increased by 42.3 per cent and 22.3 per cent, respectively, as against a decline of 2.2 per cent and 3.5 per cent during the previous year. Consequently, trade deficit narrowed to US $ 98.2 billion (5.7 per cent of GDP) from the previous year (Appendix Table 17). However, on BoP basis, trade deficit as a percentage of GDP was higher at 7.5 per cent.

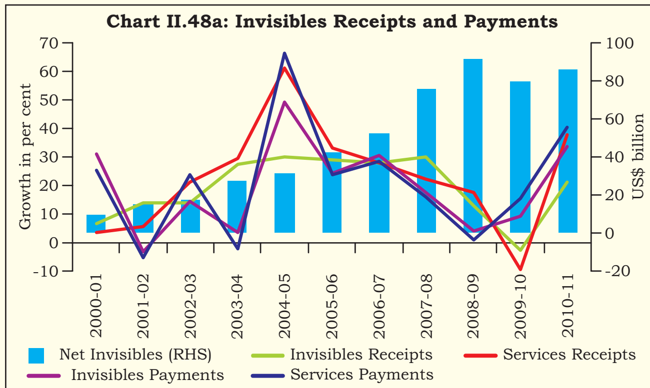
Invisibles growth robust

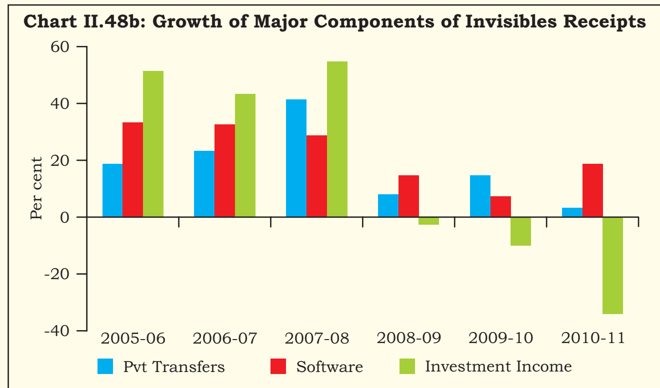
II.6.15 During 2010-11, invisibles receipts and payments exhibited robust growth in contrast to a decline in receipts during 2009-10. This increase - driven by services exports and private transfers - was partly offset by a decline in investment income. The sharp growth in invisible payments was led by its major components *viz.*, services and investment income. As a result, net invisibles recorded a modest increase over the preceding period. Among the major components of invisibles, services exports witnessed a turnaround and recorded a growth of 37.8 per cent to US $ 132 billion. While software services receipts accounted for 44.7 per cent of total services exports, performance of business and financial services also improved significantly during the year.

II.6.16 A noteworthy aspect in respect of services data was the release of provisional aggregate data on trade in services for the first time for the month of April 2011 as a follow up of the implementation of the recommendations of the Working Group on Balance of Payments Manual for India (Chairman: Shri Deepak Mohanty). The aggregate data on trade in services will be released on a monthly basis after a gap of about 45 days.

II.6.17 Investment income receipts, which is a major component of invisibles, declined by about one-third on account of low interest rates abroad. Private transfer receipts, a significant and resilient component of invisibles receipts during the global crisis, increased marginally during 2010-11. With the turnaround in other

Chart II.48 : Performance of India's Invisibles



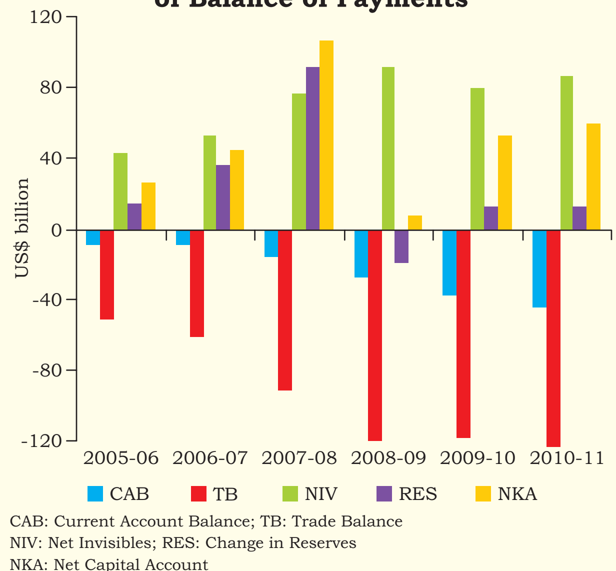


segments, the share of private transfer receipts in current receipts declined during 2010-11 (Chart II.48).

Current account deficit shrinks

II.6.18 On BoP basis, trade deficit widened in absolute terms to US$ 130 billion (7.5 per cent of GDP) during 2010-11 from US$ 118 billion (8.6 per cent of GDP) in the previous year despite higher growth in exports relative to imports (Appendix Table 18). Net invisibles financed about 66.1 per cent of trade deficit as compared with 67.6 per cent in the previous year. As a result, the CAD narrowed to 2.6 per cent of GDP during 2010-11 from 2.8 per cent during the previous year (Chart II.49). Thus, CAD is within the threshold level of sustainable CAD of 2.7-3.0 per cent (Box II.17).

Chart II.49: Trends in the Major Components of Balance of Payments



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

Capital account improves though composition of flows poses concerns

II.6.19 The positive perception of India's growth prospects attracted capital inflows during 2010-11 which witnessed an increase of US$ 6.3 billion over the preceding year. The composition and volatility of such flows posed some concern. There was the dominance of volatile flows such as FII investment and debt creating flows like ECBs and short term credit, while FDI flows moderated. Net FII inflows remained almost at the same level as that of the preceding year; there were, however, occasional bouts of net outflows when investor sentiments changed. Net FDI inflows were lower by almost US$ 11.6 billion, due to significant moderation in gross FDI inflows to India coupled with higher gross outflows. The moderation in equity flows coupled with rising debt flows during 2010-11 poses risks to sustainability.

II.6.20 Non-resident deposits during 2010-11 stood higher than the previous year mainly on account of higher inflows under NRO deposits (Chart II.50). While debt creating flows exhibit significant sensitivity to the interest rate differentials, at the aggregate level, capital flows are only weakly sensitive to the interest rate differentials (Box II.18). Net external assistance received by India was higher by US$ 2 billion benefitting from financial sector loan from the World

Box II.17
India's Threshold level of Sustainable Current Account Deficit

Conceptually, sustainability refers to the ability of a nation to finance its CAD on an ongoing basis. Therefore, the level of current account balance (CAB) that could be financed on a continuous basis without resulting in any external payment difficulties is termed as the sustainable level. Generally, the sustainable level of CAD is measured in terms of net external liabilities (NEL) relative to the size of the economy. The level of CAB that stabilises the net external assets/liabilities in relation to the size of the economy is considered as sustainable. Apart from NEL/GDP ratio, sustainability could also be assessed in terms of a range of economic indicators, *viz.*, debt-GDP ratio, import cover, and debt-servicing ratio. Sustainability of the CAB could also be seen in terms of solvency. A nation is considered solvent if the sum of its discounted current account surpluses in future is more than the current level of net external liabilities. Solvency and sustainability are closely related as a continued unsustainable path of external balance would undermine the solvency of the nation. Theoretically, it can not *a priori* be determined what would be the sustainable level of NEL ratio. It varies from country to country depending upon a host of factors including credibility and ability of the nation to sustain interest of the investors.

The issue of current account sustainability has been raised in several countries from time to time. As a practical solution, any historically sustainable level could be assumed to be sustainable in future as well (IMF, 1999). Milessi-Ferretti and Razin (1996) point out that though generally a CAD at 5 per cent of GDP is considered as a red mark, the question whether CAD is excessive or not can only be answered by modeling the path of external imbalances. But 5 per cent clearly is a danger level even for countries which have unrestricted access to global capital markets. Obstfeld and Rogoff (2005) showed that the then US CAD of 5.4 per cent of GDP had a high probability of the collapse of the US dollar. More recently, concerns have resurfaced over CAD sustainability of a few Euro zone countries. Gagnon (2011) warns that current account imbalances are coming back as a result of interplay of fiscal policy, external financial policy, net foreign assets and oil prices. Sustainable CAD in EMEs is likely to be far less than AEs.

The sustainable CAD/GDP ratio in India has gone up over a period of time. One of the early studies by Callen and Cashin (1999) had estimated it at 1.5-2.5 per cent depending upon growth rate and cost of external finance. However, with much larger cross-border capital flows and improved institutional capability to absorb the same, this has improved. Historically, in India NEL ratio of about 21 per cent was the highest in 1996-97 and it did not cause any pressure on the economy. In order to empirically workout the level of CAB that is consistent with historical sustainable peak level of NEL to GDP ratio, a model akin to 'Domar Model of Debt Sustainability' could be used. Under this model, larger the absolute size of the differential between the growth rate and the interest rate, higher would be the size of CAB that is consistent with a stable NEL ratio. By this method, CAD of 2.7 to 3.0 per cent is found to be sustainable for India over the medium term subject to a set of conditions, *viz.*, (i) GDP growth varies between 7.0 to 9.0 per cent and inflation hovers around 5.0 per cent; (ii) average interest cost on external liabilities ranges 2.0 to 3.5 per cent; and (iii) capital flows range around 4-4.5 per cent of GDP and about 3/5th of the flows are non-debt creating inflows.

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Bank. Buoyant domestic economic activities, improvement in international financial markets and lower cost of funds abroad prompted the Indian corporates to take recourse to ECBs which more than quadrupled to US$ 11.9 billion. Short-term trade credits (STC) also increased. Net capital flows, though higher, were absorbed by the higher current account deficit.

II.6.21 Country-wise, investments routed through Mauritius remained the largest component of gross FDI inflows to India during 2010-11 followed by Singapore and the Netherlands (Appendix Table 19) (Chart II.51). During 2010-11, FDI was mainly channeled into the manufacturing, services and 'construction, real estate and mining' sectors (Chart II.52).

II.6.22 The increase of US$ 13.1 billion in foreign currency assets (FCA) on BoP basis during 2010-11 could primarily be attributed to receipts under external assistance (US$ 6.1 billion), interest and funding

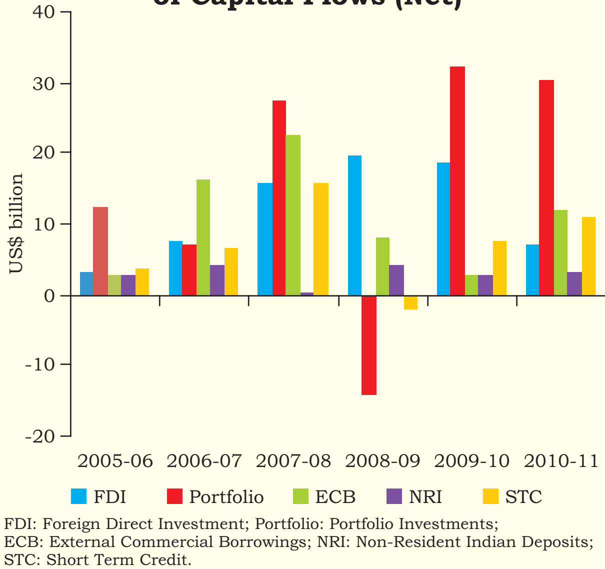

Chart II.50: Trends in Major Components of Capital Flows (Net)

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

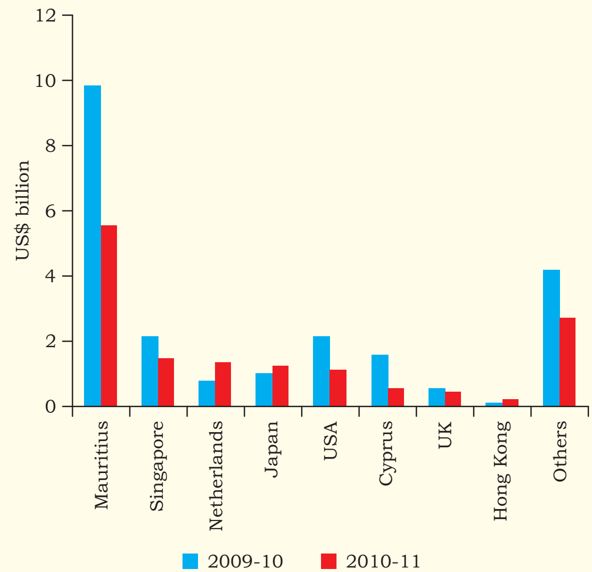

Chart II.51 Country-wise FDI Inflows

income (US$ 4.1 billion) and net purchases (RBI's market intervention) from Authorised Dealers (ADs) (US $ 1.7 billion). During 2011-12 so far (up to August 12), the Indian rupee depreciated against the major international currencies, partly reflecting higher demand from importers (Chart II.53). The exchange rate of the rupee at the current level appears to be fairly valued (Box II.19).

Foreign exchange reserves stable, reflecting flexible rupee

II.6.23 During 2010-11, net capital account surplus, after financing a larger CAD, resulted in a net accretion to foreign exchange reserves of US$ 13.1 billion (excluding valuation effect). Inclusive of the valuation gains, the foreign exchange

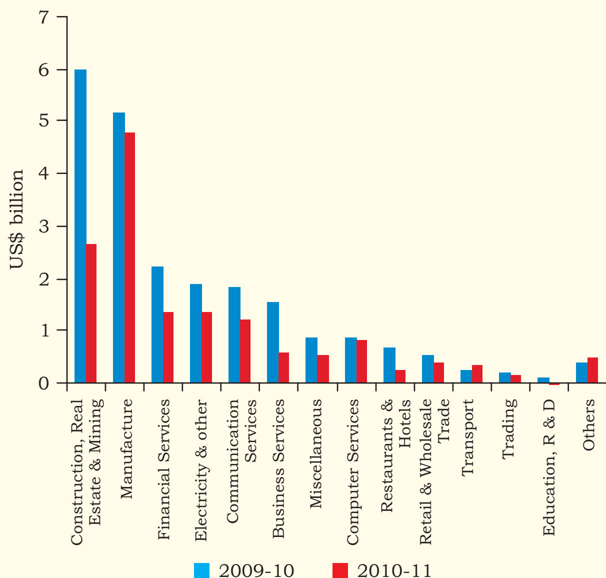

Chart II.52: Industry-wise FDI Flows

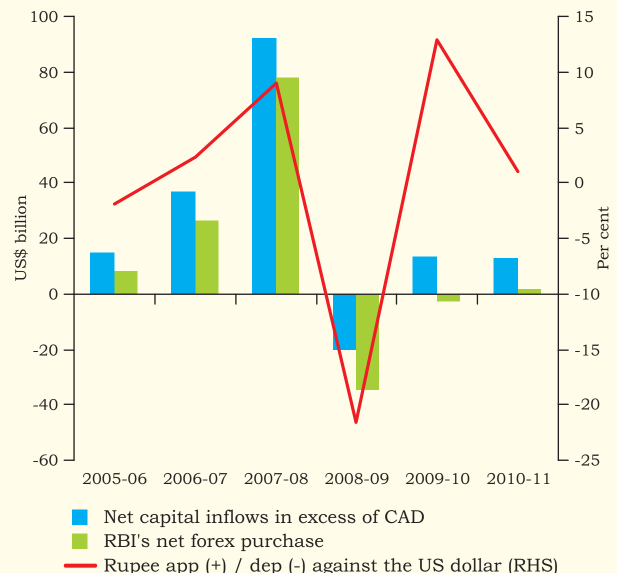

Chart II.53: Exchange Rate flexibility in India

Box II.18
Interest Rate Sensitivity of Capital Flows to India

Interest rate differential has often been viewed as a major determinant of capital flows to EMEs, and, at times, monetary policy measures that may be conditioned by the inflation-growth objectives could magnify or dampen the volume of capital inflows into a country. In the aftermath of the recent global financial crisis, multi-speed recovery and divergent inflationary trends have led to asymmetric monetary exit between EMEs and the AEs. An outcome of this process has been return of excessive capital flows to EMEs, exerting pressure on their asset prices to inflate and the exchange rates to appreciate. In India, during the normalisation of monetary policy in 2010-11 when policy interest rates were successively raised, similar concerns surfaced, particularly in the first half, even though a higher CAD and the associated higher financing needs eased the pressure on the exchange rate. Among the push factors, near zero policy rates maintained in AEs, their weak growth prospects and ample global liquidity conditions reflecting quantitative easing, implied scope for larger inflows to EMEs, including India, in search of higher return. Stronger recovery in a stable macroeconomic environment and the general assessment of India continuing to be one of the fastest growing economies in the world for a long period of time provided the necessary pull to capital inflows.

Recent empirical assessment for India using both causality and cointegration analyses suggests that FDI and FII equity flows, which together on a net basis accounted for around three fourth of the total net capital inflows during the 10-year period from 2000-01 to 2009-10, are not sensitive to interest rate differentials (Verma and Prakash, 2011). FDI inflows are essentially long-term in nature and are primarily driven by growth prospects of the Indian economy and confidence of international investors in India as an attractive long-term investment destination. Stock market returns have been found to be a major pull factor for FII flows into the domestic financial markets. In line with the expectations, debt creating flows, in particular, ECBs, FCNR(B) and NR(E)RA deposits exhibit statistically significant sensitivity to interest rate differentials, even though other determinants of these inflows dominate significantly the impact of interest rate differential. At the aggregate level, cumulative gross capital inflows appear to increase by 0.05 percentage point in response to 1 percentage point increase in interest rate differential. The weak sensitivity of capital flows to interest rate changes suggests that the Reserve Bank's monetary policy needs to continue its focus on objectives relating to inflation and growth, instead of diluting the action based on perception of attracting higher capital inflows and the resultant challenges for exchange rate and domestic liquidity. The magnitude and composition of capital flows could be managed using other instruments, as has been the case in the past.

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Singh, Bhupal (2009), "Changing Contours of Capital Flows to India" *Economic and Political Weekly*, VOL XLIV No. 43 October 24.

Verma, Radheyshyam and Anand Prakash (2011) "Sensitivity of Capital Flows to Interest Rate Differentials: An Empirical Assessment for India", *RBI Working Paper*, WPS (DEPR): 7/ 2011, May.

reserves increased by US$ 25.8 billion. India's foreign exchange reserves stood at US$ 316.6 billion as on August 12, 2011 (Appendix Table 20). The two-way movement in Indian rupee *vis-à-vis* US dollar and Euro was more pronounced since February 2007 than the earlier period indicating its flexibility (Chart II.54).

Management of foreign exchange reserves

II.6.24 The guiding objectives of foreign exchange reserves management in India are safety, liquidity and returns in line with the general international practices in this regard. 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 prices of securities and of the US dollar against other currencies. Moreover, the reserves which are built up mostly out of the volatile capital flows do not represent surplus earnings through trade like in the case of some other countries and they are required to be held as buffer during periods of sudden stops and reversal in capital flows.

Investments under Note Purchase Agreement with IMF

II.6.25 In order to strengthen the IMF's lendable resources, the Reserve Bank had entered into a Note Purchase Agreement (NPA) with the IMF under which the Reserve Bank shall purchase IMF Notes for an amount up to the equivalent of US$10 billion. The earlier commitment of US$ 10 billion under NPA has

Box II.19
Equilibrium Exchange Rate

With the increasing integration of the world economy, the role of exchange rate has become important in the external adjustment process and calls for a credible assessment of equilibrium exchange rate. The assessment of equilibrium exchange rate is essentially an empirical exercise.

From the policy makers perspective in the long-term horizon, there are three complementary methodologies for exchange rate arrangements. These are: macroeconomic balance (MB) approach, a reduced form equilibrium real exchange rate (ERER) approach and an external sustainability (ES) approach. Exchange rate assessments are based on the notion of equilibrium, that is, consistency with external and internal balance over the medium to long-run. The MB approach - a pillar of current account and exchange rate assessments for a number of years - calculates the difference between the CAB projected over the medium term at prevailing exchange rates and an estimated equilibrium CAB. The exchange rate adjustment that would eliminate this difference over the medium term is obtained using country-specific estimated responses of the trade balances to the real exchange rate. The ERER approach directly estimates an equilibrium real exchange rate for each country as a function of medium-term fundamentals such as the net foreign asset position of the country, the relative productivity differential between the tradable and non-tradable sectors, and the terms of trade. Under this approach, the exchange rate adjustment needed to restore equilibrium over the medium term is calculated as the difference between the estimated equilibrium real exchange rate and its current value. The ES approach, involves calculating the difference between the actual CAB and the balance that would stabilise the NFA position of the country at some benchmark level.

With respect to the exchange rate of the Indian Rupee, the preliminary exercise using the external sustainability approach, shows that the sustainable level of CAD is for India is around 3 per cent. As the current level of CAD for India is around 3 per cent, it could be inferred that the exchange rate is close to its equilibrium value. The broad-based 36 currency trade weighted real effective exchange rate, a measure of external competiveness, covering about 85 per cent of India's total trade is generally hovering around the base level of 100, which also corroborates the above empirical exercise. IMF has estimated that the real effective rupee, based on the MB approach, is slightly undervalued but on average the rupee is in equilibrium (IMF 2010).

The exchange rate policy in India is not guided by a fixed or pre-announced target or band; rather, it is determined by the demand and supply in the foreign exchange market. However, the objective of exchange rate policy has been to retain the flexibility to intervene in the foreign exchange market if the capital inflows are lumpy and volatile or if they disrupt the macroeconomic situation.

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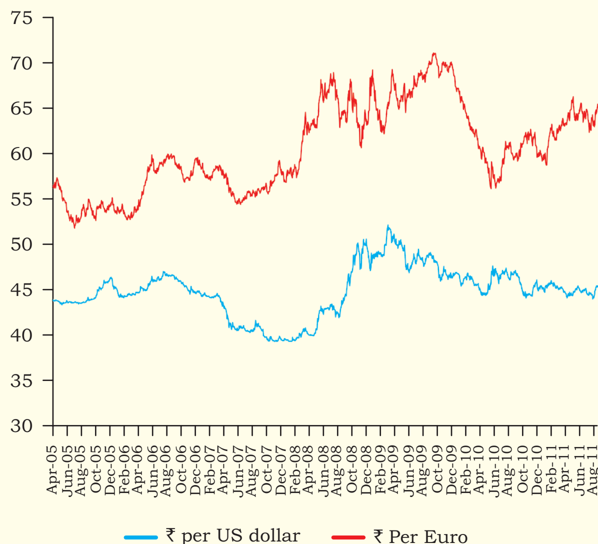
IMF (2010), 'Current Account and External Sustainability'. IMF Staff Technical Note for Article IV consultations with India, November.

Chart II.54: Movements of Indian Rupee against US Dollar and Euro



been folded into the amended and expanded New Arrangements to Borrow (NAB) which has been activated on April 1, 2011. As on June 30, 2011 investments amounting to SDR 750 million (₹5367.90 crore) have been made in notes under NAB.

External debt rises moderately

II.6.26 India's external debt stock increased by 17.2 per cent to US$ 306 billion as at end-March 2011 owing to increase in commercial borrowings, short-term trade credits, multilateral and bilateral borrowings as well as the valuation effects due to depreciation of the US dollar against other major currencies. While long-term debt increased by US$ 32.2 billion to US$ 241 billion, short-term debt (on the basis of original maturity) increased by US$ 13 billion to US$ 65 billion (Appendix Table 21). In terms of currency

composition, the US dollar denominated debt accounted for the major portion of total external debt at end-March 2011 with a share of 59.9 per cent, followed by Indian Rupee (13.2 per cent), Japanese yen (11.4 per cent) and SDR (9.7 per cent) with the balance 5.8 per cent accounted for by the Euro, Pound Sterling and other currencies. Various debt sustainability indicators remained at a comfortable level (Chart II.55).

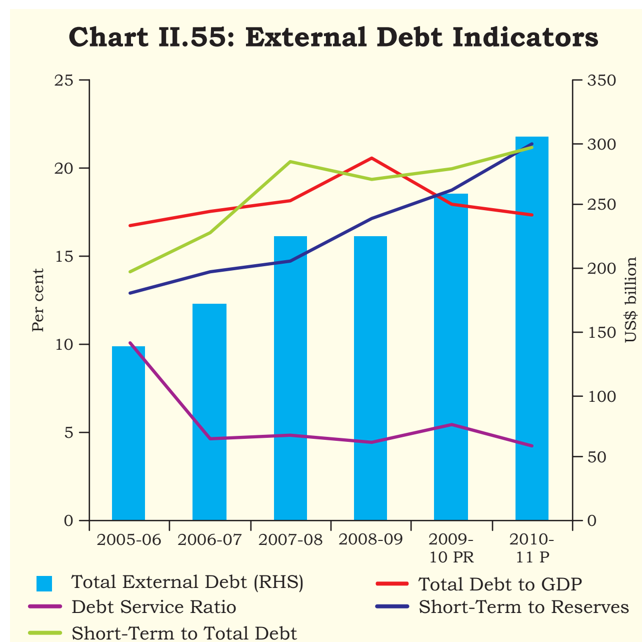
International investment position weakens

II.6.27 Net International investment position (IIP) computed as a gap between the economy's external financial assets and liabilities, is an indicator of the country's strength in terms of sustainability of the financing of its external sector. The international assets increased from US$ 381 billion at end-March 2010 to US$ 425 billion at end-March 2011, mainly on account of increases in direct investment abroad and reserve assets. The increase in international liabilities from US$ 539 billion as at end-March 2010 to US$ 643 billion as at end-March 2011 was mainly on account of an increase in inward direct and portfolio investments and other investments. As a result, net liabilities increased by US$ 61 billion.

External sector resilient, but global uncertainties can impact current and capital account movements

II.6.28 India's external sector remains resilient even after weathering the global financial crisis. However, global uncertainties can have considerable impact on movements in current and capital account of BoP. Exports which performed well in 2010-11 may not sustain high growth momentum if the downside risks to world growth materialise. However, continued product diversification and targeting new markets together with proactive policies pursued by the Government bode well for harnessing export growth potential. Services exports are also likely to remain

Chart II.55: External Debt Indicators



buoyant due to India's comparative advantage in software services. As projected by NASSCOM, software exports could grow robustly by 16-18 per cent in 2011-12. Rising commodity prices, particularly oil, and geo-political turmoil, may have implications for BoP. Private transfers continued to remain buoyant.

II.6.29 Financing of CAD for 2011-12 may not pose a problem as it is unlikely to be high. However, the public debt fragilities in the Euro Zone and the growth slow down in the US may impact capital flows. The inward FDI flows are likely to be much larger during 2011-12 taking into account the proposals cleared and the initial trend available up to June 2011. With regard to portfolio flows they could be volatile, though India is likely to remain one of the preferred destinations due to the differential growth rates. The debt flows may be supported by interest rate differential. Therefore, the BoP situation remains manageable, though it necessitates continuous monitoring due to the global uncertainties.

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

III MONETARY POLICY OPERATIONS

In balancing the twin objectives of price stability and growth, the conduct of monetary policy was conditioned by the shift in policy challenge from "management of recovery" to "management of inflation". During the first half of 2010-11, policy was geared towards non-disruptive normalisation of the monetary policy stance, which supported consolidation of growth. Inflation stayed elevated, but the sources of inflationary pressures warranted cautious calibration of the normalisation process. The anti-inflation accent of monetary policy became stronger during the second half of the year, as the inflation process became generalised and sticky in an environment of strong growth. Furthering transparency about the monetary policy process, minutes of the meetings of the Technical Advisory Committee on Monetary Policy are now being released in the public domain. The operating framework for monetary policy was modified in May 2011, with the switchover to repo rate as the single policy rate for better signalling the stance of monetary policy.

III.1 The monetary policy stance in 2010-11 changed course during the year, from calibrated normalisation to tightening driven by inflation concerns. Liquidity conditions remained consistent with the shift in monetary policy stance, though some of the key determinants of liquidity remained volatile. The cumulative effect of transient factors (such as advance tax collections), frictional factors (large government surplus balances) and structural factors (*i.e.*, high increase in currency in circulation and higher credit growth relative to deposit growth) culminated in large deficit liquidity conditions, which were managed by the Reserve Bank through an appropriate mix of SLR, OMO and LAF.

III.2 A number of steps were taken during 2010-11 to enhance the communication of monetary policy. The Reserve Bank introduced mid-quarter reviews during the year. Another notable development during 2010-11 was the introduction of the Base Rate system which replaced the Benchmark Prime Lending Rate (BPLR) with effect from July 2010. This helped in improving the assessment of the transmission of monetary policy (Box III.1).

Role of communication in monetary policy

III.3 Monetary policy acts on its ultimate objectives of price stability and growth with long and variable lags. Given these lags in monetary transmission, effective communication of monetary policy objectives, rationale for policy actions and expected outcomes is critical. Effective communication along with appropriate monetary actions can help anchor inflation expectations. Like other central banks, the Reserve Bank has also placed a lot of emphasis on effective communication of its policy objectives. The stance of monetary policy and the rationale are communicated to the public in a variety of ways – periodic monetary policy statements, other publications, speeches by the top management and press releases. In order to further enhance the efficacy of the communication process, a number of steps have been taken in the recent period. From September 2010, the Reserve Bank introduced Mid-Quarter Reviews (MQRs) to combine the rigour and comprehensiveness of the quarterly process with the need for flexibility to respond in a fast evolving global and domestic macroeconomic situation.

Box III.1
Monetary Policy Transmission after the Switchover to Base Rate

The Benchmark Prime Lending Rate (BPLR), introduced in 2003, was expected to serve as the benchmark rate for pricing of loan products by reflecting the actual cost of funds for banks. The BPLR system, however, fell short of its original objective of bringing transparency to lending rates. This was mainly because banks could lend below the BPLR under the system. The share of sub-BPLR lending (excluding export credit and small loans) of SCBs was as high as 77 per cent in September 2008, before dropping to 70 per cent, which was still very high, during the quarter ended June 2010. As a result, it was difficult to assess the transmission of policy rates of the Reserve Bank to lending rates of banks.

In order to address these concerns, the Reserve Bank announced the constitution of a Working Group (Chairman: Shri Deepak Mohanty) in the Annual Policy Statement of 2009-10 to review the BPLR system and suggest changes to make credit pricing more transparent. The Working Group submitted its Report in October 2009 and based on the recommendations of the Group and the suggestions from various stakeholders, the Reserve Bank issued guidelines on the Base Rate system in April 2010. The system of Base Rate, that came into effect on July 1, 2010, replaced the BPLR system.

Under the new system, the actual lending rate charged to borrowers is the Base Rate plus borrower-specific charges. The Base Rate is the minimum rate for all loans and banks are not permitted to resort to any lending below the Base Rate except some specified categories such as: (a) Differential Rate of Interest (DRI) advances, (b) loans to banks' own employees, (c) loans to banks' depositors against their own deposits, (d) interest rate subvention given by government to agricultural loans and rupee export credit, and (e) some specific cases of restructured loans. The interest rates on small loans up to ₹2 lakh and rupee export credit have been deregulated to increase the flow of credit to small borrowers and exporters at reasonable rates. With these measures, the Reserve Bank achieved complete deregulation of interest rates relating to rupee lending by commercial banks. The Base Rate system was expected to facilitate better pricing of loans, enhance transparency in lending rates and improve the assessment of the transmission of monetary policy. Though the experience so far is limited, it suggests that these objectives have been largely met.

The Reserve Bank has increased the repo rate by 325 basis points (bps) since mid-March 2010. The effective tightening of the policy rate has, however, been of the order of 475 bps as the system migrated from surplus mode to deficit mode. In response, Base Rates have been raised by 75-375 bps between July 2010 and August 11, 2011 (Table 1). The range of increase was, however, much narrower, *i.e.,* 175-375 bps for 49 major banks.

Table 1: Variation in Policy Rate of the Reserve Bank and Deposit/Lending Rates of SCBs

(bps)

Period	Increase in Repo Rate	Increase in Deposit Rates	Increase in Lending Rate	
			Base Rate	BPLR
Mid-March 2010 to May 2010	50	25-160	Not Applicable	No Change
June 2010 to August 11, 2011	275	25-550	75-375	100-375

It has been observed that there is greater convergence amongst banks in fixing the Base Rate over time *vis-a-vis* under the BPLR system. As a result, the Base Rate system is found to be more transparent and more responsive to hikes in policy rates by the Reserve Bank compared to the BPLR system. This is reflected in the average increase in the Base Rate by public and private sector banks since July 2010. It is seen that the pace of increase in Base Rate in response to increase in policy rate was initially slower but picked up momentum during December 2010-February 2011. Also, the number of days taken by these banks to raise their Base Rates went down during this period (Table 2). However, following gradual moderation in the growth of non-food credit, the pace of increase in Base Rate relative to that of the repo rate slowed down from February 2011 onwards, while the number of days taken to raise the Base Rate also increased.

Table 2: Extent of Increase in Base Rate and Time Taken by Public/Private Sector Banks

Period (Month over Month)	Increase in Repo Rate (bps)	Average increase in Base Rate (bps)	Average no. of days taken to raise Base Rate
Dec.10/July 10	75	58	140
Feb.11/Dec.10	25	65	74
May 11/Feb.11	75	64	88
August 11, 11/May 11	125	69	87

Thus, not only has there been a larger degree of convergence of the Base Rates across banks, they have also become more responsive to increase in policy rates of the Reserve Bank. As a result, the assessment of the transmission of monetary policy has strengthened under the new system, from that under the BPLR system.

III.4 Steps taken to strengthen the existing two-way communication process include webcasting of the Governor's press conference and interaction with researchers/analysts on monetary policy after the quarterly reviews. Audio recordings and transcripts of the press conference and the teleconference with researchers/analysts are also put on the Reserve Bank's website.

III.5 As a part of its communication policy and given the objective of more transparency, the Reserve Bank is endeavouring to put in public domain all data/inputs that go into the formulation of monetary policy. Accordingly, the main points of discussion in the meetings of the Technical Advisory Committee (TAC) on Monetary Policy are being placed on the website, roughly four weeks after the meeting of the Committee. The first such release was in February 2011 of the TAC meeting in January 2011.

Introduction of mid-quarter reviews

III.6 Most major central banks make frequent monetary policy announcements ranging from 8 to 12 announcements a year. Monetary and credit policy was traditionally reviewed by the Reserve Bank twice a year. Over time, a need was felt to increase the frequency of the policy communication and the Annual Policy Statement of 2005-06 announced the introduction of more frequent reviews of monetary policy, at quarterly intervals. The proposed quarterly reviews of monetary policy were intended to provide the opportunity for structured communication with markets on a more frequent basis, while retaining the flexibility to take specific measures warranted by evolving circumstances.

III.7 The gap of a quarter between policy reviews was felt too long in a rapidly evolving macroeconomic situation. There were several occasions (April, June and September-December 2008; January and March 2009; March and July 2010) when the Reserve Bank had to take policy actions in response to macroeconomic developments. While these instances questioned the discipline of the quarterly schedule, they also underscored the need for flexibility.

III.8 Accordingly, the First Quarter Review of Monetary Policy for July 2010 announced the introduction of MQRs. By instituting MQRs, the Reserve Bank intended to take the surprise element out of the off-cycle actions. The Reserve Bank, however, reserves the flexibility to take swift and pre-emptive policy actions, as and when warranted by the evolving macroeconomic developments. It was decided to announce the MQRs in June, September, December and March by way of a press release, providing a rationale for either action or maintenance of the *status quo*. The first MQR was announced in September 2010.

III.9 Unlike the Quarterly Reviews, the MQRs were intended to be a less intensive process. In the run up to the MQRs, there are no pre-policy consultations with the stakeholders from the financial market and the industry. However, there is a process of consulting the members of the TAC. In order to take the advice of the TAC members in the run up to the MQRs, the Reserve Bank has instituted a mechanism to obtain the views of the members through a structured feedback format.

MONETARY POLICY OPERATIONS: CONTEXT AND RATIONALE

III.10 The monetary policy stance in 2010-11 evolved in line with changing domestic growth-inflation dynamics. In the first half of 2010-11, the thrust of monetary policy was on avoiding policy impediments to the recovery amidst global uncertainties, while also containing inflationary pressures. Headline inflation, which touched double digits in the first quarter of 2010-11, showed moderation in the second quarter of the year, but remained above the comfort zone of the Reserve Bank. Food inflation remained high on account of structural demand-supply imbalances despite normal monsoons. Though non-food manufactured products inflation declined from the elevated levels seen at the start of the year, it remained sticky and above its medium term trend. Considering global uncertainties and associated implications for domestic growth and the fact that inflation was largely driven by supply side factors, the Reserve Bank followed calibrated normalisation of policy (Table III.1).

III.11 In the second half of 2010-11, while growth continued to consolidate, the moderating path of inflation reversed beginning December 2010 due to a series of supply side shocks, both domestic and

Table III.1: Movements in Key Policy Rates and Reserve Requirements in India

(Per cent)

Effective since	Reverse Repo Rate	Repo Rate	Cash Reserve Ratio	Marginal Standing Facility Rate
1	2	3	4	5
February 13, 2010	3.25	4.75	5.50 (+0.50)	-
February 27, 2010	3.25	4.75	5.75 (+0.25)	-
March 19, 2010	3.50 (+0.25)	5.00 (+0.25)	5.75	-
April 20, 2010	3.75 (+0.25)	5.25 (+0.25)	5.75	-
April 24, 2010	3.75	5.25	6.00 (+0.25)	-
July 2, 2010	4.00 (+0.25)	5.50 (+0.25)	6.00	-
July 27, 2010	4.50 (+0.50)	5.75 (+0.25)	6.00	-
September 16, 2010	5.00 (+0.50)	6.00 (+0.25)	6.00	-
November 2, 2010	5.25 (+0.25)	6.25 (+0.25)	6.00	-
January 25, 2011	5.50 (+0.25)	6.50 (+0.25)	6.00	-
March 17, 2011	5.75 (+0.25)	6.75 (+0.25)	6.00	-
May 3, 2011	6.25 (+0.50)	7.25 (+0.50)	6.00	8.25*
June 16, 2011	6.50 (+0.25)	7.50 (+0.25)	6.00	8.50 (+0.25)
July 26, 2011	7.00 (+0.50)	8.00 (+0.50)	6.00	9.00 (+0.50)

Note: 1. Reverse repo indicates absorption of liquidity and repo indicates injection of liquidity.
2. Figures in parentheses indicate change in policy rates in per cent.

* : Marginal Standing Facility is with effect from May 9, 2011.

global. Food prices registered sharp increases in December 2010 and January 2011 following unseasonal increase in vegetable prices. The sharp increase in global prices of raw cotton and rubber, metals and minerals were transmitted quickly to the domestic markets during the second half of the year. Even as mineral oil price inflation showed an uptick, it was less than the extent of the global crude price inflation as the administered mineral oil prices remained unchanged. Robust demand conditions saw input price pressures being increasingly transmitted to final output prices and rising core inflation. It was, therefore, crucial to ensure that the elevated inflationary expectations did not get entrenched. Hence, towards the end of 2010-11, monetary policy stance underwent a shift as the Reserve Bank deviated from the calibrated approach and took stronger monetary policy measures. This was warranted to ensure that the long-term growth prospects were not harmed, even if it meant sacrificing some growth in the short-term (Table III.2).

III.12 Based on the Report of the Working Group to Review the Operating Procedures of Monetary Policy in India (Chairman: Shri Deepak Mohanty) and in the light of the feedback received, changes relating to operating procedures of monetary policy were announced in the Monetary Policy Statement for 2011-12 (Box III.2).

Table III.2: Monetary Policy Reviews

Monetary Policy Statement 2010-11

Backdrop:
- Broad-based recovery taking firm hold with rising domestic and external demand.
- Inflation pressures, initially driven by food prices, becoming more generalized.
- Corporates regaining pricing power in many sectors.
- Inflation expectations of the households at elevated level.

Baseline Projection/Indicative Trajectory:
- 8.0 per cent real GDP growth (with an upside bias) during 2010-11.
- 5.5 per cent WPI inflation for March 2011.
- 17.0 per cent, 18.0 per cent and 20.0 per cent growth in M_3, aggregate deposits and non-food credit, respectively, during 2010-11.

Measures:
- Increase in repo rate, reverse repo rate and CRR by 25 basis points each.

Expected Outcome:
- Contain inflation and anchor inflationary expectations.
- Sustain the recovery process.
- Meet government borrowing requirements and the private credit demand.
- Align policy instruments in a manner consistent with the evolving state of the economy.

Mid-Cycle Policy Measure: July 2, 2010

Backdrop:
- Double-digit headline inflation levels.
- Petrol prices were decontrolled and prices of remaining administered fuel such as diesel, LPG and kerosene were increased in end-June 2010.

Measures:
- Increase in repo rate and reverse repo rate by 25 basis points each (with the LAF window having moved to deficit mode from end-May 2010, effective tightening of 175 basis points).

First Quarter Review of Monetary Policy 2010-11

Backdrop:
- Growth process registered further momentum during Q1 of 2010-11.
- Overall food inflation at elevated level.
- Rise in administered prices of iron ore and electricity.
- Non-food manufactured products inflation much higher than the medium-term trend.

Baseline Projection/Indicative Trajectory:
- 8.5 per cent real GDP growth during 2010-11.
- 6.0 per cent WPI inflation for March 2011.

Measures:
- Increase in repo rate and reverse repo rate by 25 basis points and 50 basis points, respectively.

(Contd...)

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Mid Quarter Review: September 2010
- Inflation continued to be the dominant concern for policy.
- Increase in repo rate and reverse repo rate by 25 basis points and 50 basis points, respectively.

Second Quarter Review of Monetary Policy 2010-11
Backdrop:
- Normal monsoons raised the prospects of good *Kharif* cultivation.
- Quarterly industrial outlook survey showed improvement in the overall business conditions.
- Moderation in food inflation not commensurate with a normal monsoon, due to continued elevated prices of protein-rich food items.
- Non-food primary articles, specifically fibres registered significant inflation.

Baseline Projection/Indicative Trajectory:
- 8.5 per cent real GDP growth during 2010-11.
- 5.5 per cent WPI inflation (under the new base) for March 2011, equivalent to 6.0 per cent inflation under the old base.

Measures:
- Increase in repo rate and reverse repo rate by 25 basis points each.

Expected Outcome:
- Sustain the anti-inflationary thrust of the recent monetary actions and outcomes in the face of persistent inflation risk.
- Rein in rising inflationary expectations that could be aggravated by the structural nature of food price increases, while not disrupting growth.

Mid Quarter Review: December 2010
- Management of liquidity came to the forefront of policy concerns, following the excessive tightness in money markets.
- The SLR of SCBs was reduced from 25 per cent of their NDTL to 24 per cent with effect from December 18, 2010.
- Staggered OMO auctions for purchase of government securities for an aggregate amount of ₹48,000 crore announced.
- These measures were expected to release sizeable primary liquidity into the system, bringing down the liquidity deficit in the system close to the comfort zone of the Reserve Bank while stabilising interest rates in the overnight inter-bank market closer to the operative policy rate of the Reserve Bank.

Third Quarter Review of Monetary Policy 2010-11
Backdrop:
- Real GDP increased by 8.9 per cent during the first half of 2010-11, reflecting strong domestic demand, especially private consumption and investment, and improving external demand.
- Series of commodity price shocks – vegetable prices, crude oil prices.

Baseline Projection/Indicative Trajectory:
- 8.5 per cent real GDP growth (with an upside bias) during 2010-11.
- 7.0 per cent WPI inflation for March 2011.

Measures:
- Increase in repo rate and reverse repo rate by 25 basis points each.

Mid Quarter Review: March 2011
- Inflation pressures accentuated further after January 2011.
- Inflation estimated at around 8 per cent for March 2011.
- Increase in repo rate and reverse repo rate by 25 basis points each.

Monetary Policy Statement 2011-12
Backdrop:
- Very sharp rise in inflation and elevated inflationary expectations.
- Rise in inputs costs quickly passed on to domestic manufactured goods.
- Signs of moderation in growth particularly investment spending.
- Rise in administered coal prices in end-February 2011.

Baseline Projection/Indicative Trajectory:
- 8.0 per cent real GDP growth during 2011-12.
- 6.0 per cent WPI inflation (with an upward bias) for March 2012.
- 16.0 per cent, 17.0 per cent and 19.0 per cent growth in M_3, aggregate deposits and non-food credit of SCBs, respectively.

Measures:
- Repo rate increased by 50 basis points to 7.25 per cent.
- Reverse repo rate, determined with a spread of 100 basis points below the repo rate, automatically adjusted to 6.25 per cent.
- Marginal Standing Facility (MSF) rate, determined with a spread of 100 basis points above the repo rate, fixed at 8.25 per cent.
- Interest rate on savings bank deposit rate increased from 3.5 per cent to 4.0 per cent.

Expected Outcome:
- Contain inflation by reining in demand-side pressures.
- Anchor inflationary expectations and sustain the growth in the medium-term by containing inflation.

Mid Quarter Review: June 2011
- The monetary policy stance remains anti-inflationary.
- Repo rate increased by 25 basis points.

First Quarter Review of Monetary Policy 2011-12
Backdrop:
- Some moderation underway in industrial production.
- Prospects of agriculture not clear.
- Continued high level of inflation.
- Rise in administered fuel prices in June 2011.

Baseline Projection/Indicative Trajectory:
- 8.0 per cent real GDP growth during 2011-12.
- 7.0 per cent WPI inflation for March 2012.
- 15.5 per cent and 18.0 per cent growth in M_3 and non-food credit of SCBs, respectively.

Measures:
- Repo rate increased by 50 basis points to 8.0 per cent.
- Reverse repo rate, determined with a spread of 100 basis points below the repo rate, automatically adjusted to 7.0 per cent.
- MSF rate, determined with a spread of 100 basis points above the repo rate, fixed at 9.0 per cent.

Box III.2
Changes in Operating Procedure of Monetary Policy

Background

The operating procedure of monetary policy in India has witnessed significant changes since the beginning of the 1990s with developments in money market and changes in liquidity conditions brought about by financial sector reforms. In this process, the LAF, introduced in June 2000, emerged as the principal operating procedure of monetary policy, with the repo and the reverse repo rates as the key instruments for signalling the monetary policy stance. LAF, supported by instruments such as the CRR, OMO and MSS, had served the Indian monetary and financial system well. Large volatility in capital flows and sharp fluctuations in government cash balances, however, posed several challenges to liquidity management by the Reserve Bank.

Thus, the first Quarter Review of Monetary Policy for 2010-11 proposed the need for revisiting the operating procedures of monetary policy in India. Accordingly, on October 1, 2010, a Working Group (Chairman: Shri Deepak Mohanty) was constituted with members drawn from the Reserve Bank, financial market participants and the academia.

Changes in the Extant Operating Procedures of Monetary Policy

Based on the Group's recommendations and the feedback received, the following changes in the extant operating procedures of monetary policy were effected as announced in the Monetary Policy Statement for 2011-12:

- The weighted average overnight call money rate is now the operating target of monetary policy.
- The repo rate has acquired the status of being the only one independently varying policy rate.
- A new MSF has been instituted from which SCBs can borrow overnight up to 1.0 per cent of their respective NDTL at 100 basis points above the repo rate.

The revised corridor has a fixed width of 200 basis points. The repo rate has been placed in the middle of the corridor, with the reverse repo rate 100 basis points below it and the MSF rate 100 basis points above it. However, the Reserve Bank will have the flexibility to change the width of the corridor, should monetary conditions so warrant.

Asset price implications for monetary policy

III.13 In general, wealth impact is not observed to be very significant in India. Only a small portion of savings, *i.e.,* about 12 per cent of total savings of the household sector in financial assets, is invested in the equity market. In many advanced economies, the share of such investment in total financial savings is much bigger. Therefore, cooling down of the equity market should not have any significant impact on the aggregate demand. As regards, the real estate market, home owners in India, unlike advanced economies, do not borrow against the houses already purchased when their valuations go up. As such, cooling of real estate prices should also not have any significant impact on consumption and hence aggregate demand. Thus, asset prices do not seem to influence the inflation path and conduct of monetary policy may refrain from responding directly to asset price cycles. The Reserve Bank has used both micro and macro prudential measures to limit the risks to financial stability from asset price cycles. Monetary policy, as a macroeconomic policy tool, enables an environment in which prudential regulation works more effectively.

Overall Assessment

III.14 During the major part of 2010-11, the stance of the monetary policy was for calibrated normalisation. The moderation in inflation in Q2 and Q3 of 2010-11 justified such a calibrated approach. As the LAF window of the Reserve Bank transited from a surplus to a deficit mode, consistent with the Reserve Bank's anti-inflationary stance and its calibrated approach to absorb surplus liquidity, liquidity management also became a central focus in 2010-11. It had to be ensured that the primary liquidity needs of an expanding economy were met in a manner consistent with the anti-inflationary monetary policy stance. Inflation pressures, however, intensified in Q4 of 2010-11 even as the growth process showed some signs of moderation. The proximate cause of the intensification of inflationary pressure was a series of supply side shocks, both domestic and global, which rapidly fed into a broad spectrum of manufactured products. The inflation pressures and elevated inflation expectations emerged as a source of risk to future growth. Accordingly, the stance of monetary policy for 2011-12 gave foremost priority to containing inflation and anchoring inflation

expectations even at the cost of some growth in the short-run.

Management of liquidity – evolving factors driving Reserve Bank's operations

III.15 During 2010-11, the centre's cash balance with the Reserve Bank and currency in circulation were key drivers of autonomous liquidity. With the consolidation of economic growth, credit growth accelerated faster than deposit mobilisation, leading to structural squeeze on liquidity for an extended period. The deficit liquidity conditions were reflected in large recourse to the LAF repo window (Chart III.1). The Reserve Bank actively managed liquidity so that neither a surplus diluted monetary transmission, nor a deficit choked fund flows. While the overall liquidity in the system remained in deficit, consistent with the policy stance, the extent of deficit went beyond the Reserve Bank's comfort zone of (+)/(-) one per cent of NDTL of banks, requiring appropriate policy measures (Table III.3).

III.16 The liquidity conditions changed significantly during Q1 of 2010-11. With the recovery of the economy firmly in place, the Reserve Bank moved in a calibrated manner in the direction of normalising its policy instruments. Accordingly, there was gradual moderation in the volume of surplus liquidity in the system from February 2010. The liquidity conditions switched to deficit mode from end-May 2010, due to large increase in government balances with the Reserve Bank generated from 3G/BWA spectrum auctions and the first instalment of quarterly advance tax payments in June 2010.

III.17 During Q2 2010-11, the liquidity conditions continued to remain in deficit mode till end-July 2010 and eased thereafter mainly on account of large scale public debt redemptions. After a brief period of surplus liquidity (from end-August to early-September 2010), it again switched to deficit mode as liquidity migrated to government balances with the Reserve Bank on account of the second quarterly advance tax payments.

III.18 The liquidity conditions tightened significantly during Q3 2010-11 mainly due to autonomous factors, *i.e.*, increase in the government's surplus balance with the Reserve Bank and currency in circulation compounded by the structural liquidity mismatch faced by banks. The government's surplus balance peaked in December 2010 reflecting advance tax collections. The net injection under the LAF peaked at ₹1,70,485 crore during the third week of December 2010 (Chart III.2).

Chart III.1: Repo (+)/ Reverse Repo (-) under LAF

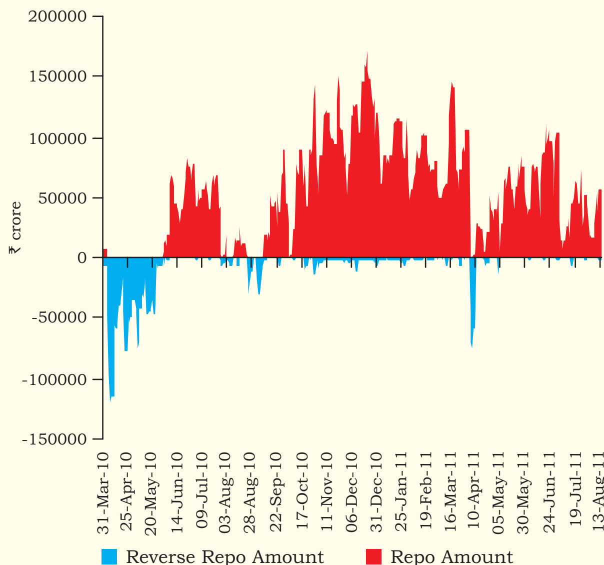
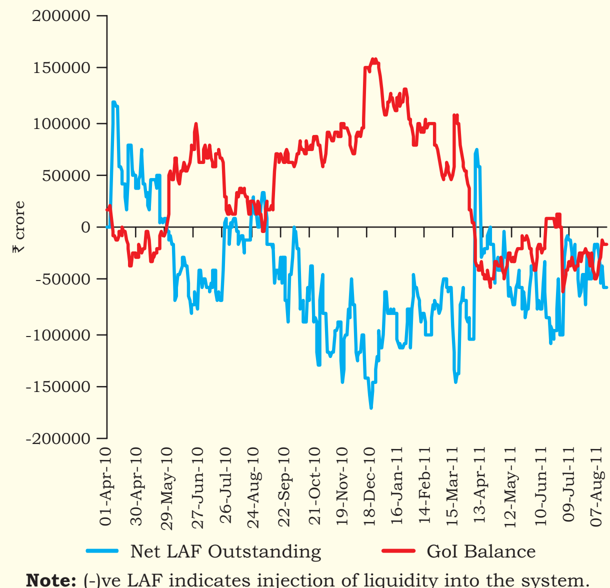


Chart III.2: Outstanding LAF and GoI Balance



Note: (-)ve LAF indicates injection of liquidity into the system.

Table III.3:Liquidity Management Measures taken by the Reserve Bank in 2010-11

Time Period/Event	Measures
1	2
End-May 2010 : Larger than anticipated collection from 3G/BWA spectrum auctions in addition to advance tax outflows resulted in migration of liquidity to central government's cash balance account with the Reserve Bank	For the period May 28, 2010-July 2, 2010, SCBs were : (i) Allowed to avail additional liquidity support under the LAF to the extent of up to 0.5 per cent of their NDTL (for any shortfall in maintenance of SLR arising out of availment of this facility, banks were allowed to seek waiver of penal interest). (ii) Given access to second LAF (SLAF) on a daily basis. With the persistence of deficit liquidity conditions, measure (i) was extended up to July 16, 2010 and measure (ii) up to July 30, 2010.
End-October 2010 : Frictional liquidity pressure due to autonomous factors	(i) The Reserve Bank conducted special SLAF on October 29 and November 1, 2010, a special two-day repo auction under the LAF on October 30, 2010, and allowed waiver of penal interest on shortfall in maintenance of SLR (on October 30-31, 2010) to the extent of 1.0 per cent of NDTL for availing additional liquidity support under the LAF. (ii) The Reserve Bank extended these liquidity easing measures further and conducted SLAF on all days during November 1-4, 2010 and extended the period of waiver of penal interest on shortfall in maintenance of SLR (to the extent of 1.0 per cent of NDTL) for availing additional liquidity support under the LAF till November 7, 2010. (iii) The Reserve Bank purchased government securities under OMO from November 4, 2010. (iv) On November 9, 2010, the Reserve Bank reintroduced daily SLAF and extended the period of waiver of penal interest on shortfall in maintenance of SLR to the extent of 1.0 per cent of NDTL for availing additional liquidity support under the LAF till December 16, 2010. (v) On November 29, 2010, the Reserve Bank extended the daily SLAF and allowed additional liquidity support to the SCBs under the LAF to the extent of up to 2.0 per cent of their NDTL till January 28, 2011.
Mid-December 2010 : Continued build up in government balances on account of third quarterly advance tax collections	In the MQR, the Reserve Bank: (i) Reduced the SLR of SCBs from 25 per cent of NDTL to 24 per cent with effect from December 18, 2010. Given the permanent reduction in the SLR, additional liquidity support of 1.0 per cent of NDTL was made available from December 18, 2010 to January 28, 2011. (ii) Announced conduct of OMO auctions for purchase of government securities for an aggregate amount of ₹48,000 crore over the next one month (staggered as purchases of ₹12,000 crore per week).
End-January 2011: Frictional and structural liquidity pressure	In the Third Quarter Review of January 2011, the Reserve Bank extended the daily SLAF and additional liquidity support to SCBs of 1.0 per cent of NDTL under the LAF till April 8, 2011. Subsequently, both the measures were extended till May 6, 2011.

III.19 At the start of Q4 2010-11, injections under the LAF declined marginally due to the cumulative impact of decline in surplus balances of the Centre and staggered OMO carried out by the Reserve Bank in December 2010-January 2011. During 2010-11, the Reserve Bank purchased government securities for an aggregate amount of about ₹67,000 crore under OMO auctions. The liquidity conditions improved further in February 2011 with the decline in the surplus balances of the Centre. Notwithstanding the quarterly advance tax outflows during mid-March 2011, the liquidity deficit remained controlled on account of higher government expenditure during the month. Thus, the quantum of liquidity deficit declined in Q4

as compared with Q3, mainly on account of the Reserve Bank's OMO purchases and the decline in government cash balances with the Reserve Bank.

III.20 The current financial year began with liquidity remaining in absorption mode in the first week of April 2011 on account of high government expenditure and the absence of normal government securities auctions. The liquidity conditions again shifted to injection mode from the second week of April 2011. The average daily net liquidity injection declined significantly to about ₹19,000 crore during April 2011 from about ₹81,000 crore in March 2011. While the negative government balance with the Reserve Bank added liquidity into the system, the increasing currency with the public acted in the opposite direction during the month. The liquidity conditions tightened further in May 2011 as the gap between pace of credit growth and deposit mobilisation by banks, which had been narrowing from end-December 2010, reversed trend and increased in May 2011. There was also a decline in WMA/OD availed by the government.

III.21 The liquidity conditions remained in deficit mode in June 2011 due to quarterly advance tax outflows. The average daily net liquidity injection increased further to around ₹74,000 crore. The liquidity conditions improved at the beginning of July 2011 partly on account of redemption of a security with outstanding stock of ₹37,000 crore. The liquidity deficit, however, increased subsequently and the average daily net liquidity injection was around ₹44,000 crore during July 2011. The average daily net liquidity injection under the LAF was around ₹37,000 crore during August 1-16, 2011. Up to mid-August 2011, availment of funds under the MSF, which came into operation in May 2011, has happened only twice.

III.22 As the main drivers of liquidity conditions varied from quarter to quarter as discussed above, the Reserve Bank had to manage liquidity actively while avoiding any possible conflict with the monetary policy stance. Persistence of inflation at elevated level was a key challenge for monetary policy, despite evidence of strengthening monetary policy transmission.

IV CREDIT DELIVERY AND FINANCIAL INCLUSION

Financial inclusion is an important process to attain the goal of inclusive growth. Accordingly, the Reserve Bank of India has made sustained efforts to increase the penetration of formal financial services in unbanked areas, while continuing with its policy of ensuring adequate but viable flow of credit to priority sectors of the economy. Financial literacy efforts of the Reserve Bank, particularly the outreach programme, generated significant interest and exuberant participation from public and banks/ financial institutions. Regulatory actions to further financial inclusion included changes in KYC norms, relaxing branch authorization policy, widening eligible entities to function as business correspondents, and requiring minimum percentage of additional branches to be opened in unbanked rural centres.

IV.1 Credit delivery in a country as diverse as India poses many a challenge including bringing those sections of society that are financially excluded into the ambit of formal financial system, providing financial literacy, reforming credit delivery mechanisms, among others. The Reserve Bank of India continued with its various initiatives in this area such as rolling out the Financial Inclusion Plans (FIP), encouraging multiple channels of lending and enhancing the scope of the Business Correspondent (BC) model, improving credit delivery procedures in micro and small enterprises (MSE) sectors and encouraging adoption of Information and Communication Technology (ICT) solutions.

PRIORITY SECTOR LENDING

IV.2 The focus of priority sector lending is to enhance credit facilities for those priority sectors that impact large sections of the population, the weaker sections and the sectors which are employment intensive such as agriculture and micro and small enterprise (MSE). As on the last reporting Friday of March 2011, 15 out of 81 banks had not achieved the priority sector lending target (Table IV.1).

IV.3 Scheduled commercial banks (SCBs) having shortfall in lending to priority sector/subsectors *vis-a-vis* the stipulated targets, will be required to contribute to the corpus of Rural Infrastructure Development Fund (RIDF) and similar funds set up with National Bank of Agriculture and Rural Development (NABARD) / Small Industries Development Bank of India (SIDBI) / National Housing Bank (NHB). The corpus of such funds are announced every year by the Government of India.

IV.4 The Union Budget 2011-12 announced to set up RIDF XVII (corpus of ₹18,000 crore of which ₹2,000 crore will be dedicated to creation of warehousing facilities), Short Term Co-operative Rural Credit (STCRC) (Refinance) Fund (corpus of ₹10,000 crore), Micro, Small and Medium Enterprise (MSME) (Refinance) Fund (corpus of ₹5,000 crore), and Rural Housing Fund (corpus of ₹3,000 crore) with NABARD, SIDBI, NHB, respectively during the year.

Flow of Credit to Agriculture Sector

IV.5 The Government had announced a target of ₹3,75,000 crore for flow of agricultural credit in 2010-

Table IV.1: Priority Sector Advances

(Amount in ₹ crore)

	Public Sector Banks	Private Sector Banks	Foreign Banks
1	2	3	4
2010*	8,63,777	2,14,669	59,960
	(41.6)	(45.8)	(36.0)
2011*	10,22,925	2,49,139	66,796
	(41.0)	(46.7)	(39.1)

Notes:
1. * : As on the Last Reporting Friday of March.
2. Figures in brackets are percentages to ANBC or credit equivalent of OBE, whichever are higher as on March 31 of the previous year, in the respective groups.
3. The target for aggregate advances to the priority sector is 40 per cent of the ANBC or credit equivalent of OBE, whichever is higher for domestic banks and 32 per cent for the foreign banks.
4. Data for 2011 are provisional.

Source: Provisional data reported by banks.

Table IV.2: Disbursements under SACP by Public Sector Banks

(Amount in ₹ crore)

Year	Target	Achievement	Percentage of Achievement	Annual growth in Disbursement (%)
1	2	3	4	5
2007-08	1,52,133	1,33,226	87.6	8.8
2008-09	1,59,470	1,65,198	103.3	24.0
2009-10	2,04,460	2,07,347	101.4	26.0
2010-11*	2,29,709	2,05,367	89.4	-0.95

*: Data are provisional.

Table IV.3: Recovery of Direct Agricultural Advances

(Amount in ₹ crore)

Year ended June	Demand	Recovery	Overdues	Percentage of recovery to demand
1	2	3	4	5
2008	95,100	71,739	23,361	75.4
2009	1,19,084	90,660	28,425	76.1
2010*	92,905	68,665	24,240	73.9

*: Data are provisional.

11, of which 119 per cent had been achieved by end-March, 2011(provisional) by banks including co-operative banks and regional rural banks (RRBs). The target for the year 2011-12 is ₹4,75,000 crore for disbursement to agriculture by all agencies. Banks have been advised to step up direct lending to agriculture and credit to small and marginal farmers.

IV.6 The disbursements by the public sector banks to agriculture under Special Agricultural Credit Plan (SACP) for the financial year 2009-10 was at ₹2,07,347 crore against that of ₹2,04,460 crore last year (101.4 per cent of the projected amount) whilst that of the private sector banks was a disbursal of ₹78,452 crore against the projection of ₹62,352crore (126 per cent of the projected amount). Disbursements by the public sector banks under SACP for the last three years are as set out in Table IV.2.

IV.7 Recovery rate for direct agricultural advances for the year ended 2010 showed moderate decline as compared to the rise seen in the previous year (Table IV.3).

IV.8 For the year 2010-11, the Government lowered the rate of interest subvention for short-term production credit up to ₹3 lakh to 1.5 per cent while the additional interest subvention for prompt paying farmers was raised to 2 per cent; accordingly the effective interest rate charged to such farmers is likely to come down to 5 per cent per annum.

IV.9 As per the reimbursement schedule for Agricultural Debt Waiver and Debt Relief Scheme, the Government of India released the 3rd instalment of ₹11,340 crore in January 2011 of which ₹1,240 crore was passed on to NABARD for reimbursement to RRBs and co-operatives and the remainder amount (₹10,100 crore) was utilised for reimbursing SCBs, local area banks (LABs) and urban co-operative banks (UCBs) (Table IV.4).

Flow of Credit to Micro, Small and Medium Enterprises (MSMEs)

IV.10 In order to study various issues relating to MSMEs, a High Level Task Force was constituted by the Government of India (Chairman: Shri T K A Nair, Principal Secretary to the Prime Minster). SCBs were accordingly advised in June, 2010 to increase their share of lending to micro enterprises in MSE to 60

Table IV.4: Compensation of lending institutions under Agricultural Debt Waiver and Debt Relief Scheme, 2008

(Amount in ₹ crore)

Lending Institutions	Proposed Reimbursement*			
	1st instalment Sep-08	2nd instalment Jul-09	3rd instalment Jul-10	4th instalment Jul-11
1	2	3	4	5
RRBs and Co-operatives	17,500	10,500	2,800	Balance amount, if any
SCBs, UCBs and LABs	7,500	4,500	9,200	Balance amount, if any
Total	**25,000**	**15,000**	**12,000**	**Balance amount**

*: Based on the current provisional estimates.

per cent in three stages (*viz*., 50 per cent in the year 2010-11, 55 per cent and 60 per cent in the subsequent years) with 10 per cent annual growth in the number of micro enterprise accounts and also 20 per cent year-on-year growth in MSE lending. A suitable format has been devised by the Reserve Bank to capture and closely monitor the achievement of these targets by banks on a half yearly basis *i.e.,* in March and September.

IV.11 The Union Budget 2011-12 proposed to liberalise the existing scheme of interest subvention of 1 per cent on housing loans by extending it up to ₹15 lakh where the cost of the house does not exceed ₹25 lakh from the present limit of ₹10 lakh and ₹20 lakh, respectively. Accordingly, necessary instructions were issued to all SCBs (excluding RRBs) on April 21, 2011.

IV.12 Reflecting the revival in demand conditions in 2010-11, the total credit to MSE from the SCBs increased by 33.7 per cent during the year (Table IV.5).

IV.13 Based on the recommendations of the Task Force on Revival of Rural Co-operative Credit Institutions (Chairman: Prof. A. Vaidyanathan) the Government of India ,in consultation with State Governments, had approved a package for revival of the short-term rural cooperative credit structure (ST CCS), consisting of Primary Agricultural Credit Societies (PACS) at the village/base level, central co-operative banks (CCBs) at the intermediate level and the state co-operative banks (StCBs) at the apex level. Aside from aiming at reviving the ST CCS to make it an efficient medium to serve the credit needs of rural India, especially the small and marginal farmers, the package also seeks to (i) provide financial assistance to bring the system to an acceptable level of health; (ii) introduce legal and institutional reforms necessary for its democratic, self reliant and efficient functioning; and (iii) take measures to improve the quality of management.

Table IV.5: Credit to MSE Sector by SCBs

	Outstanding credit to MSE		MSE/SSI credit
	No. of Accounts (in Million)	Amount (in ₹ crore)	as per cent of ANBC
1	2	3	4
2010	8.5	3,62,291 (41.4)	13.4
2011*	9.3	4,84,473 (33.7)	9.9

*: As on the Last Reporting Friday of March.

Note: 1. Figures in parantheses indicate per cent growth in credit over the previous year.
2. Data for 2011 are provisional.

IV.14 The twenty-five states willing to participate were required to enter into a Memorandum of Understanding (MoU) with the Central Government and NABARD. This covers more than 96 per cent of the ST CCS units in the country. Also, twenty one states have amended their respective State Cooperative Societies Act through legislative process.

IV.15 An aggregate amount of ₹8,993 crore has been released by NABARD (up to end-June, 2011) towards Government of India's share for recapitalisation of PACS in 16 states while the State Governments have also released their share of ₹854 crore. The implementation of the revival package on an all India basis is supervised by the National Implementing and Monitoring Committee, set up by the Government of India.

IV.16 The Reserve Bank regulates StCBs and district central co-operative banks (DCCBs) under the Banking Regulation Act, 1949 (AACS), while the NABARD supervises them. Subsequent to the issuance of revised guidelines (in consultation with NABARD) in October 2009 on licensing of StCBs/ DCCBs, 10 StCBs and 160 DCCBs have been licensed taking the total number of licensed StCBs and DCCBs to 24 and 235 respectively, as at end-June, 2011.

IV.17 With a view to liberalizing the branch licensing for RRBs, they were allowed to open branches in Tier 3 to Tier 6 centres as identified in the Census 2001 (with population up to 49,999), without having the need to take permission from the Reserve Bank in each case, subject to reporting, provided they fulfill certain conditions. Accordingly, instructions were issued to all RRBs and their sponsor banks in November 2010.

IV.18 The Working Group of Technology Upgradation in RRBs (Chairman: Shri G.Srinivasan)

had recommended that Core Banking Solution (CBS) should be fully implemented in all RRBs by September 2011. As on date, CBS has been fully implemented in 45 out of the total 82 RRBs, while it is in progress in the remainder.

FINANCIAL INCLUSION

IV.19 Financial inclusion broadly refers to the process of ensuring access to appropriate financial products and services needed by vulnerable groups such as the weaker sections and low income groups at an affordable cost, in a fair and transparent manner by mainstream institutional players. Despite widespread expansion of the banking sector, a significant proportion of the households, especially in rural areas, remain outside the coverage of the formal banking system. The proportion of rural residents who lack access to bank accounts is about 40 per cent, and this rises to over three-fifths in the eastern and north-eastern regions of India.

IV.20 Moving towards universal financial inclusion has been a policy priority for the Reserve Bank over the last few years since financial inclusion becomes a critical financial component for ensuring sustainable and equitable economic growth (Box IV.1).

Box IV.1
Financial Inclusion and Inclusive Growth: What the Empirical Evidence Suggests?

Inclusive growth as a strategy of economic development has received renewed attention in recent years owing to rising concerns that the benefits of economic growth have not been equitably shared. Growth is inclusive when there is equality of economic opportunities. Financial inclusion makes growth broad based and sustainable by progressively encompassing the hitherto excluded population. Financial inclusion is no longer a policy choice but a policy compulsion.

Banks and other financial services players are expected to mitigate the supply side bottlenecks that hinder the poor and disadvantaged social groups from gaining access to the financial system. Empirical evidence suggests that access to financial products is constrained by several factors which include: lack of awareness about the financial products, unaffordable products, high transaction costs, and products which are inconvenient, inflexible, not customised and of low quality. Microfinance and financial literacy play pivotal roles in addressing these issues.

Empirical evidence shows that countries with large proportion of population excluded from the formal financial system also show higher poverty ratios and higher inequality. The inclusive growth country analytics has a distinct character focusing on the pace and pattern of growth. Rapid pace of growth is unquestionably necessary for substantial poverty reduction, but for this growth to be sustainable in the long run, it should be broad-based across sectors, and include a large part of the country's labour force. This analytics of inclusive growth implies a direct link between the macro and micro determinants of growth.

The main instrument for a sustainable and inclusive growth is productive employment. Against this backdrop, studies based on application of the Tobit model on national-level cross-sectional household data for 2001 on the Indian economy show a highly significant positive relationship between productive loan amount and households poverty after controlling for socio-economic characteristics. Panel data studies of Bangladesh observe that access to microfinance contributes to poverty reduction, especially for female participants. Cross country studies on factors associated with financial inclusion show that the level of human development and that of financial inclusion are positively correlated, barring a few exceptions.

Some of the important factors determining the level of financial inclusion in a country are per capita GDP, income inequality, adult literacy and urbanisation. Further, physical and electronic connectivity and information availability such as telephone and internet usage also play positive role in enhancing financial inclusion.

The estimated values of a Financial Inclusion Index, by Mehrotra *et al* (2009) at the state and district levels for India, indicate that there has been a relative improvement in the status of financial inclusion between 2002 and 2006 with the number of districts in the lowest grade declining from 378 to 330.

The empirical findings strengthen the argument that financial exclusion is indeed a reflection of social exclusion, as countries having low GDP per capita, relatively higher levels of income inequality, low rates of literacy, low urbanisation and poor connectivity appear to be less financially inclusive. Financial inclusion, therefore, assumes importance as a policy objective.

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Ianchovichina, E. and S. Lundstrom (2009), ''Inclusive Growth Analytics: Framework and Application'', *World Bank Policy Research Working Paper* No. 4851.

Mehrotra,N, V.Puhazhendhi, G.G.Nair, and B.B.Sahoo (2009), "Financial Inclusion – An Overview", *NABARD Occasional Paper* No. 48.

Instruments used for strengthening delivery of services and assessment of their effectiveness

IV.21 Financial inclusion can be seen as a viable business proposition for banks, especially so if the delivery models aim at generating revenue rather than being cost centric such that customers get quality banking services at their door step while simultaneously creating business opportunities for the banks.

IV.22 It is feasible only if delivery of services, at the minimum, includes four products: (i) a savings cum overdraft account, (ii) a remittance product for electronic benefits transfer and other remittances, (iii) a pure savings product ideally a recurring deposit scheme, and (iv) entrepreneurial credit in the form of General-purpose Credit Card (GCC) or Kisan Credit Card (KCC).

IV.23 Reserve Bank is furthering financial inclusion with high priority through a combination of strategies ranging from relaxation of regulatory guidelines, provision of new products and other supportive measures to achieve sustainable and scalable financial inclusion as outlined below.

A. Provision of new products

i) As of March 2011, 74.4 million No Frill accounts have been opened by domestic commercial banks with outstanding balance of ₹6,566 crore. Basic banking No Frill accounts have nil or very low minimum balances as well as charges that make such accounts accessible to vast sections of the population.

ii) With a view to encourage transactions in No Frill accounts banks have been advised to provide small overdrafts (ODs) in such accounts. Up to end March 2011, banks have provided 4.2 million ODs amounting to ₹199 crore.

iii) Banks had been asked to consider introduction of a GCC facility up to ₹25,000 at their rural and semi-urban braches. The objective of the scheme is to provide hassle-free credit to banks' customers based on the assessment of cash flow without insistence on security, purpose or end-use of the credit. This is in the nature of revolving credit entitling the holder to withdraw up to the limit sanctioned. As of March 2011, banks had 0.95 million GCC accounts with outstanding credit of ₹1,308 crore.

iv) Banks have been advised to speed up opening of accounts, leveraging ICT to provide benefits to their customers at their door step. As on March 2011, banks had opened 37.2 million accounts using ICT through BCs.

B. Regulatory measures

i) KYC requirements for opening bank accounts have been further relaxed during the year, to include job card issued by MGNREGA duly signed by an officer of the State Government or the letters issued by the Unique Identification Authority of India containing details of name, address and Aadhaar number.

ii) *Simplified branch authorisation:* To address the issue of uneven spread of bank branches, domestic SCBs are permitted, since December 2009, to freely open branches in Tier 3 to Tier 6 centres with population of less than 50,000 under general permission, subject to reporting. In the north eastern states and Sikkim, domestic SCBs can now open branches in rural, semi urban and urban centres without taking prior permission from the Reserve Bank, subject to reporting.

iii) *Engaging Business Correspondents:* During 2010-11, 'for-profit' companies were also allowed to be engaged as BC - intermediaries for providing financial and banking services, as facilitators for banks. As at end-March, 2011, domestic commercial banks have reported deploying 58,361 BCs/ customer service providers (CSPs), providing banking services in 76,801 villages.

iv) *Opening of branches in unbanked rural centres:* So as to improve banking penetration and financial inclusion rapidly in the rural areas, the need for opening more brick and mortar branches, besides using BCs, was felt.

Accordingly, banks were mandated in the Annual Policy Statement of May 2011 to allocate at least 25 per cent of the total number of branches to be opened during a year to unbanked rural centres.

C. Supportive measures

i) Two Funds, namely the Financial Inclusion Fund (FIF) for meeting the cost of developmental and promotional interventions for ensuring financial inclusion, and the Financial Inclusion Technology Fund (FITF), to meet the cost of technology adoption has been set up at NABARD with an overall corpus of ₹500 crore each. In the Union Budget for 2011-12 the corpus of these funds was enhanced by ₹100 crore each.

ii) To improve banking penetration in the North-East, the Reserve Bank has offered to fund the capital and running costs for five years, provided the State Government concerned is willing to make available the premises and put in place appropriate security arrangements. During the year, branches were opened at 2 of the agreed centres in Meghalaya, 2 in Tripura and 4 in Manipur.

iii) With an objective of ensuring uniform progress in provision of banking services in all parts of the country, banks were advised to draw up a roadmap to provide banking services through a banking outlet in every unbanked village having a population of over 2,000 by March 2012. The Reserve Bank advised banks that such banking services need not necessarily be extended through a brick and mortar branch but could be provided also through any of the various forms of ICT- based models, including BCs. About 72,800 such unbanked villages have been identified and allotted to various banks through State Level Bankers Committees (SLBCs).

Progress of Financial Inclusion Plans during the year

IV.24 In January 2010, all public and private sector banks were advised to put in place a Board approved three-year FIP and submit the same to the Reserve Bank by March 2010. Accordingly, the banks have submitted their FIPs containing targets for March 2011, 2012 and 2013.

IV.25 These plans broadly include self-set targets with respect to opening of rural brick and mortar branches; employment of BCs; coverage of unbanked villages with population above 2,000 as also other unbanked villages with population below 2,000 through branches/BCs/other modes; opening of No Frill accounts including those opened through BC-ICT; issuance of KCC, GCC and other specific products designed by them to cater to the financially excluded segments. Banks were advised to integrate Board approved FIPs with their business plans and to include the criteria on financial inclusion as a parameter in the performance evaluation of their staff.

IV.26 In order to review the progress of banks in the implementation of FIPs and making way for accelerated progress in future, the Reserve Bank has been conducting Annual FIP Review Meetings with banks. A few important action points from the discussions held during May-June 2011 are as follows:

i) Banks would review their delivery models so that financial inclusion results in a profitable business for them.

ii) Banks will also focus on providing banking services in peripheral villages with population of less than 2,000.

iii) In future, banks would focus more on opening of brick and mortar branches in unbanked villages. It may be a low cost intermediary kiosk with a simple structure, requiring minimum infrastructure for operating small customer transactions and supporting up to 8-10 BCs at a reasonable distance of 2-3 Kms.

iv) Banks would expand financial inclusion initiatives in urban and semi-urban areas by targeting pockets of migrant workers and small vendors, leveraging Aadhaar enrollment for opening banks accounts.

v) PSBs shall formulate FIPs for all RRBs sponsored by them and develop an effective

monitoring mechanism so that targets assigned to the RRBs are achieved meticulously.

Financial literacy efforts including outreach activities

IV.27 Financial literacy facilitates financial inclusion, which in turn results in inclusive growth and development. In countries with diverse social and economic profiles as in India, financial education is particularly relevant for people who are resource poor, operate at the margin and are vulnerable to persistent downward financial pressures.

IV.28 Financial education can broadly be defined as the capacity to have a familiarity with and also an understanding of financial market products, especially risks and rewards to make informed choices. The Reserve Bank has taken a number of measures for increasing financial literacy.

i) RBI has undertaken a project titled 'Project Financial Literacy' with the objective of disseminating information regarding the central bank and general banking concepts to various target groups including school and college going children, women, rural and urban poor, defence personnel and senior citizens.

ii) A multilingual website in 13 Indian languages on all matters concerning banking and the common person was launched by the Reserve Bank in June, 2007.

iii) With a view to introducing banking to school children, illustrated books have been made available on the website. Similar books have been prepared for the different target groups and are widely distributed in regional languages through various Regional Offices of the Reserve Bank.

iv) Financial literacy programmes are being launched in each state with the active involvement of the State Government and the SLBC. These programmes include skits, road shows, exhibitions, workshops, seminars, and dissemination through radio and television.

IV.29 A model scheme on financial literacy and credit counselling centres (FLCCs) was formulated by the Reserve Bank and communicated to all SCBs and RRBs with the advice to set up the centres as distinct entities, such that the FLCCs' services are available even to other banks' customers in the district.

IV.30 Financial education stresses on the capacity building measures to enable small and marginal borrowers to avail of the entire suite of financial products and services *i.e.,* savings, remittance, insurance and pension from the banking sector, in addition to credit. In view of the utility of these centres as expressed by state governments and other stakeholders, banks have been advised to set up FLCCs in all districts. As on March 2011, 252 FLCCs were set up in various states of the country.

IV.31 During 2010-11, the Reserve Bank organised the second Frontline Managers' Conferences on financial inclusion to review the progress made in furthering financial inclusion, understand the problems impeding financial inclusion at the ground level from demand and delivery perspective and get a feel of the ground realities on the current status of our financial inclusion efforts. Grassroot level functionaries of banks, MFIs, BCs, technology providers and representative customers of financial services from across the country participated in the conference.

IV.32 In the wake of the Andhra Pradesh micro finance crisis in 2010, concerns were expressed by various stakeholders and the need was felt to review regulation of NBFCs which function as MFIs. As indicated in the Second Quarter Review of November 2010, a Sub-Committee of the Central Board of the Reserve Bank (Chairman: Shri Y. H. Malegam) was constituted to study issues and concerns in the MFI sector (Box IV.2).

OUTREACH ACTIVITIES

IV.33 Cognizant of the beneficial impact of outreach activities, these flagship events were carefully orchestrated to ensure financial inclusion,

Box IV.2
Committee on the MFI Sector (Malegam Committee)

The Malegam Committee in its January 2011 report, *inter alia*, recommended (i) creation of a separate category of NBFC-MFIs; (ii) a margin cap and an interest rate cap on individual loans; (iii) transparency in interest charges; (iv) lending by not more than two MFIs to any individual borrower; (v) creation of one or more credit information bureaus; (vi) establishment of a proper system of grievance redressal procedure by MFIs; (vii) creation of one or more "social capital funds"; and (viii) continuation of categorisation of bank loans to MFIs, complying with the regulation laid down for NBFC-MFIs, under the priority sector.

Based on the feedback received, the broad regulation framework recommended by the Committee have been accepted. The SCBs have accordingly been advised in May, 2011 that bank credit to MFIs extended on or after April 1, 2011 for onward-lending to individuals and also to members of self help groups (SHGs)/joint liability groups (JLGs) would be eligible for categorisation as priority sector advance under respective categories *viz*., agriculture, MSE, and micro credit (for other purposes), as indirect finance, provided not less than 85 per cent of total assets of MFI (other than cash, balances with banks and financial institutions, Government securities and money market instruments) are in the nature of "qualifying assets".

In addition, aggregate amount of loan, extended for income generating activity, is not less than 75 per cent of the total loans given by MFIs.

- A "qualifying asset" shall mean a loan disbursed by MFI, which inter alia satisfies criteria such as (i) the borrower's household annual income does not exceed ₹60,000 in rural areas and ₹1,20,000 in non-rural areas; (ii) loan does not exceed ₹35,000 in the first cycle and ₹50,000 in the subsequent cycles; (iii) total indebtedness of the borrower does not exceed ₹50,000; (iv) the loan is without collateral; (v) loan is repayable by weekly, fortnightly or monthly installments as per borrower's choice
- Further, banks have to ensure that MFIs comply with the stipulated caps on margin and interest rate as also other pricing guidelines, to be eligible to classify these loans as priority sector loans:
  - i) Margin cap at 12 per cent for all MFIs. The interest cost is to be calculated on average fortnightly balances of outstanding borrowings and interest income is to be calculated on average fortnightly balances of outstanding loan portfolio of qualifying assets.
  - ii) Interest cap on individual loans at 26 per cent per annum for all MFIs to be calculated on a reducing balance basis.
  - iii) Only three components are to be included in pricing of loans *viz*., (a) a processing fee not exceeding 1 per cent of the gross loan amount, (b) the interest charge and (c) the insurance premium.
  - iv) The processing fee is not to be included in the margin cap or the interest cap of 26 per cent.
  - v) Only the actual cost of insurance *i.e.,* actual cost of group insurance for life, health and livestock for borrower and spouse can be recovered; administrative charges to be recovered as per IRDA guidelines.
  - vi) No penalty for delayed payment.
  - vii) No security deposit/ margin to be taken.
- The banks should obtain from MFIs, at the end of each quarter, a Chartered Accountant's Certificate stating, *inter alia*, that (i) 85 per cent of total assets of the MFI are in the nature of "qualifying assets", (ii) the aggregate amount of loan, extended for income generation activity, is not less than 75 per cent of the total loans given by the MFIs, and (iii) pricing guidelines are followed.
- Bank loans to MFIs, which do not comply with above conditions and bank loans to other NBFCs, will not be reckoned as priority sector loans w.e.f. April 1, 2011. The bank loans extended prior to April 1, 2011 classified under priority sector will continue to be reckoned under priority sector till maturity of such loans.

emphasising focus on financial education and literacy initiatives across the country during the year. A total of 214 villages, including 167 villages identified in the preceding Platinum Jubilee year of the Reserve Bank, were taken up for being transformed into 'Model Villages'.

IV.34 During the outreach programmes of grassroot level sensitisation, various events such as lectures, demonstrations, exhibitions and skits were organised to educate people about the role played by the Reserve Bank in their daily life. The outreach events received all round acclaim from the public, Government officials and banks and attracted the interest of electronic and print media in the country. The participation of the top executives of the Bank (in 34 outreach programmes in 2010-11) along with other dignitaries from banks, NABARD and State Government agencies generated new hopes among the public in rural areas as evident from their whole-hearted involvement in these programmes. The Reserve Bank endeavours to ensure sustained post-event momentum so that long-term objectives of financial inclusion are attained.

V DEVELOPMENT AND REGULATION OF FINANCIAL MARKETS

The financial markets functioned smoothly during 2010-11. With a view to further strengthening the regulatory architecture while promoting greater efficiency in the financial markets, the Reserve Bank initiated policy measures to address certain regulatory gaps, promote transparency and improve liquidity in the money markets. The policy initiatives in the area of foreign exchange management were directed towards procedural simplifications and maintaining sustainability of the liberalisation process. In the derivatives market, the Reserve Bank persisted with a calibrated and sequential approach towards launching of new market instruments keeping a balance between financial stability issues and market efficiency.

V.1 Financial stability has been recognised as a key objective of the Reserve Bank's monetary policy. Financial stability entails stability of the financial markets and financial institutions. Financial market stability minimises uncertainties and facilitates investment decision making with due assignment of measurable risks. Market development augments market efficiency that reduces transaction costs, promotes transparency, establishes benchmarks for the purpose of pricing, and fosters long-term savings and investment for growth. Market instability affects risk taking behaviour and impedes sustained growth and hence financial market regulation is necessary for growth. Development and regulation of financial markets can, however, entail trade-offs at least in the short run, when the regulatory measures that are designed to promote financial stability impede market efficiency. Accordingly, the recognition of the trade-offs to achieve the best possible outcome is a requisite for a central bank that is vested with the responsibility of the development and the regulation of the various segments of the financial markets.

MONEY MARKET

V.2 The money market is an important segment of the financial market because it not only reflects the impact of liquidity mismatch in the system but also operates as the first leg in transmitting monetary policy changes to the other parts of the financial system. With liquidity transiting to a deficit mode in May 2010, policy measures during 2010-11 were aimed at ensuring smooth functioning of the markets so as not to destabilise economic activity. Against this macroeconomic backdrop, policy measures were taken with a view to addressing certain regulatory gaps, promote transparency and improve liquidity in the money market.

Regulation of NCDs of maturity up to one year

V.3 In order to address the regulatory gap that existed in the case of issuance of NCDs of maturity up to one year through private placement, the Reserve Bank issued Directions in terms of section 45W of the RBI (Amendment) Act, 2006 on June 23, 2010. The Directions provide for regulation of the issuance of NCDs of maturity up to one year, which are money market instruments. The Directions are applicable to both secured as well as unsecured NCDs. As per the Directions, NCDs cannot be issued for maturity less than 90 days and cannot have call/put options that are exercisable within 90 days from the date of issue. The eligibility criteria, rating requirements, *etc.*, for these NCDs have been prescribed broadly in line with the extant guidelines on issuance of CPs. Taking into account the feedback received from the market participants, the Reserve Bank has issued an amendment Direction on December 6, 2010, *inter alia*, permitting financial institutions (FIs) to invest in NCDs of maturity up to one year; non-banking financial companies including Primary Dealers that do not maintain a working capital limit to issue NCDs of maturity up to one year; and FIIs to invest in NCDs of maturity up to one year subject to extant provisions of FEMA and SEBI guidelines issued in this regard.

Reporting platform for CDs and CPs

V.4 Towards transparency in the secondary market for CDs and CPs, the Reserve Bank introduced a reporting platform for all secondary market transactions in CDs and CPs. The reporting platform was operationalised by FIMMDA with effect from July 1, 2010. The Reserve Bank, SEBI and IRDA have mandated all their regulated entities to report their OTC trades in CDs and CPs on the FIMMDA reporting platform.

Repo in corporate bonds

V.5 As a measure aimed at provision of liquidity to the corporate bond market, the Reserve Bank had issued guidelines in January 2010, permitting repo in corporate bonds. To further facilitate repo transactions in corporate bonds, a review of the guidelines governing repo in corporate bonds was undertaken by the Reserve Bank in consultation with the market participants. Consequently, the minimum haircut applicable on the underlying collateral has been revised from 25 per cent to 10 per cent (in case of AAA-rated bonds), 12 per cent (AA+) and 15 per cent (AA). Further, settlement of repo trades in corporate bonds on a T+0 basis (in addition to T+1 and T+2) has also been permitted.

GOVERNMENT SECURITIES MARKET

V.6 The government securities market is a key segment of the financial market as it finances the fisc in a cost effective manner, provides reference points for the pricing of corporate debt, serves as a conduit for monetary policy transmission across the maturity spectrum and also provides the wherewithal for the central bank's liquidity management by way of open market operations. During 2010-11, the purchase of government securities from the market participants under the open market operations served to infuse liquidity and reduce the structural liquidity mismatches. During the recent years, the Reserve Bank has been taking a series of measures that has contributed to price discovery, widening of investor base, increasing transparency of the market and safeguarding the financial system. The initiatives regarding the development of the government securities market during 2010-11 were aimed at ensuring a balance between greater market liquidity and effective regulation.

Government Securities Act, 2006, Sections 27 & 30 - Imposition of penalty for bouncing of SGL forms

V.7 The guidelines for SGL transfer were reviewed in the light of the provisions of sections 27 and 30(3) of the Government Securities Act, 2006 and the existing regulatory penalty for SGL bouncing was replaced with a transparent and rule-based pecuniary penalty in July 2010. Under the revised guidelines, graded monetary penalties (subject to a maximum penalty of ₹5 lakh per instance) are charged for the first nine instances in a financial year while the tenth default would lead to debarment from undertaking short sales for the remaining part of the financial year. The permission to undertake short sales shall be restored in the next financial year subject to certain requirements in terms of improved internal controls, *etc*.

Extension of DvP III facility in the Government Securities market to Gilt Account Holders

V.8 The settlement of trades in Government securities through CCIL was shifted from DvP II to DvP III with effect from April 2, 2004. The DvP III facility was not, however, available to transactions by the gilt account holders. With the stabilisation of the transaction and settlement infrastructure, DvP III facility has been extended in July 2011 to transactions by the gilt account holders (excluding transactions between the gilt account holders of the same custodian) so that the gilt account holders get the benefit of efficient use of funds and securities.

FOREIGN EXCHANGE MARKET

V.9 During 2010-11, capital flows were largely absorbed by the current account deficit (CAD). FII investment, ECBs, external assistance and NRI deposits dominated capital flows during the year. However, the slowdown in inward FDI was a cause

for concern, although inward FDI during 2011-12 (April-June) has been encouraging. The policy initiatives in the area of foreign exchange management during the year under review were directed towards procedural simplifications, stability of forex market and maintaining sustainability of the liberalisation process.

Current Account

V.10 The specific counter cyclical measures initiated during the crisis period were either scaled down or rolled back as part of the exit policy. The special rupee refinance facility to the EXIM Bank was discontinued with effect from April 1, 2010, and the swap facility to it was scaled down from US $ 1 billion to US $ 525 million (the outstanding level as on January 25, 2010) and the same was made available up to September 30, 2010.

V.11 With the continued recession in the advanced economies impacting India's exports in the immediate post crisis period, the relaxation allowed to exporters in realisation and repatriation of export proceeds within 12 months from the date of export of goods and services was extended up to September 30, 2011. In case of write-off of unrealised export bills, AD Category – I banks were advised not to insist on surrender of the proportionate incentives, subject to certain terms and conditions, other than those under the Duty Drawback Scheme, if availed of by the exporters under any of the Export Promotion Schemes under the Foreign Trade Policy 2009-14.

V.12 Acknowledging the importance of the services provided by the Online Payment Gateway Service Providers (OPGSPs) to the exporters in facilitating export transactions, particularly for small value goods and services, suitable guidelines to ensure orderly conduct of such transactions in line with the FEMA Regulations, have been issued to AD banks.

V.13 To facilitate greater use of Indian Rupee in trade transactions, non-resident importers and exporters have now been permitted to hedge their currency risk in respect of exports from and imports to India invoiced in Indian Rupees with AD category I banks in India.

V.14 The currency component of foreign exchange for visits abroad was reviewed and increased during the year to US $ 3,000 or its equivalent, as against US $ 2,000 earlier to a traveller proceeding to countries other than Iraq, Libya, Islamic Republic of Iran, Russian Federation and other Republics of Commonwealth of Independent States, without the prior permission from the Reserve Bank.

V.15 AD Category – I banks were required to obtain an unconditional, irrevocable standby Letter of Credit (LC) or a guarantee from an international bank of repute situated outside India or a guarantee of an AD Category – I bank in India, if such a guarantee is issued against the counter guarantee of an international bank of repute situated outside India, for an advance remittance for imports of goods exceeding US $ 100,000 or its equivalent. The limit has been enhanced to US $ 200,000 or its equivalent, for importers other than a Public Sector Company or a Department/Undertaking of Central/State Governments where the requirement of bank guarantee is to be specifically waived by the Ministry of Finance, Government of India for advance remittances exceeding US $ 100,000 or its equivalent.

Capital Account

V.16 ECB policies have been progressively liberalised to channelise more external funds to the infrastructure sector. The recent liberalisation measures include expansion of the definition of infrastructure to include “cold storage or cold room facility, including for farm level pre-cooling, for preservation or storage of agricultural and allied produce, marine products and meat”, allowing Infrastructure Finance Companies (IFCs) for availing ECBs for on-lending to the infrastructure sector, facility of credit enhancement for raising debt through capital market instruments by entities in the infrastructure sector and the scheme of take-out finance through ECB under the approval route for refinancing of rupee loans availed from domestic banks for development of new projects in the sea port and air port, roads including bridges and power sector. Corporates engaged in the development of integrated township

were permitted to avail of ECB, under the approval route, up to end-December 2010. Corporates in select services sectors, such as software, hospital and hotel have been allowed to avail ECB above US $ 100 million under the approval route.

V.17 The facility of premature buyback of FCCBs which was available up to end-June, 2011 has been extended up to end-March, 2012 with reduced minimum discount rates. In order to meet the redemption obligations, Indian companies have been allowed to raise fresh ECBs/FCCBs as per the extant ECB guidelines under the automatic route to refinance their outstanding obligations, subject to certain conditions.

V.18 Keeping in view the requirement of huge funds for the infrastructure sector and to enable the development of government securities and corporate bond markets in the country in a calibrated manner, the FII investment limits were enhanced from US $ 5 billion to US $ 10 billion in respect of government securities and from US $ 15 billion to US $ 40 billion in respect of corporate bonds issued by companies in the infrastructure sector, subject to the condition that the incremental limit should be earmarked for investment in corporate bonds with a residual maturity of over five years. The incremental limit in corporate bonds will have to be earmarked for investment in the corporate bonds issued by the companies in the infrastructure sector, as defined under the ECB policy. This measure, besides augmenting the flow of finance to the infrastructure sector, would also enhance the liquidity of long-term papers.

V.19 Keeping in view the utility and usage of the instrument of performance guarantees in project executions abroad and also considering the risks associated with such guarantees *vis-a-vis* financial guarantees, henceforth only 50 per cent of the amount of the performance guarantees would be reckoned for the purpose of computing financial commitment to its JV/WOS overseas, within the 400 per cent of the net worth of the Indian Party. Irrespective of whether the direct subsidiary is an operating company or a SPV, the Indian promoter entity may extend corporate guarantee on behalf of the first generation step down operating company under the Automatic Route, within the prevailing limit for overseas direct investment. Further, the areas relating to restructuring of the balance sheet of the overseas entity involving write-off of capital and receivables and disinvestment by the Indian Parties of their stake in an overseas JV/WOS involving write-off were liberalised.

V.20 Non-resident investors (other than SEBI registered FIIs and SEBI registered FVCIs) who meet the KYC requirements of SEBI, have been permitted to purchase on repatriation basis rupee denominated units of equity schemes of domestic MFs, within an overall ceiling of US$ 10 billion. These investors have also been allowed to invest up to an additional amount of US$ 3 billion in units of debt schemes of domestic MFs which invest in infrastructure (as defined under the ECB norms) with a minimum residual maturity of 5 years, within the existing ceiling of US$ 25 billion for FII investment in corporate bonds issued by infrastructure companies.

V.21 Recognising the important contribution of non-resident Indians (NRIs) and persons of Indian origin (PIOs) in India's growth process and the need for facilitating genuine foreign exchange transactions by non-resident Indians (NRIs) as well as resident individuals under the current regulatory framework of FEMA, a committee (Chairperson: Smt. K.J. Udeshi) has been constituted in April 2011 to identify areas for streamlining and simplifying the procedure so as to remove the operational impediments, and assess the level of efficiency in the functioning of authorised persons, including the infrastructure created by them. The Committee submitted its report in August 2011. The recommendations of the Committee are under examination.

DERIVATIVES MARKET

V.22 Derivatives can serve as important instruments in the development of the financial markets when these instruments permit portfolio diversification and risk hedging, thereby ensuring financial stability. Derivatives can, however, turn out to be a double-edged sword as the global financial

crisis would testify. During the post-crisis period, instead of addressing the risks, derivatives emerged as the source of off balance sheet and hidden exposures of banks and financial institutions. In India, the Reserve Bank has persisted with a calibrated and sequential approach towards launching of new market instruments in recognition of the trade-offs between financial stability issues and market efficiency.

Introduction Interest Rate Futures (IRF) on 91-Day T-Bills

V.23 The Interest Rate Futures contract on 10-year notional coupon bearing Government of India security was re-introduced on August 31, 2009. Based on the market feedback and the recommendations of the Technical Advisory Committee (TAC) on the Money, Foreign Exchange and Government Securities Markets, it was decided to introduce short-tenor IRF contracts. Accordingly, in order to provide participants with additional instruments to manage volatility in the short-term interest rates, IRFs on 91-day Treasury Bills were permitted since March 2011.

Introduction of Credit Default Swaps (CDS)

V.24 Lack of instruments to manage credit risk was a long-felt need and to address the same the introduction of credit default swaps was taken up in 2003 and further followed up in 2007. However, the initiatives had to be put on hold in view of the unfolding of the global financial crisis. Taking into account the lessons learnt from global financial crisis, it was decided to permit CDS on corporate bonds and the final guidelines in this regard were issued in May 2011 (Box V.1).

Exchange Traded Currency Derivatives

V.25 The currency futures market remained active during 2010-11. The average daily turnover in currency futures on the three active exchanges (NSE, MCX-SX and USE) stood at US $ 8.0 billion in March 2011 as against US $ 7.1 billion in March 2010. Increased globalisation of the economy increases the foreign exchange exposure of Indian firms and individuals with exchange rate risk arising from domestic and global financial market developments. This has necessitated introduction of various instruments by the Reserve Bank to hedge the exchange exposure by the residents. Currently, residents in India are permitted to trade in futures contracts in four currency pairs on recognised stock exchanges.

V.26 In order to expand the menu of tools for hedging currency risk, recognised stock exchanges were permitted to introduce plain vanilla currency options on spot US Dollar/Rupee exchange rate for residents. The exchange traded currency options market is functioning subject to the guidelines issued by the Reserve Bank and the Securities and Exchange Board of India (SEBI) from time to time.

V.27 In view of the large positions held by the FIIs and considering the increased depth of the Indian forex market to absorb the impact on the exchange rate, FIIs have now been permitted to cancel and rebook up to 10 per cent of the market value of the portfolio as at the beginning of the financial year as against 2 per cent that was permitted earlier.

Non-deliverable Forwards Market

V.28 NDF market exists mostly in non-convertible or in currencies with limited on-shore hedging options. With increasing capital flows to the EMEs, the NDF market offers a convenient hedging mechanism for foreign investors who may not have full access to the onshore market of the concerned currency due to restrictions or may prefer to transact in an international financial centre they are familiar with for the sake of convenience. Though comprehensive information is not available on the global NDF market, Brazilian Real, Chinese Renminbi, Taiwanese dollar, South Korean Won and the Indian Rupee reportedly account for the major share. The major centres for the Indian Rupee NDF market are reportedly Singapore, London, New York and Hong Kong. In India, the linkage between the NDF market and the domestic financial markets remains weak (Box V.2).

Box V.1
Guidelines on Credit Default Swaps (CDS) for Corporate Bonds

Introduction of credit derivatives in India was actively examined in the past to provide the market participants tools to manage credit risk. Accordingly, draft guidelines on introduction of CDS were issued in 2003 and 2007. However, taking into account the status of the risk management practices then prevailing in the banking system and also the experiences relating to the financial crisis, the issuance of final guidelines was deferred.

The matter was reviewed and the Second Quarter Review of Monetary Policy of 2009-10 had proposed introduction of plain vanilla OTC single-name CDS for corporate bonds subject to appropriate safeguards. Accordingly, an internal Working Group was constituted to finalise the operational framework for the introduction of single-name CDS for corporate bonds in India. The Group submitted its final report in February, 2011. Based on the recommendations of the report, the draft guidelines on CDS were prepared and placed on the Bank's website on February 23, 2011 for public comments. Taking into account the feedback received from the market participants and other stake holders, the final guidelines on CDS were issued on May 23, 2011 and would become effective from October 24, 2011.

The salient features of the guidelines are as under:

- The CDS shall be permitted on listed corporate bonds, unlisted but rated bonds of infrastructure companies and unlisted/unrated bonds issued by the Special Purpose Vehicles (SPVs) set up by infrastructure companies as reference obligations.
- The reference entities shall be single legal resident entities.
- The permitted participants have been categorised into:
  a) Market Makers: Participants such as Commercial Banks, NBFCs and stand-alone Primary Dealers are permitted to undertake both protection buying and protection selling subject to satisfying the prescribed eligibility norms. Insurance Companies and Mutual Funds would be allowed to act as market-makers subject to the approval of their respective regulators.
  b) Users: Participants permitted only to hedge their underlying exposures, such as, Commercial Banks, Primary Dealers, NBFCs, Mutual Funds, Insurance Companies, Housing Finance Companies, Provident Funds, Foreign Institutional Investors (FIIs) and listed corporates.
- Users cannot purchase CDS without having the underlying exposure and the protection can be bought only to the extent (both in terms of quantum and tenor) of such underlying risk.
- For users, physical settlement is mandatory. Market-makers can opt for any of the three settlement methods (physical, cash or auction settlement), provided the CDS documentation envisages such settlement.
- The CDS contracts shall be standardised in terms of coupon, coupon payment dates, *etc*.
- Bankruptcy, Failure to pay, Repudiation/moratorium, Obligation acceleration, Obligation default, Restructuring approved under Board for Industrial and Financial Reconstruction (BIFR) and Corporate Debt Restructuring (CDR) mechanism and corporate bond restructuring are the eligible credit events for CDS.
- As CDS markets are exposed to various risks, such as, sudden increases in credit spreads resulting in mark-to-market losses, jump-to-default risk, basis risk, counterparty risks, *etc*., market participants are required to take these risks into account and build robust and appropriate risk management system to manage such risks. The guidelines specifically prescribe for having counterparty credit exposure limits, PV01[1] limit and an independent risk management framework for reporting, monitoring and controlling all aspects of risks, assessing performance, valuing exposures, monitoring and enforcing position and other limits for CDS.
- Market-makers shall report their CDS trades with both users and other market-makers on the reporting platform of CDS trade repository within 30 minutes from the deal time. The trade repository would disseminate key information on market participants' positions and help regulators and market participants gain a clear and complete snapshot of the market's overall risk exposure to CDS.

OTC Foreign Exchange Derivatives

V.29 The comprehensive guidelines on OTC foreign exchange derivatives and overseas hedging of commodity price and freight risks were issued in December 2010. The important elements of the revised guidelines, which became effective in February 2011 are: (i) AD Category I banks can only offer plain vanilla European cross currency options; (ii) allowing embedded cross currency option in the case of foreign currency-rupee swaps; (iii) permitting use of cost reduction structures, both under the

[1] Change in price of Rs.100 nominal bond for one basis point change in yield.

Box V.2

NDF Market and its Implications for the Domestic Financial Markets

A non deliverable forward (NDF) refers to an OTC forward transaction that is settled not by delivery but by exchange of the difference between the contracted rate and some reference rate. Such transactions usually involve a non-convertible (with some degree of capital control) or in currencies with limited on-shore hedging options and take place in an offshore location either in order to overcome on-shore regulations or because it is convenient for the transacting parties. The contract is for a fixed amount (of the non-convertible currency), on a specific due date, and at an agreed forward rate. At maturity, the prevailing spot rate (reference rate) is compared with the contracted NDF rate. The difference is usually paid in the convertible currency on the maturity date. There is no delivery of the reference or domestic currency on the maturity date. No payment or account movement takes place in the non-convertible currency. When a NDF transaction is agreed, the parties must also agree on a way to determine the reference rate (at maturity). This might be the daily rate fixed by the central bank in question, or an average rate published by several banks. NDFs require a special contract that meets the provisions of the internationally recognised International Swaps and Derivatives Association (ISDA).

NDF market in Indian Rupee

The demand for Rupee NDF may arise from many sources, *e.g.*

1. Hedge funds/FIIs for hedging potential future exposure to Indian equity/bond market (since the present dispensation allows hedging only of actual, but not potential, exposures);
2. MNCs having manufacturing or business interests in India, who do their invoicing in Indian Rupee but are not allowed to hedge their rupee exposure; and
3. Directional bet by the speculators on the Indian Rupee without any underlying exposure.

The linkage between the NDF market and the domestic market may come from banks and corporates who have global books and can, therefore, take offsetting positions in their foreign and Indian books. This linkage would transmit the price movement in the NDF market to the domestic market or *vice versa*. However, the linkage is weak because corporates' domestic forex forward transaction is based on underlying exposure and there is a limit on the aggregate (cash and derivative) positions that banks can take. The empirical analysis also brings out a weak causality between the NDF and domestic market rates.

Reference :

Padmanabhan, G. (2011), 'Forex Market Development - Issues and Challenges: Thoughts of a Returning Forex Market Regulator,' Keynote address at the seminar of Forex Association of India, Singapore, August 13.

contracted exposures and past performance routes, subject to certain safeguards; and (iv) allowing swaps to move from rupee liability to forex liability, subject to certain safeguards.

V.30 With the return to normalcy in the financial markets, the Reserve Bank persisted with its objective of maintaining an appropriate balance between its market development objectives and effective regulation in order to promote financial stability which is a precondition for long term sustainable growth. Policy measures were taken with a view to addressing certain regulatory gaps, promoting transparency and improving liquidity in the financial markets. The Reserve Bank's calibrated and sequential approach towards the introduction of new market instruments in recognition of the trade-offs between financial stability issues and market efficiency has contributed to the stability of financial markets.

VI REGULATION, SUPERVISION AND FINANCIAL STABILITY

After the outbreak of the global financial crisis, pursuit of financial stability as an explicit policy objective, especially by central banks, is gaining prominence. In India, the Reserve Bank's regulatory and supervisory policies have always been oriented towards maintenance of systemic stability. The Indian banking system remained largely sound and resilient to shocks as indicated by various stress tests. The high level of leverage in developed countries, which was one of the causal factors behind the global financial crisis, continues to remain low in India. The regulatory and supervisory structure of the Reserve Bank was further strengthened during the year. The important policy decisions for SCBs included, inter alia, strengthening countercyclical provisioning norms, measures to avoid excessive leverage in housing loan segment, credit support to Micro Finance Institutions(MFIs) etc. After the consolidation in the UCB sector there is substantial improvement in their financial health.

VI.1 The mandate of central banks in many countries is getting widened to include systemic regulation and macroprudential supervision in the aftermath of the global financial crisis. In India, the regulation and supervision have since long been the most crucial functions of the Reserve Bank. The Reserve Bank currently has the mandate to regulate banks as well as non-banking financial companies (NBFCs) and has conducted its regulatory and supervisory functions with the objective of maintaining systemic financial stability as well as preventing failure of individual entities.

VI.2 The focus on regulation, supervision and financial stability helped the Indian banking system to sustain the downturn witnessed during the global financial crisis. Strong prudential regulations were adopted by the Reserve Bank much ahead of the outbreak of the crisis. The Indian financial system still remains largely bank oriented and therefore a resilient banking system is crucial in maintaining systemic stability. The stress test results suggest that Indian banking system is largely resilient and can withstand plausible shocks.

FINANCIAL STABILITY ASSESSMENT

VI.3 Post-crisis, financial stability has come to be recognised as an integral element of macroeconomic policy framework globally. In the international fora, a Financial Stability Board (FSB) is set up to detect systemic vulnerabilities and strengthen the supervisory and regulatory structure with a view to promoting financial stability. India is also a member of FSB and has committed to adopt international best practices (Box VI.1).

VI.4 The multiple indicator approach to monetary policy as well as prudent financial sector management has enabled the Reserve Bank to maintain financial stability in the country even in the face of strong headwinds from the global economy. The post crisis focus on establishing an institutional mechanism for coordination among regulators and the Government has culminated in the establishment of the Financial Stability and Development Council (FSDC) in December 2010. The FSDC is chaired by the Finance Minister and assisted by a Sub-Committee to be chaired by the Governor of the Reserve Bank. This structure attempts to strike a balance between the sovereign's objective of ensuring financial stability and the operative arrangements involving the central bank and other regulators. While the Sub-Committee is expected to evolve as a more active, hands-on body for financial stability in normal times, the FSDC would have a broad oversight and will assume a central role during crises (Box VI.2).

VI.5 Further, the Financial Sector Legislative Reforms Commission (FSLRC) has been constituted

Box VI.1
Financial Stability Board (FSB)

The FSB, which was established in 2009 as a successor to the Financial Stability Forum (FSF), is an international body established to address financial system vulnerabilities and to drive the development and implementation of strong regulatory, supervisory and other policies in the interest of financial stability. The FSB has identified a range of issues with potential implications for systemic stability and various initiatives, as under, are now underway, internationally, to tackle these issues:

1. Developing macroprudential frameworks and policy measures as an essential tool for ensuring financial stability;
2. Implementing the Basel Committee proposals to enhance the capital and liquidity standards of financial institutions, now commonly known as Basel III. The proposals envisage a minimum Common Equity Capital ratio of 4.5 per cent, a Capital Conservation Buffer of up to 2.5 per cent, calibration of a Liquidity Coverage Ratio (LCR) and a Net Stable Funding Ratio (NSFR), *etc.*;
3. Reforming policies relating to Systemically Important Financial Institutions (SIFI), with a view to reducing the probability and impact of failure, improving resolution capacity and strengthening core financial infrastructures and markets;
4. Exploring possible regulatory measures to address the systemic risk and regulatory arbitrage concerns posed by the shadow banking system;
5. Improving the OTC and Commodity Derivatives Market through measures requiring all standardised OTC derivative contracts to be traded on exchanges or electronic trading platforms and, where appropriate, cleared through central counterparties; reporting of OTC derivative contracts to trade repositories; and higher capital requirements for non-centrally cleared contracts;
6. Other measures such as reforming compensation practices of financial institutions, enhancing and strengthening accounting standards and reducing reliance on Credit Rating Agencies (CRAs).

Reserve Bank's views

India is a member of the FSB and the Reserve Bank is actively involved in the process of policy formulation in the Board. It remains committed to adoption of international standards and best practices, in a phased manner and calibrated to local conditions, wherever necessary.

Banks in India are well capitalised and the Basel III norms are unlikely to put undue pressure on the banking system in the aggregate, though a few individual banks may need to raise additional capital to comply to these standards, once they are phased in. Many regulatory prescriptions being contemplated internationally, especially with respect to core capital, had been inducted into the Indian regulatory framework well before the crisis.

A framework for monitoring the activities of the Financial Conglomerates (FCs) is in place in the country. Though none of the Indian institutions are likely to qualify as a global SIFI, nonetheless, the progress made in SIFI identification and resolution mechanism will have to be incorporated into the domestic regulatory regime.

The shadow banking sector, as it is understood globally, does not exist in India. The NBFC sector which is loosely identified with shadow banking is also largely regulated. There remain some regulatory gaps which leave scope for arbitrage. A Working Group has been, *inter alia*, mandated to identify such gaps and suggest measures to plug them.

Unlike in most jurisdictions, where centralised trade reporting has come into focus only post-crisis, India has had arrangements for reporting of various OTC derivative transactions ranging from summary information to transaction level data. The existing reporting arrangements require trades in foreign exchange, interest rate, government securities, corporate bonds and money market instruments to be reported to the Clearing Corporation of India Ltd. (CCIL). A Working Group constituted by the Reserve Bank has further suggested a range of measures towards expanding the menu of products which are reported and requiring such reporting through regulatory mandates.

Macroprudential policy tools to address issues of systemic concerns have been employed in India for quite some time and the results have been largely positive. The tools used in India included specifying/revising exposure norms, provisioning for standard assets, differentiated risk weights for sensitive sectors, specification of loan to value ratio, *etc*. To sustain the efficacy of such instruments, going forward, a wide range of qualitative and quantitative indicators will need to be developed and the integrity of data will have to be enhanced.

under the Chairmanship of Justice B.N. Srikrishna by the Central Government in March 2011, with a view to rewriting and streamlining the financial sector laws, rules and regulations to bring them in harmony with the requirements of India's fast growing financial sector.

VI.6 By the Securities and Insurance Laws (Amendment and Validation) Act, 2010, a new chapter (chapter III-E) has been inserted in the Reserve Bank of India Act, 1934. This chapter provides for a joint mechanism, consisting of Union Finance Minister as Chairperson, Governor, Reserve Bank of India as

Box VI.2
Developments Related to FSDC and its Sub-Committee

Following the announcement in the Union Budget of 2010-11, the Financial Stability and Development Council (FSDC) was set up in December 2010 with a view to institutionalise and strengthen the mechanism for maintaining financial stability. The FSDC will, *inter alia*, deal with issues relating to financial stability, financial sector development, inter-regulatory coordination and macroprudential supervision of the economy including the functioning of large financial conglomerates.

The FSDC is chaired by the Union Finance Minister and its members include the heads of the financial sector regulators and representatives from key departments of the Ministry of Finance. The FSDC is assisted by its Sub-Committee, which meets frequently (at quarterly intervals) to assess the health of the financial sector and monitor any incipient signs of vulnerability. The Sub-Committee is chaired by the Governor of the Reserve Bank and its members also include the heads of the financial sector regulators and representatives from the Ministry of Finance. The Sub-Committee has replaced the erstwhile High Level Co-ordination Committee on Financial Markets (HLCCFM).

Since its inception, the FSDC has met thrice and has taken stock of issues related to the macroeconomy, implications of the developments in the advanced countries on India, sovereign rating of India and the impact of competitive devaluation by different jurisdictions. The Sub-Committee has also met thrice since its constitution and has reviewed the major macroeconomic and financial sector developments, focusing on issues related to systemic risk. It is engaging itself on an institutional mechanism for inter-regulatory coordination for the supervision of financial conglomerates and putting in place a robust reporting platform for over-the-counter (OTC) derivatives market. Bridging the existing regulatory gaps in the NBFC sector, regulation of government sponsored NBFCs, regulation of investment advisory services, conflict of interest in the distribution of financial products, development of repos in corporate bonds, introduction of infrastructure development funds (IDF), financial inclusion and financial literacy are also critical issues on its agenda.

Vice-Chairperson, the Secretary, Department of Economic Affairs, the Secretary, Department of Financial Services and the Chairpersons of SEBI, IRDA and PFRDA as members to resolve any difference of opinion amongst the regulators. The Act provides for a reference being made to the Joint Committee only by the regulators and not by the Central Government. The decision of the Joint Committee shall be binding on the Reserve Bank of India, the Securities and Exchange Board of India (SEBI), the Insurance Regulatory and Development Authority (IRDA) and the Pension Fund Regulatory and Development Authority (PFRDA).

MONITORING OF FINANCIAL STABILITY

VI.7 Stress testing exercises are regularly carried out by the Reserve Bank as part of its macroprudential oversight. A series of stress testing in respect of credit, liquidity and interest rate risks showed that Indian banking system remained reasonably resilient though their profitability could be affected significantly. The stress tests show that credit risk would be well contained even if 30 per cent of restructured standard assets turned into NPAs. Though under the most stringent credit quality shock of 150 per cent on the baseline, the system level CRAR was adversely affected, the banking system was able to withstand an adverse NPA shock reasonably with their capital fund. Liquidity stress tests revealed some areas of concern even though the scenario has improved as compared to the last assessment. The credit risk stress tests on systemically important non-deposit taking NBFCs (NBFC-ND-SI) and scheduled UCBs revealed that the impact on CRAR under different scenarios would not be alarming.

Leverage of Corporate and Household Sector

VI.8 In the recent period, high leverage levels of corporate and household sector are causes of concern, especially in developed countries. Of these, leverage in household and to a large extent even the corporate sector has been an area which is not directly regulated, even though macroprudential guidelines exist for bank and non-bank lending to corporate sector and retail sector. In India, however, the level of leverage for corporate and household sector is much lower as compared to the high levels prevailing in developed countries (Box VI.3).

ASSESSMENT OF THE BANKING SECTOR

VI.9 The robust economic growth during 2010-11 was accompanied by a strong credit growth, even though deposit growth did not keep pace and the gap was funded through an increasing share of market

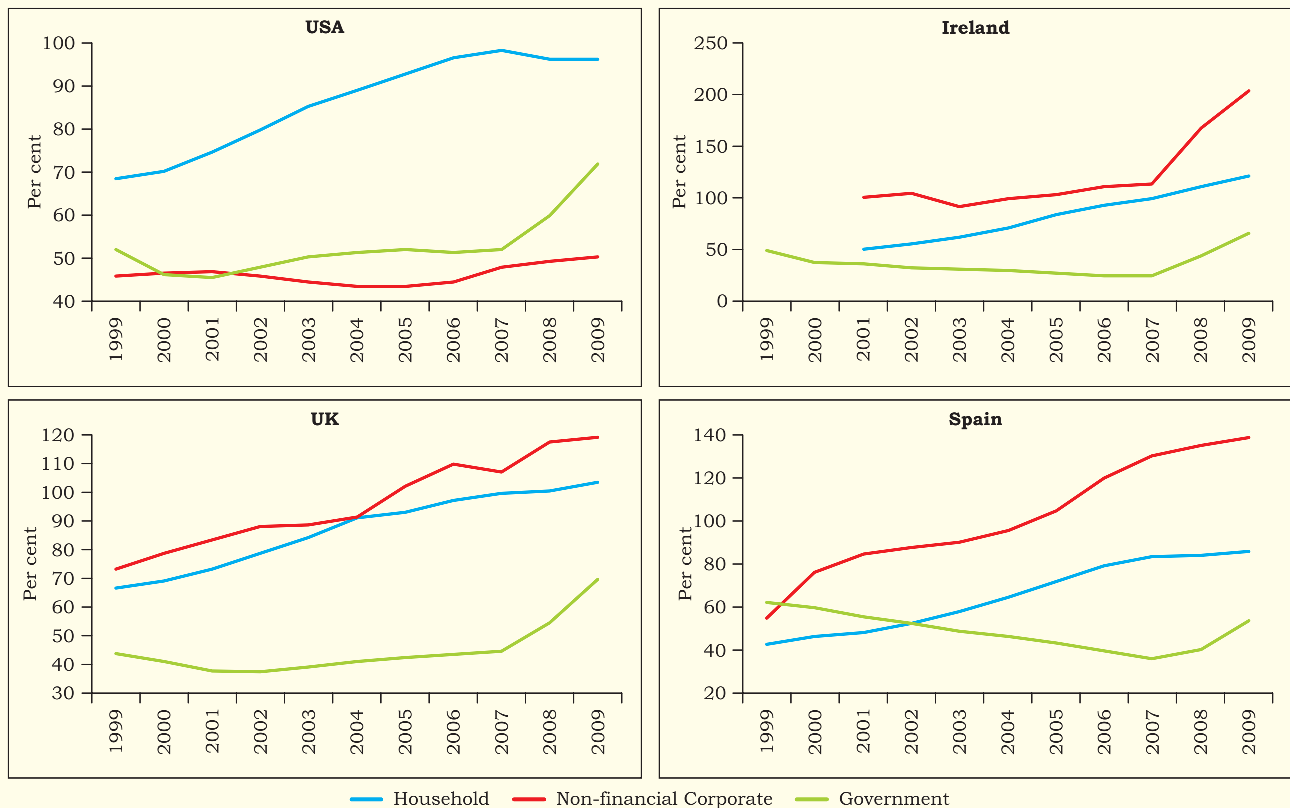
Box VI.3
Corporate and Household Leverage, Credit Cycle and Economic Growth

The high level of debt and steady and sharp rise in leverage in the developed economies, especially after 2000, has been identified as one of the major causal factors that sparked off the global financial crisis. The high level of leverage was particularly significant in case of household sector and corporate sector. In the years preceding the financial crisis, household debt rose significantly, especially in countries which experienced a boom in the housing sector, like USA, UK, Ireland and Spain. Corporate debt ratios also increased sharply in some countries like Ireland, Spain, Portugal and UK but were stable in the US (Chart 1). In contrast, the government debt ratios were stable in most of the countries. Surprisingly, even though household sector and corporate sector were highly leveraged, aggregate financial sector leverage in most countries grew only modestly or declined during the years preceding the crisis. This was mainly because of rise in securitisation which allowed banks to shift non-performing loans off their balance sheets.

It is well documented in economic literature that financial crises often take place after a credit boom as reflected in a sharp rise in the ratio of credit to GDP. The leverage is high during credit boom periods, suggesting risk taking behaviour of both lenders as well as borrowers, thereby leading to build-up of systemic risk. This subsequently results in a bust when risk materialises. These types of credit cycles are fairly regular and clearly identifiable across countries and across time and may subsequently lead to banking crises. Thus, even though high leverage in the initial period may lead to a phase of high economic growth through credit boom, as the bubble bursts, the spillover effects may have adverse implications for growth. This is usually followed by a long and often painful process of deleveraging, as financial sector, households and corporates reduce their debt exposures. Following the recent crisis as well, the process of deleveraging has begun in developed economies, though by no means yet complete. Thus, while household and corporate sector debt is beginning to decline, government borrowing is increasing sharply in many economies to finance crisis related stimulus programmes and financial sector bailouts. In contrast, the process of deleveraging is faster in case of financial institutions as these institutions reduced lending and resorted to shrinking balance sheets.

In sharp contrast to the developing countries, the debt levels in India have remained low. In fact, the leverage of corporate sector has been falling in recent years implying that the

Chart 1: Debt GDP Ratio: Cross Country Experience

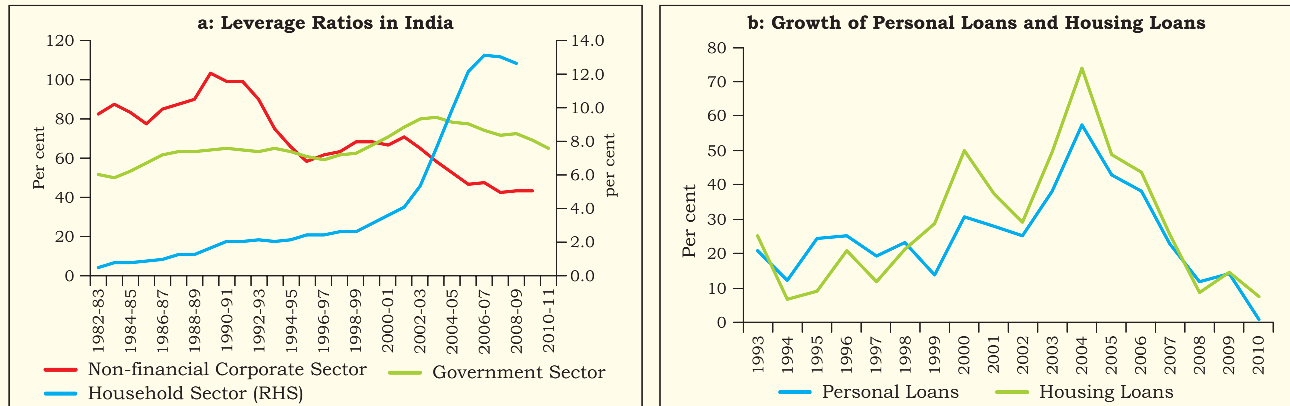


Data sources: Eurostat, OECD Stat, National Economic Accounts data, USA.

(Contd...)

(Concld...)

Chart 2: Indebtedness in India



Note: In chart 2a, the leverage ratio refer to debt-equity ratio of non-Government non-financial companies, combined total liabilities of centre and state to GDP ratio for Government sector and household sector credit by SCBs to personal disposable income for household sector.

corporates have preferred the equity route to raise money as compared to the debt route. Microstructure issues like improved ease of raising finances through capital markets due to liberalisation of norms relating to issue and pricing of shares coupled with encouraging market environment have played a crucial role in a shift from debt to equity for corporate. The household indebtedness, which remains a major cause of concern in the developed countries, is comparatively very low in India. Even though the debt ratio witnessed a sharp rise during the period 2000-01 onwards, it has moderated in the post-financial crisis period. Housing loans constitute around half of the total personal loans in India and as a result a boom and bust in the housing market can affect quality of assets. The build-up of systemic risk in this area in India was avoided mainly due to implementation of macroprudential policy by the Reserve Bank like changing the risk weights for loans to real estate.

References:

Tang, G. and Upper, C. (2010): 'Debt Reduction after Crises', *BIS Quarterly Review*, September, 25-38.

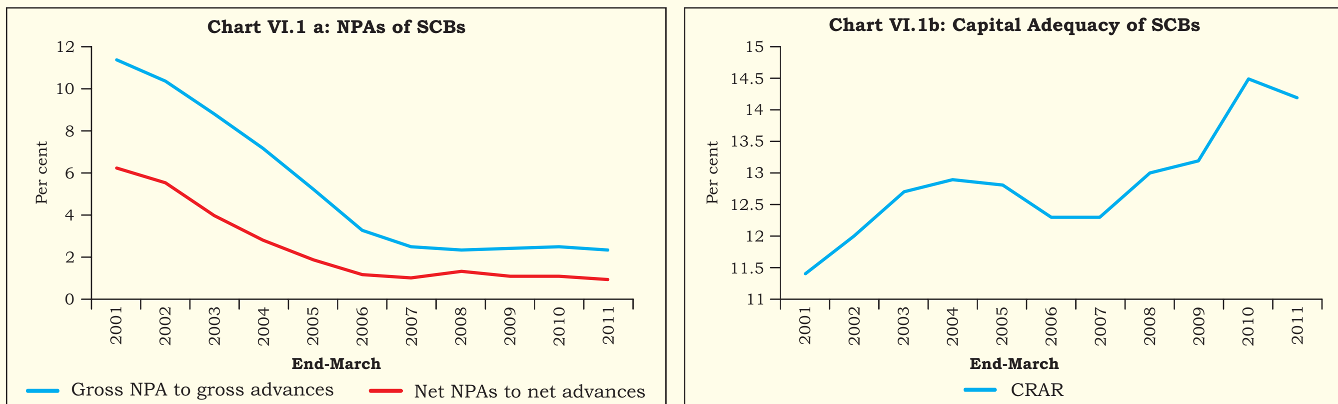
Roxburgh, C. *et.al* (2010): *Debt and Deleveraging: The Global Credit Bubble and its Economic Consequence*', McKinsey Global Initiative, January.

Geanakoplos, J. (2010): 'Solving the Present Crisis and Managing the Leverage Cycle', *FRBNY Economic Policy Review*, August, 101-131.

borrowings. This increased reliance on borrowed funds raised concerns about asset liability mismatches. In the recent period however, the divergent trend between credit and deposit growth has significantly reversed.

VI.10 The strong credit growth during 2010-11 outpaced the growth in NPAs resulting in better asset quality of the banking sector (chart VI.1a). The NPA write-offs by banks to cleanse their balance sheets also helped in achieving a lower gross NPA ratio. Even

Chart VI.1: Soundness Indicators on SCBs



though the credit portfolio of banking system is fairly diversified, the credit growth mainly emanated from three sectors – infrastructure, retail and commercial real estate. As each of these sectors has a peculiar set of asset quality propositions, the brisk growth in exposure seen during 2010-11 poses some concerns.

VI.11 The system level CRAR under Basel-II norms stood at 14.2 per cent as at end-March 2011 which was well above the regulatory requirement of 9 per cent (Chart VI.1b). Subsequently however there was a decline in CRAR at 13.8 per cent as at end June 2011 largely due to robust credit off-take. All the bank groups had CRAR above 12 per cent as at end-March 2011 under Basel-II norms.

VI.12 Despite significant decline in securities trading and hence in non-interest income and also higher risk provisioning, SCBs could record a growth of 20 per cent in their net profit during 2010-11, mainly due to an impressive growth of 35 per cent in net interest income. Accordingly, return on equity (RoE) and return on assets (RoA) as well as net interest margin (NIM) of SCBs recorded an increase. The ratio of liquid assets to total assets deteriorated during 2010-11 and stood at around 30 per cent at end-March 2011 as compared to more than 32 per cent for last several years.

VI.13 The financial soundness indicators of scheduled UCBs have improved in recent years. Asset quality and profitability of NBFCs-ND-SI also improved over the previous year. Asset quality of deposit taking NBFCs (NBFCs-D) showed an improvement in 2010-11compared with last year, even though capital adequacy ratio declined marginally (Table VI.1).

MAJOR DECISIONS TAKEN BY BOARD FOR FINANCIAL SUPERVISION

VI.14 The Board for Financial Supervision (BFS), constituted in November 1994, remains the chief guiding force behind the Reserve Bank's supervisory and regulatory initiatives. The BFS held twelve meetings during the period July 2010 to June 2011.

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	2010	14.5	12.8	24.2	43.5	22.2	42.1
	2011	14.2	12.7	22.1	46.2	21.0	N.A.
Gross NPAs to Gross Advances	2010	2.5	9.3	0.3	N.A.	2.0	2.5
	2011	2.3	7.4	0.3	N.A.	0.9	1.9
Net NPAs to Net Advances	2010	1.1	4.4	0.1	N.A.	-	1.2
	2011	0.9	3.1	0.1	N.A.	-	0.8
Return on Total Assets	2010	1.1	0.8	1.2	1.8	1.5	2.0
	2011	1.1	0.9	1.0	1.1	N.A.	2.2
Return on Equity	2010	13.3	N.A.	10.4	6.8	9.0	7.0
	2011	13.7	N.A.	9.2	5.1	N.A.	8.7
Efficiency (Cost/Income Ratio)	2010	45.8	58.8	14.6	31.2	81.8	73.5
	2011	46.0	49.9	19.3	36.1	N.A.	68.7
Interest Spread (per cent)	2010	2.7	N.A.	2.3	N.A.	3.9	1.8
	2011	3.1	N.A.	2.0	N.A.	N.A.	1.9

N.A.: Not Available.

Note: 1. Data for 2011 are unaudited and provisional.
2. Data for SCBs are excluding LABs.
3. Data for SCBs covers domestic operations, except for CRAR.
4. Data on CRAR on Scheduled UCBs exclude Madhavpura Mercantile Co-operative Bank Ltd.
5. For NBFC-D, data for 2011 pertain to period ended September 2010.

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

In these meetings, it considered, *inter alia*, the performance and the financial position of banks and financial institutions during 2009-10. It reviewed 94 inspection reports (25 reports of public sector banks, 28 of private sector banks, 31 of foreign banks, 4 of local area banks, and 6 of financial institutions). During the period, the BFS also reviewed 15 summaries of inspection reports pertaining to scheduled urban co-operative banks and 43 summaries of financial highlights pertaining to scheduled UCBs classified in Grade I/II. With a view to fine tuning of supervisory rating, the BFS sought a complete review of the rating methodology, which is currently under process.

VI.15 Based on the recommendations of BFS, a High Level Committee (Chairman: Dr. K. C. Chakrabarty) has been constituted to assess the adequacy of the RBI's supervisory policies, procedures and processes, and suggest enhancements for benchmarking the supervisory framework to global standards. Further, with a view to address supervisory concerns arising out of growing volumes as well as complexity of business of banks, the supervisory processes and the organisational structure of the Department of Banking Supervision has been reorganised. The supervisory process (both on-site and off-site) in respect of the major banking groups is being brought together within a division (Financial Conglomerates Monitoring Division - FCMD) in the department so as to achieve better synergy and optimum utilisation of available supervisory resources. Further a need-based reorganisation of the other operational areas of the Department will also be undertaken.

VI.16 While deliberating on issues relating to the Internal Vigilance Framework in private sector/foreign banks, the BFS decided, *inter alia*, that the banks may be advised to frame their own policy for identification of sensitive positions at all levels and for evolving a framework for periodic rotation and mandated leave periods.

VI.17 While deliberating on the issues relating to constitution and performance of co-operative courts in different states, BFS had observed that recovery is treated as dispute under co-operative law, and it would be desirable for UCBs to incorporate in their bye-laws and loan agreements a provision for settling recovery of loans internally through an arbitration council set up by the general body. Based on the directions of the BFS, the views of the respective Task Forces for Co-operative Urban Banks (TAFCUBs) and those of the Legal Department in the matter were obtained. Subsequently, the Secretaries and Registrars of Co-operative Societies of all the State Governments have been advised on July 8, 2010 that the State Co-operative Societies Act may be amended for setting up an internal disputes resolution mechanism where the Act does not provide for arbitration.

COMMERCIAL BANKS

Regulatory Initiatives

Entry of new banks in the private sector

VI.18 Following the announcement made in the Annual Policy Statement for 2010-11, a discussion paper on new bank license was published in August 2010 inviting suggestions and comments from all concerned. Subsequently a gist of such comments received on the discussion paper and the views emerged in the discussions with stakeholders were placed on the Reserve Bank's website in December 2010. Based on the experience gained from the licensing of new banks under the guidelines issued in 1993 and 2001 and the comments/ suggestions received from the stakeholders and general public, draft guidelines on 'entry of new banks in the private sector' are in the process of being finalised in consultation with the Government of India.

Entry of foreign banks

VI.19 A revision to the Reserve Bank's "Roadmap for Presence of Foreign Banks in India", released in February 2005 was due in April 2009. At that juncture, however, the global financial markets were in turmoil and there were uncertainties surrounding the financial strength of banks around the world. In this backdrop, it was decided to review the roadmap once there was

greater clarity regarding stability and recovery of the global financial system. Presently various international fora are engaged in setting out policy frameworks incorporating the lessons learnt from the crisis. Drawing lessons from the crisis, a discussion paper on 'Presence of Foreign Banks in India' was released in January 2011 seeking feedback / suggestions from stakeholders and general public. The guidelines delineating the road-map for presence of foreign banks in India would be finalised after taking into account the feedback/suggestions received from the stakeholders.

VI.20 Reserve Bank, however, continues to grant licenses to foreign banks to open branches in India on a case to case basis. During the year 2010-11, the Reserve Bank issued 4 approvals to foreign banks for maiden presence in India, taking the total numbers of foreign banks operating in India to 37 as at end-June 2011. Besides, 47 foreign banks have also representative offices in India.

Basel II – Implementation of advanced approaches

VI.21 In line with the Basel II framework, Reserve Bank issued detailed guidelines on Advanced Measurement Approach (AMA) for computing capital charge for operational risk in April 2011. Banks intending to migrate to AMA were advised to assess their preparedness with reference to these guidelines. As and when they are ready for implementation, they may approach RBI with a notice of intention.

VI.22 All the commercial banks in India were advised to continue the parallel run under Basel I framework till March 31, 2013 subject to review and ensure that their Basel II minimum capital requirement is higher than 80 per cent of the minimum requirement under Basel I.

Basel III

VI.23 Pursuant to the release of the document titled 'Basel III: A global regulatory framework for more resilient banks and banking system' by the BCBS in December 2010, which becomes operational beginning January 2013, banks have been advised not to issue Tier I and Tier II capital instruments with 'step up options', so that such instruments can qualify for inclusion in the new definition of regulatory capital (Box VI.4).

Provisioning Coverage Ratio (PCR) for advances and other provisioning requirements

VI.24 As a macroprudential measure, banks were required to maintain PCR of 70 per cent of gross NPAs with reference to the position as on end-September 2010. The surplus of the provision over and above the prescribed prudential norms should be segregated into a separate account styled as "countercyclical provisioning buffer" which will be allowed to be used during periods of system-wide downturn with the prior approval of Reserve Bank. This was intended to be an interim measure till such time the Reserve Bank introduces a more comprehensive methodology of countercyclical provisioning taking into account the evolving international standards.

VI.25 Reserve Bank increased the provision requirements in case of certain categories of non-performing and restructured accounts in May 2011. The provision requirement for 'sub-standard' assets was increased from 10 per cent to 15 per cent. The provisioning requirement for unsecured exposure in this category was increased from 20 per cent to 25 per cent. The provisioning in respect of secured portion of advances which have remained in 'doubtful' category up to one year was increased from 20 per cent to 25 per cent, whereas that for advances which remained 'doubtful' between one to three years was increased from 30 per cent to 40 per cent.

VI.26 Restructured accounts classified as standard advances will now attract a provision of 2 per cent in the first two years from the date of restructuring. In case of moratorium on payment of interest/ principal after restructuring, such advances will now attract a provision of 2 per cent for the period covering moratorium and two years thereafter. Restructured accounts classified as NPAs when upgraded to standard category will now attract a provision of 2 per cent in the first year from the date of upgradation.

Box VI.4
Initiatives Taken by the Reserve Bank to Migrate Towards the Basel III Norms

In the wake of financial crisis, the Basel Committee on Banking Supervision (BCBS) has initiated several post-crisis reform measures mainly building on the Basel II capital adequacy framework. The framework was bolstered significantly in July 2009 through a series of enhancements to each of the three pillars; notably, to address the undercapitalisation of trading book exposures of banks. Subsequently, in December 2010, the BCBS has released revised sets of rules for capital and liquidity regulations *viz.* *'Basel III: A global regulatory framework for more resilient banks and banking systems'* and *'Basel III: International framework for liquidity risk measurement, standards and monitoring'* which *inter alia* aim at promoting a more resilient banking sector and strengthening liquidity regulations. Collectively, the revised Basel II capital framework and the new global standards have been commonly referred to as "Basel III".

Though Basel III can be viewed as a modification to Basel II framework, it differs significantly from Basel II in terms of its comprehensiveness. More particularly, apart from revising the definition of regulatory capital, it is much wider in risk coverage and encompasses measures to address the systemic risks. Implementation of Basel III has thrown up significant challenges to both banks and the banking supervisors alike.

So far as implementation of Basel III in India is concerned, availability of adequate amount of capital, both in terms of quality and quantity provides significant comfort to begin implementation of the new framework as per the time schedule fixed by the BCBS. Nevertheless, RBI has taken a number of initiatives to ensure smooth transition of the banking sector to Basel III framework. RBI's representation at the Financial Stability Board (FSB), BCBS and their various sub-groups provides the much needed opportunity to understand and contribute to the formulation of policies relating to regulation and supervision of the banking sector at the international level, particularly, Basel III. In order to raise awareness among banks about Basel III, RBI has been regularly briefing the Chief Executives of banks since RBI became member of BCBS in 2009. These meetings also provide an opportunity to RBI to assess the level of preparedness of banks to implement Basel III and clarify any issues which they may have in this regard. Other initiatives taken by RBI include organising various training programmes through its training establishments, seminars, meetings and participation in seminars organised by the Indian Banks' Association (IBA) and other self regulatory bodies.

The BCBS is monitoring the impact of Basel III proposals through the semi-annual Quantitative Impact Study (QIS) on banks. Ten Indian banks are participating in this QIS exercise. The outcome of the QIS will not only give an idea about the impact of the Basel III rules on Indian banks, but will also help in enhancing the understanding of banks about the subtle nuances of various aspects of Basel III proposals.

Meanwhile, RBI is examining the Basel III regulations and will issue guidelines to the extent applicable for banks operating in India in due course of time. RBI is also working on operationalisation of Countercyclical Capital Buffer under Basel III. RBI would adhere to internationally agreed phase-in period starting in January 1, 2013 for implementation of Basel III.

Housing loans by commercial banks – LTV ratio, risk weight and provisioning

VI.27 In order to prevent excessive leveraging in housing loans portfolio, banks were advised in December 2010 that the Loan to Value (LTV) ratio in respect of housing loans should not exceed 80 per cent. However, for small value housing loans, *i.e.* housing loans up to ₹20 lakh, the LTV ratio should not exceed 90 per cent. The risk weight for residential housing loans of ₹75 lakh and above, irrespective of the LTV ratio, will be 125 per cent. The standard asset provisioning on the outstanding amount of housing loans at teaser rates was increased from 0.40 per cent to 2 per cent. The provisioning on these assets would revert to 0.40 per cent after one year from the date on which the rates are reset at higher rates if the accounts remain 'standard'.

Credit support to Micro Finance Institutions (MFIs)

VI.28 Considering the fact that the problems afflicting the Micro Finance Institutions (MFIs) sector were not necessarily on account of any credit weakness *per-se* but were mainly due to exogenous factors, it was decided in January 2011 that the special regulatory asset classification benefit could be extended to restructured MFI accounts, which were standard at the time of restructuring, even if they are not fully secured. This relaxation was granted purely as a temporary measure and was applicable to standard MFI accounts restructured up to March 31, 2011. This time line was extended up to June 6, 2011 in the case of MFI loans restructured under the consortium approach adopted by banks and under the CDR mechanism. The objective was to provide some liquidity support to MFIs and facilitate a 'holding

on' operation for some time till appropriate measures were taken to bring about long term and structural changes in the functioning of MFIs.

Prudential norms on investment in Zero Coupon Bonds

VI.29 It was observed that banks were investing in long term Zero Coupon Bonds (ZCBs) issued by corporates including those issued by NBFCs. Since the issuers of ZCBs are not required to pay any interest or instalments till the maturity of bonds, the credit risk in such investments would go unrecognised till the maturity of bonds and this risk could especially be significant in the case of long term ZCBs. Further, since such issuances and investments if done on a large scale could pose systemic problems, banks were advised in September 2010 that they should not invest in ZCBs unless the issuer builds up sinking fund for all accrued interest and keeps it invested in liquid investments/securities (Government bonds). Banks were also advised to put in place conservative limits for their investments in ZCBs. Similar guidelines were also issued for UCBs.

Permanent diminution in the value of investments in banks' subsidiaries /joint ventures

VI.30 In the absence of any specific instructions on the method of assessment/measurement of permanent diminution in the value of banks' investments in subsidiaries/ joint ventures which are included under 'Held to Maturity' (HTM) category, banks were not making any attempt to determine whether there is any permanent diminution in their strategic equity investments held under HTM or 'Available for Sale' (AFS) categories. In January 2011 banks were advised about the circumstances under which the need to determine impairment arises and in such an eventuality they would be required to obtain valuation of such investments by a reputed/qualified valuer and make provision for the impairment required, if any.

Sale of Investments held under HTM category

VI.31 Securities under HTM category are intended to be held till maturity by the banks and accordingly are not required to be marked to market. However, it was observed that many banks were resorting to sale of securities under HTM category, that too frequently to take advantage of favourable market conditions and to book profit. Therefore, banks were advised in August 2010 that if the value of sales and transfers of securities to/from HTM category exceeds 5 per cent of the book value of investments held in HTM category at the beginning of the year, they should disclose in the notes to accounts to the balance sheet the market value of the investments held in the HTM category and indicate the excess of book value over market value for which provision is not made. However, the one-time transfer of securities to/from HTM category with the approval of Board of Directors permitted to be undertaken by banks at the beginning of accounting year and sales to RBI under pre-announced OMO auctions, will be excluded from the 5 per cent cap mentioned above.

Accounting Procedure for Investment

VI.32 It was observed that banks were not following a uniform methodology in accounting their investment in government securities. They were following either 'trade date' accounting or 'settlement date' accounting. Therefore, to bring about uniformity, the banks were advised to follow only the 'Settlement Date' accounting. Similar guidelines were also issued for UCBs.

Investment in Non-SLR Securities

VI.33 Reserve Bank issued a circular in December 2010 permitting banks to invest in non-convertible debentures (NCDs) with original or initial maturity up to one year issued by corporates (including NBFCs), subject to extant prudential guidelines.

Guidelines on banks' ALM-Interest Rate Risk

VI.34 Detailed guidelines on banks' Asset Liability Management (ALM) Framework on Interest Rate Risk were issued by the Reserve Bank on November 4, 2010. In the guidelines, the banks were advised to adopt the Duration Gap Analysis (DGA) for interest rate risk management in addition to the Traditional Gap Analysis (TGA) previously mandated.

Issue of Irrevocable Payment Commitments (IPCs)

VI.35 Certain risk mitigating measures were prescribed by the Reserve Bank in September 2010 in the context of banks issuing IPCs to various stock exchanges on behalf of mutual funds and FIIs, as a transitory measure up to end-October 2011. Banks were advised therein to incorporate a clause in the agreement with their clients which gives them an inalienable right over the securities to be received as payout in any settlement, before November 1, 2010. In view of operational difficulties expressed by some banks, this deadline was subsequently extended up to end-December 2010.

Revised Business Correspondents (BC) guidelines

VI.36 Guidelines were issued in September 2010, permitting banks to engage companies registered under the Companies Act, 1956 (excluding NBFCs) with large and widespread retail outlets as BCs in addition to the individuals/entities permitted earlier.

Credit card operations of banks

VI.37 Inspite of instructions issued to banks from time to time on credit card operations, complaints are received from card holders both at Reserve Bank and at the offices of the Banking Ombudsmen. Banks were therefore, once again advised that if they fail to adhere to the prescribed guidelines, Reserve Bank would initiate suitable penal action, including levy of monetary penalties.

Branch authorisation policy

VI.38 In view of the need to step up opening of branches in rural areas so as to meet the objectives of financial inclusion and increased banking penetration, banks have been mandated to open at least 25 per cent of the total number of branches proposed to be opened during a year in unbanked rural (tier 5 and tier 6) centres.

Fair practices code-disclosure

VI.39 With a view to bringing in fairness and transparency, banks were advised to disclose to the borrowers all-in cost information inclusive of all charges involved in processing/sanction of loans in the loan application in a transparent manner. Banks were also advised to ensure that the charges/fees are non-discriminatory.

Bank's participation in trading of Currency Options

VI.40 Pursuant to the issue of guidelines on trading of currency options on recognised stock/new exchanges, AD category-1 commercial banks fulfilling required criteria were permitted to become trading and clearing members of the exchange traded currency options market of the recognised stock exchanges, on their own account and on behalf of their clients. All other SCBs are permitted to participate only as clients. NBFCs-ND-SI were also permitted to participate in the designated currency options exchanges recognised by SEBI as clients, only for the purpose of hedging their underlying forex exposures. UCBs licensed as AD category I were allowed to participate in the exchange traded currency option market of a designated exchange recongnised by SEBI, only as clients, subject to RBI guidelines. Such participation is allowed only for hedging underlying forex exposure arising from customer transactions.

Reopening of pension option- prudential treatment

VI.41 To mitigate the difficulties faced by public sector banks in absorbing the enhanced expenditure arising on account of enhancement of gratuity limits and reopening of pension option to their employees, special regulatory dispensation of amortisation was granted to such banks and was subsequently extended to ten old private sector banks, which came under the 9th bipartite settlement under the aegis of Indian Banks' Association (IBA). These banks were permitted to amortise the expenditure over a period of 5 years beginning with the financial year 2010-11 subject to a minimum of 1/5th of the total amount being amortised every year. Upon the introduction of International Financial Reporting Standards (IFRS) from April 2013 as scheduled, the opening balance of reserves of banks will be reduced to the extent of the unamortised carry forward expenditure. Further the unamortised expenditure shall not include any

amount relating to retired employees. The unamortised expenditure would not be reduced from Tier I capital, as a special case in view of the exceptional nature of the event.

The Banking Laws (Amendment) Bill, 2011

VI.42 The Banking Laws (Amendment) Bill 2011 has been introduced in Lok Sabha in March 2011. The Bill seeks to amend certain provisions of the Banking Regulation Act, 1949 and the Banking Companies (Acquisition and Transfer of Undertakings) Act of 1970 and 1980. The proposed amendments to the BR Act envisages, *inter alia*, removal of restriction on voting rights, enabling banking companies to raise capital in accordance with the international best practices, formation of Depositors' Education and Awareness Fund, conferring powers on Reserve Bank to supersede the Board of Directors of a banking company in certain cases, to call for information from/ to inspect the associate enterprises of a banking company and to exempt mergers of banking companies from the applicability of the provisions of the Competition Act, 2002, thus making the regulatory powers of RBI more effective.

VI.43 The proposed amendments to the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970 and 1980 envisages raising the authorised capital of the nationalised banks, enable them to raise capital through right issue/issue of bonus shares and raising the restriction on voting rights.

Supervisory Initiatives

Cross Border Supervision and Co-operation

VI.44 The process of entering into bilateral MoUs with 16 identified jurisdictions/countries for cross border supervision has been initiated. Out of the 16 pre-identified overseas supervisors, MoUs with China Banking Regulatory Commission (CBRC) and Dubai Financial Services Authority (DFSA), the independent integrated financial services and market regulators of the Dubai International Financial Centre (DIFC), have been signed. Proposals in respect of 7 other overseas supervisors are at various stages of finalisation.

Regulatory and Audit Compliance

VI.45 In view of the concerns about the adequacy of regulatory compliance by foreign banks in India, it was advised that for all foreign banks operating in India, the Chief Executive Officer would be responsible for effective oversight of regulatory and statutory compliance as also the audit process and the compliance thereof in respect of all operations in India.

Developments in Fraud Monitoring

VI.46 RBI as a part of its supervisory process alerts the banks about common fraud prone areas, *modus operandi* of frauds and the measures to be taken by them to prevent/reduce incidence of frauds in banks on an ongoing basis. During 2010-11, the Reserve Bank took several measures for strengthening the frauds monitoring mechanism in banks.

Enhancement of governance of IT security measures

VI.47 A Working Group on Information Security, Electronic Banking Technology, Risk Management and Cyber Frauds (Chairman: Shri G. Gopalakrishna), was formed by the Reserve Bank following the announcement in the Annual Monetary Policy Statement of 2010. Based on the recommendations of the group and the feedback received from stakeholders, detailed guidelines were issued to the banks on April 29, 2011. These guidelines are aimed at enhancing the governance of IT information security measures, cyber frauds, independent assurance about the effectiveness of the IT controls and related areas.

Internal vigilance in banks

VI.48 In an endeavour to align the vigilance function in private sector and foreign banks to that of the public sector banks, detailed guidelines for the former have been issued so that all issues arising out of lapses in

the functioning of the private sector and foreign banks especially relating to corruption, malpractices, frauds *etc.* can be addressed uniformly by the banks for timely and appropriate action.

Guidelines for prevention of frauds

VI.49 A study was also made across banks to ascertain the policy and operating framework in place for detection, reporting and monitoring of frauds. The study revealed that while the banks do have control policies and processes, these are not well structured and systematic to ensure proper focus on typical fraud events. Besides, there was lack of consistency in treatment of transactions having characteristics of fraud as also in their reporting to the competent authority. The banks have been advised to suitably modify their policies and streamline the operating framework. In order to ensure close monitoring and tighter controls so as to thwart frauds especially in housing loan, export finance, loans against fixed deposit receipts *etc*., the banks have been asked to structure their operating framework on three tracks *viz*. (i) Detection and reporting of frauds (ii) Corrective action and(iii) Preventive and punitive action.

URBAN CO-OPERATIVE BANKS

Consolidation through mergers

VI.50 The consolidation of the urban co-operative banking sector through the process of merger of weak banks with stronger ones while providing an avenue for non-disruptive exit to the weak entities has been set in motion since 2005-06. During last six years, the Reserve Bank has received 158 proposals for merger. The Reserve Bank issued no objection certificate (NOC) for 120 cases. Out of the 120 NOCs issued, 95 mergers had actually been effected upon the issue of statutory orders by the Central Registrar of Co-operative Societies (CRCS)/Registrar of Co-operative Societies (RCS) of the State concerned. Out of the 95 mergers, 59 UCBs had negative net worth. Profit making UCBs were also permitted to merge with other financially strong UCBs with the aim of consolidation and strengthening the sector.

Transfer of assets and liabilities of UCBs to Commercial Banks

VI.51 Certain financially weak UCBs with relatively bigger size balance-sheets (*i.e*. Tier II UCBs) could not opt for mergers as there were no willing UCBs to take over such UCBs with higher accumulated losses. To overcome this problem, specific guidelines about transfer of certain assets and liabilities with mutual consent of both the UCB and the interested SCBs were issued for the first time in February 2010. So far there have been two such cases of transfer of assets and liabilities of UCBs to SCBs. Specific assets and liabilities of Shree Suvarna Sahakari Bank Ltd., Pune were taken over by the Indian Overseas Bank and similarly the assets and liabilities of the Memon Co-operative Bank Ltd., Mumbai were taken over by the Bank of Baroda.

Unlicensed UCBs and licensing of new UCBs

VI.52 Based on the guidelines issued by the BFS in August 2009, a review of unlicensed UCBs was made and 51 UCBs have been granted banking licenses. As on March 31, 2011, there are four unlicensed banks and review in respect of these UCBs is in progress. Further, the Reserve Bank has constituted an expert committee for studying the advisability of granting new urban cooperative banking licenses (Box VI.5).

Maximum limits on unsecured loans and advances

VI.53 The maximum limits for grant of unsecured loans by the UCBs (with or without surety or for cheque purchase) for individual and group borrowers were enhanced suitably keeping in view the twin criteria of capital adequacy (CRAR) and size of demand and time liabilities (DTL) of the UCBs. The enhanced limits ranged between ₹0.25 lakh (for UCB with DTL up to ₹10 crore and CRAR below nine per cent) and ₹5.00 lakh (for UCB with DTL above ₹100 crore and CRAR above nine per cent). The total unsecured loans and advances granted by an UCB are limited to 10 per cent of its total assets as per audited balance sheet as on 31 March of the preceding financial year.

Box VI.5
Expert Committee on Licensing of New Urban Cooperative Banks

In the light of the past experience regarding newly licensed UCBs becoming financially unsound in short span of time and the prevailing precarious financial health of the UCB sector, the Reserve Bank issued a comprehensive policy in 2005 on UCBs with a view to improving the financial health of this sector. It was also decided not to issue any fresh licences thereafter for new UCBs. The Reserve Bank entered into memoranda of understanding (MoU) with all State Governments and the Central Government for coordination of regulatory policies and encouraged voluntary consolidation in the sector by merger of non-viable UCBs with financially sound and well managed UCBs. Pursuant to these policies, the share of financially sound banks has increased from 61.3 per cent in 2005 to 80.3 per cent in 2010. As the financial position of the sector improved considerably, UCBs were permitted to enter into new areas of business.

Against this backdrop a Committee (Chairman: Shri Y. H. Malegam), has been set up for studying the advisability of granting new urban co-operative banking licences. Further, as announced in the Second Quarter Review of Monetary Policy 2010-11, the Committee was advised to look into the feasibility of an umbrella organisation for the UCB sector.

The terms of references of the Committee are as under:

i) To review the role and performance of UCBs over the last decade and especially since the adoption of Vision document in 2005,

ii) To review the need for organisation of new UCBs in the context of the existing legal framework for UCBs, the thrust on financial inclusion in the economic policy and proposed entry of new commercial banks into the banking space,

iii) To review the extant regulatory policy on setting up of new UCBs and lay down entry point norms for new UCBs,

iv) To examine whether licensing could be restricted only to financially sound and well managed cooperative credit societies through conversion route,

v) To make recommendations relating to the legal and regulatory structure to facilitate the growth of sound UCBs especially in the matter of raising capital consistent with co-operative principles.

vi) To examine the feasibility of an umbrella organisation for the UCB Sector.

vii) To examine other issues incidental to licensing of UCBs and make appropriate recommendations.

Share linking to borrowing norm in UCBs

VI.54 UCBs which maintain a minimum capital to risk-weighted assets ratio (CRAR) of 12 per cent on a continuous basis were exempted from the mandatory share linking norms.

Credit exposure to housing and commercial real estate sectors

VI.55 The permitted credit exposure of UCBs to housing, real estate and commercial real estate sectors was revised from the earlier limit of 15 per cent of deposits to 10 per cent of their total assets. This limit of 10 per cent could be exceeded by an additional limit of five per cent of total assets in housing loans to individual up to ₹15 lakh.

Extension of area of operation of UCBs

VI.56 All financially sound and well managed UCBs having minimum assessed net worth of ₹50 crore, subject to meeting other norms, were permitted to extend their area of operation beyond the State of original registration as also to any other States of their choice. Further if such UCBs have acquired weak banks in other States, they would be allowed to extend their area of operation to the entire State of registration of the target bank.

Liberalised norms for opening of branches by UCBs

VI.57 All financially sound and well managed UCBs having required headroom capital in terms of assessed net worth per branch including existing branches and satisfying other criteria were allowed to open branches/extension counters beyond the annual ceiling of 10 per cent of existing branch network.

Use of business correspondents/ business facilitators by UCBs

VI.58 With the objective of ensuring greater financial inclusion and increasing the outreach of the UCBs in providing basic and affordable banking services in their area of operation, it was decided to consider requests from well managed and financially sound UCBs to engage business facilitator/business correspondent using ICT solutions.

Collection of account payee cheques

VI.59 With a view to mitigating the difficulties faced by the members of co-operative credit societies in collection of account payee cheques, UCBs were permitted to collect account payee cheques drawn for an amount not exceeding ₹50,000 to the account of their customers who are co-operative credit societies, if the payees of such cheques are the constituents of such co-operative credit societies.

RURAL CO-OPERATIVES

Package for revival of Rural Co-operatives

VI.60 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 central government had approved a package for revival of rural co-operatives at the apex level. An aggregate amount of ₹8,993 crore has been released by NABARD up to June 30, 2011 towards Government of India's share for recapitalisation of PACS in sixteen States while the State Governments have also released ₹854 crore as their share.

Licensing of Rural Co-operative Banks

VI.61 The Annual Policy Statement of April 2009 had announced a roadmap for licensing of unlicensed state and central co-operative banks in a non-disruptive manner and revised guidelines were issued for the same in October 2009. Subsequent to the issuance of revised guidelines, 10 StCBs and 160 DCCBs have been licensed taking the total number of licensed StCBs and DCCBs to 24 and 235 respectively as at end-June, 2011. Efforts are being made to ensure that the remaining unlicensed banks meet the criteria for licensing by the stipulated date.

Raising RRB branches to CBS platform

VI.62 The Working Group of Technology Upgradation in Regional Rural Banks (RRBs) (Chairman: Shri G. Srinivasan) had recommended that CBS should be fully implemented in all RRBs by September 2011. As on date, out of total 82 RRBs, CBS has been fully implemented in 45 RRBs while in remaining 37 it is in progress.

DEPOSIT INSURANCE AND CREDIT GUARANTEE CORPORATION

VI.63 Deposit insurance constitutes an important element in preventing any runs on the banks due to unforeseen events. Deposit Insurance and Credit Guarantee Corporation (DICGC) is a wholly owned subsidiary of Reserve Bank of India. 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 except three UTs of Lakshadweep, Chandigarh, and Dadra and Nagar Haveli are also covered by deposit insurance. The number of registered insured banks as on March 31, 2011 stood at 2,217 comprising 82 Commercial Banks, 82 RRBs, 4 LABs and 2,049 Co-operative Banks. With the present limit of deposit insurance in India at ₹1 lakh, the number of fully protected accounts (977 million) as on March 31, 2011 constituted 93 per cent of the total number of accounts (1,052 million) as against the international benchmark[1] of 80 per cent. Amount-wise, insured deposits at ₹17,35,800 crore constituted 35 per cent of assessable deposits at ₹49,52,427 crore against the international benchmark[1] of 20 to 40 per cent. At the current level, the insurance cover works out to 1.63 times per capita GDP as on March 31, 2011 as against the international benchmark of around 1 to 2 times per capita GDP prior to the financial crisis.

VI.64 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

1 : 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

fund is used for settlement of claims of depositors of banks taken into liquidation/reconstruction/ amalgamation, *etc*. During the year 2010-11, the Corporation settled aggregate claims for ₹379 crore in respect of a commercial bank (supplementary claim) and 73 Co-operative Banks (28 original claims and 45 supplementary claims) as compared with claims for around ₹655 crore during the previous year. The size of the DIF stood at ₹24,704 crore as on March 31, 2011, yielding a Reserve Ratio (DIF/insured deposits) of 1.4 per cent.

VI.65 An assessment team comprising representatives of IADI and IMF visited DICGC in end-September 2010 to undertake a field test of the Draft Assessment Methodology for Core Principles for Effective Deposit Insurance Systems. According to the assessment of the team, DICGC is compliant or largely compliant with about half of the 18 core principles for 'effective deposit insurance systems'. In its "paybox" function, the DICGC is fully or largely compliant on all core principles. However, weaknesses in the overall insolvency framework which are outside the control of the DICGC makes overall compliance with many core principles limited. The report made several recommendations such as removing insolvent co-operative banks from the system, obtaining deposit-specific information from banks in a standard format, executing MoUs by DICGC with other deposit insurers whose banks have a presence in India, granting DICGC an access to a "fast-track" source of funding from either RBI or Ministry of Finance (MoF) to provide funds needed for prompt depositor reimbursement, developing a formal public awareness programme and establishing a reasonable target reserve fund by DICGC. The Working Group on Reforms in Deposit Insurance, including Amendments to DICGC Act, would be looking into the recommendations of the field test team.

BANKING CODES AND STANDARDS BOARD OF INDIA

VI.66 The membership of BCSBI has grown from 67 banks in 2006 to 112 banks in 2011 and the membership of 14 more banks is under process. During the year, BCSBI undertook a Survey of 1,000 branches and 135 hubs of 49 member banks (excluding RRBs and Urban Co-operative Banks), spread over 22 cities in India, to independently verify compliance with the provisions of the Code of Bank's Commitment to Customers and Code of Bank's Commitment to Micro and Small Enterprises. More than 2,000 customers were also interviewed at the branches to obtain their responses. In general, the Survey findings reveal perceptible improvement in customer service.

NON-BANKING FINANCIAL COMPANIES

VI.67 As announced in the Annual Policy 2010-11, the regulatory framework for Core Investment Companies (CICs) was announced (Box VI.6).

Provision of 0.25 per cent for standard assets of NBFCs

VI.68 In the interest of counter cyclicality and also to ensure that NBFCs create a financial buffer as a protection from the effect of economic downturns, provisioning for standard assets was introduced to NBFCs at 0.25 per cent of the outstanding standard assets.

Participation in currency futures

VI.69 NBFCs (excluding residuary non-banking companies (RNBCs)) were allowed to participate in the designated currency futures exchanges recognised by SEBI as clients only for the purpose of hedging their underlying forex exposures. NBFCs were advised to make appropriate disclosures regarding transactions undertaken in the balance sheet.

Exemption for Long Term Infrastructure Finance Bonds

VI.70 Amount raised by issue of infrastructure bonds by Infrastructure Finance Companies, shall not be treated as 'public deposit' under the 'Non-Banking Financial Companies Acceptance of Public Deposits (Reserve Bank) Directions, 1998.

Box VI.6
Regulatory Framework for Core Investment Companies (CICs)

Core Investment Company (CIC) is a non-banking financial company carrying on the business of acquisition of shares and securities and which (a) holds not less than 90 per cent of its net assets in the form of investment in equity shares, preference shares, bonds, debentures, debt or loans in group companies and (b) its investments in the equity shares in group companies constitutes not less than 60 per cent of its net assets as on the date of the last audited balance sheet.

CICs were not required to obtain Certificate of Registration (CoR) from Reserve Bank under Section 45 IA of the RBI Act 1934. In practice however, it proved very difficult to determine whether a company has invested in the shares of another company for the purpose of holding stake or for the purpose of trade. It was therefore decided that investing in shares of other companies, even for the purpose of holding stake should also be regarded as carrying on the business of acquisition of shares. Furthermore, in view of the peculiar business model of CICs, *viz.*, holding stake in group companies and funding group concerns, CICs find it difficult to comply with the extant net owned fund (NOF) requirements and exposure norms for NBFCs prescribed by the Reserve Bank. Considering these issues, a revised regulatory framework for CICs was announced in August 2010. The salient features of the framework are as follows:

i) Core Investment Companies (CIC) with an asset size of less than ₹100 crore will be exempted from the requirements of registration with RBI. For this purpose all CICs belonging to a Group will be aggregated.

ii) CICs with asset size above Rs. 100 crore but not accessing public funds are also exempted from the requirement of registration with RBI.

iii) Due to systemic implications on account of access to public funds (such as funds raised through Commercial Paper, debentures, inter-corporate deposits and borrowings from banks/FIs), CICs having asset size of 100 crore or above are categorised as Systemically Important Core Investment Companies (CICs-ND-SI) and are required to obtain CoR from the Reserve Bank.

iv) Every CIC-ND-SI shall ensure that at all times it maintains a 'minimum capital ratio' whereby its adjusted net worth shall not be less than 30 per cent of its aggregate risk weighted assets and risk adjusted value of off-balance sheet items.

v) Every CIC-ND-SI shall ensure that its outside liabilities at all times shall not exceed 2.5 times its adjusted net worth.

vi) A CIC-ND-SI which adheres to the requirements regarding capital and leverage ratio as specified at (iii) and (iv) above, may to the extent necessary, be exempted from compliance with maintenance of statutory minimum NOF and requirements of "Non-Banking Financial (Non-Deposit accepting or holding) Companies Prudential Norms (Reserve Bank) Directions, 2007" including requirements of capital adequacy and exposure norms.

In view of the changed regulatory framework, all CICs-ND-SI, irrespective of whether they were specifically exempted in the past from registration with the Reserve Bank or not, were directed to apply for obtaining the CoR. In order to operationalise the changed policy environment in a non-disruptive manner, companies which apply for CoR within the stipulated time were directed to carry on the existing business till the disposal of their application by the Reserve Bank. However, companies which fail to apply for the CoR within the stipulated period will be regarded as contravening the provisions of Section 45IA of the Reserve Bank of India Act, 1934. Companies which presently have an asset size of less than ₹100 crore would be required to apply to RBI for CoR within three months of the date of achieving a balance sheet size of ₹100 crore.

Amendment to Definition of Infrastructure Loan

VI.71 NBFCs were advised to include telecom towers also as an infrastructure facility for availing credit facility. Further NBFCs were advised that only Credit Rating Agencies (CRAs) approved by the Reserve Bank can give the rating to Infrastructure Finance Companies (IFCs).

NBFCs not to be Partners in Partnership firms

VI.72 In view of the risks involved in NBFCs associating themselves with partnership firms, it was decided to prohibit NBFCs from contributing capital to any partnership firm or to be partners in partnership firms. In cases of existing partnerships, NBFCs were advised that they may seek early retirement from the partnership firms.

Loan facilities to the physically / visually challenged

VI.73 NBFCs were advised that there should be no discrimination in extending financial products and facilities including loan facilities to the physically/ visually challenged applicants on grounds of disability

and all possible assistance may be provided to such customers.

Applicability of exemption from concentration norms

VI.74 Under the extant instructions, any NBFC-ND-SI not accessing public funds, either directly or indirectly, may make an application to the Reserve Bank for modifications in the prescribed ceilings with regard to concentration of credit/investment norms. NBFCs-ND-SI may also be issuing guarantees and devolvement of these guarantees might require access to public funds. Accordingly, any NBFC-ND-SI not accessing public funds, either directly or indirectly, or not issuing guarantees may approach Reserve Bank of India for appropriate dispensation.

Enhancing CRAR to fifteen per cent

VI.75 It was decided to align the minimum capital ratio of all deposit taking NBFCs as well as NBFCs-ND-SI to 15 per cent. Accordingly, all deposit taking NBFCs were advised to raise the minimum capital ratio consisting of Tier I and Tier II capital, which shall not be less than 15 per cent of its aggregate risk weighted assets on balance sheet and risk adjusted value of off-balance sheet item with effect from March 31, 2012.

Review of guidelines on entry of NBFCs into insurance business

VI.76 As per extant instructions, NBFCs registered with the Reserve Bank and satisfying the eligibility criteria will be permitted to set up a joint venture (JV) company for undertaking insurance business with risk participation. The maximum equity contribution an NBFC can hold in a JV company is 50 per cent of its paid-up capital. In case more than one company (irrespective of doing financial activity or not) in the same group of NBFC wishes to take a stake in the insurance company, the contribution by all companies in the same group shall be counted for the limit of 50 per cent prescribed for the NBFCs in an insurance JV.

Opening of branch/subsidiary/ joint venture/ representative office or undertaking investment abroad by NBFCs.

VI.77 Presently, an Indian party requires prior approval of the concerned regulatory authorities both in India and abroad, to make an investment in an entity outside India engaged in financial services activities. No-objection certificate will be issued by Reserve Bank to the NBFC before opening of subsidiary/joint venture/representative office or undertaking investment abroad subject to the NBFC fulfilling the conditions specified by Reserve Bank on June 14, 2011.

VII PUBLIC DEBT MANAGEMENT

A major challenge for the Reserve Bank of India during 2010-11 was the management of market borrowing programme of both the Government of India and the State Governments in a situation of increasing inflationary pressure and tight liquidity conditions. The inflationary pressures and successive hikes in policy rates alongwith large issuances exerted pressure on the yield, particularly at the shorter end. The cost of borrowing, however, was largely contained by a judicious mix of maturities and yield, among others.

VII.1 The financial year 2010-11 was characterised by rising inflationary pressure and tight liquidity conditions coupled with successive hikes in policy rates. The Reserve Bank, as the Government's debt manager conducted the market borrowing programme smoothly, guided by the twin objectives of minimisation of cost over time and pursuit of maturity profiles that are consistent with low rollover risk. The market borrowing programme of the Central Government was completed successfully during 2010-11, with the net amount raised through dated securities being lower by around 18 per cent than that in the previous year.

VII.2 During 2010-11, the one-off revenue items like 3G and broadband wireless access (BWA) auctions led to the accumulation of large Government balances, and the market borrowing programme was modulated accordingly. During 2010-11, the increase in key policy rates and a rise in inflationary expectations impacted the cost of market borrowings. Further, the unanticipated build-up of surplus cash balances with the Government following the front loading of receipts and the back loading of expenditure resulted in frictional liquidity mismatches in the financial system that had implications for the Government's borrowing costs.

DEBT MANAGEMENT OF CENTRAL GOVERNMENT

Market Borrowings

VII.3 The gross and net amounts raised through dated securities in 2010-11 were lower by around 3 per cent and 18 per cent, respectively, than those raised in the previous year (Table VII.1). A major challenge for the Reserve Bank, during 2010-11 was the management of the government market borrowing programme in a situation of tight liquidity conditions and rise in inflationary expectations. Nonetheless, one-off revenue items like 3G and BWA auctions led to an accumulation of large Government balances, which in turn, contributed to lower market borrowings during the year. The Reserve Bank's purchases of Government securities amounting to around ₹ 67,200 crore through open market operations (OMOs), aimed

Table VII.1: Gross and Net Market Borrowings of the Central Government#

(₹ crore)

Item	2009-10			2010-11			2011-12	
	Budget Estimate	Revised Estimate	Actual	Budget Estimate	Revised Estimate	Actual	Budget Estimate	Actual@
1	2	3	4	5	6	7	8	9
Gross borrowing	4,91,044 *	4,92,368 *	4,92,497	4,98,635	4,88,595	4,79,482	4,69,738	1,97,203
Net Borrowing	3,97,957 *	3,94,229 *	3,94,358	3,45,010	3,35,512	3,26,398	3,53,128	1,33,354
(i) Dated Securities	3,97,957 *	3,98,411 *	3,98,411 *	3,45,010	3,35,414	3,25,414	3,43,000	1,20,527
(ii) 364-day TBs	–	-4,182	-4,053	–	98	984	10,128	12,827

#: Dated securities and 364-day Treasury Bills. *: Includes MSS de-sequestering. @: Up to July 31, 2011.

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	
	under 5 years	5-10 years	Over 10 years	Weighted Average Yield	Range of Maturities	Weighted Average Maturity	Weighted Average Maturity	Weighted Average Coupon
1	2	3	4	5	6	7	8	9
2008-09	7.71-8.42	7.69-8.77	7.77-8.81	7.69	6-30	13.8	10.45	8.23
2009-10	6.09-7.25	6.07-7.77	6.85-8.43	7.23	5-30	11.16	9.82	7.89
2010-11	5.98-8.67	7.17-8.19	7.64-8.63	7.92	5-30	11.62	9.78	7.81

#: Excludes issuances under MSS; YTM: Yield to Maturity.

at addressing the structural liquidity mismatch, *inter alia*, facilitated the completion of large Government market borrowing during 2010-11.

VII.4 During 2010-11, in order to contain inflationary pressures, the Reserve Bank increased the key policy rates, which had an impact on the cost of Government's market borrowings. The weighted average yield of dated securities rose to 7.92 per cent in 2010-11 from 7.23 per cent in 2009-10. The weighted average coupon on the outstanding stock of Government dated securities, however, declined moderately to 7.81 per cent as on March 31, 2011 from 7.89 per cent as on March 31, 2010 (Table VII.2).

VII.5 The yield curve turned increasingly flat during the course of 2010-11 as reflected in the significant decline in the yield spreads. A large volume of long dated securities was issued during the second half in consonance with the yield curve movements. During 2010-11, 37.53 percent of the market borrowings were raised through issuance of dated securities with residual maturity of 10-14.99 years as compared to 21.77 per cent in 2009-10 (Table VII.3). As a result, the weighted average maturity of debt issuances during 2010-11 increased to 11.62 years from 11.16 years during the previous year.

VII.6 The weighted average maturity of the outstanding stock (based on residual maturity) decreased fractionally to 9.78 years as on March 31, 2011 from 9.82 years as on March 31, 2010.

VII.7 The Reserve Bank continued with the Uniform Price based auctions of Central Government dated securities during 2010-11 with a view to facilitating aggressive bidding by the market participants in an environment of uncertain market conditions. Floating rate bonds (FRBs) amounting to ₹3,000 crore were issued during 2010-11 as against ₹5,000 crore in 2009-10.

VII.8 The Central Government issued 8.01 per cent 'Postal Life Insurance Government of India Special Security 2021' for ₹4,000 crore (nominal) and 8.08 per cent 'Postal Life Insurance Government of India

Table VII.3: Issuance of GoI Dated Securities - Maturity Pattern

(₹ crore)

Residual Maturity	2008-09		2009-10		2010-11	
	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	–	–	52,000	12.44	11,000	2.52
5 - 9.99 years	77,000	29.5	1,80,000	43.06	1,52,000	34.78
10 -14.99	99,000	37.93	91,000	21.77	1,64,000	37.53
15 -19.99 years	14,000	5.36	39,000	9.33	54,000	12.36
20 years & above	71,000	27.2	56,000	13.4	56,000	12.81
Total	**2,61,000**	**100**	**4,18,000**	**100**	**4,37,000**	**100**

Special Security 2023' for ₹3,000 crore on March 31, 2011. The Reserve Bank permitted with effect from April 1, 2011 transfer of/trading in the Power Bonds maturing on October 1, 2015 and April 1, 2016, issued by various States to the Central Public Sector Undertakings (CPSUs) in terms of the Tripartite Agreement among 27 State Governments, Ministry of Power, Central Government and the Reserve Bank under One Time Settlement Scheme for dues of State Electricity Boards. The Central Government repurchased the Fertilizer Bonds issued to various Fertilizer Companies amounting ₹5,763 crore (face value), in the first tranche of such repurchase, held on March 31, 2011 and ₹6,032 crore in the second tranche, held on July 26, 2011.

VII.9 As per the Union Budget 2011-12, the gross market borrowings of the Centre through dated securities for 2011-12 are estimated at ₹4,17,128 crore (net ₹3,43,000 crore). The issuance calendar for dated securities for the first half of 2011-12 was issued in consultation with the Central Government on March 25, 2011. An amount of ₹2,50,000 crore is scheduled to be raised during the first half of 2011-12 as against ₹2,84,000 crore raised during the corresponding period of the previous year.

VII.10 Although the gross market borrowings of the Central Government through dated securities for 2011-12 are budgeted 4.6 per cent lower than the previous year, the net market borrowings would be higher than the previous year by 5.4 per cent. The Central Government has raised a large part of the scheduled borrowing programme during 2011-12 (up to July 31, 2011) (Table VII.1). The weighted average yield of dated securities issued during 2011-12 (up to July 31, 2011) was higher at 8.38 per cent as compared with 7.67 per cent during the corresponding period of the previous year.

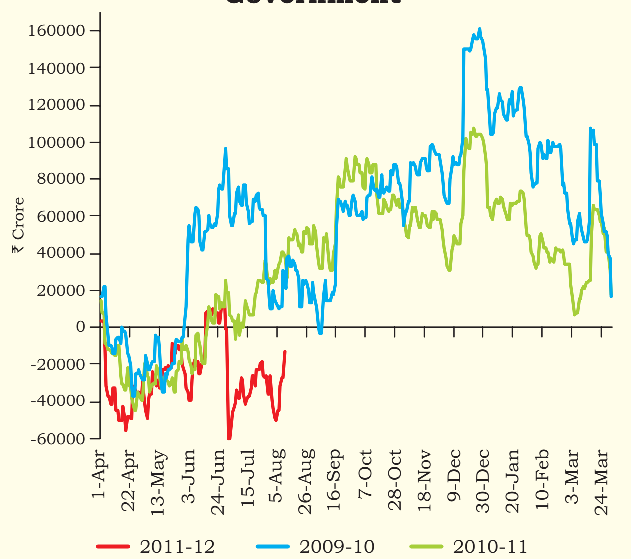
Cash Management

VII.11 The Government started the year 2010-11 with a modest cash balance of ₹16,514 crore, but soon took recourse to WMA on April 6, 2010 due to its expenditure commitments. Having breached the WMA ceiling of ₹30,000 crore for the first half, the Government resorted to OD during April 23-25, 2010. The Government again entered into OD on May 14, 2010 for a day and continued with WMA up to May 30, 2010. To tide over temporary cash mismatches, Cash Management Bills (CMBs) to the tune of ₹12,000 crore were issued in two tranches of ₹6,000 crore each for 35 days and 28 days, respectively, during May 2010. After recording a positive cash balance on May 31, 2010, the Government reverted to WMA on September 4 and 5, 2010. Overall, the Government availed of OD for three days and WMA for 57 days during 2010-11.

VII.12 The Government's cash balances remained positive for most part of the year on account of the 3-G spectrum auction receipts and buoyant tax collections. As part of cash management, the Government bought back dated securities to the tune of ₹11,767 crore in 2010. The surplus transfer from the Reserve Bank to the Government amounting to ₹18,759 crore on August 12, 2010 boosted the Government's cash balance to ₹37,916 crore on that day. The Government's cash balance gradually reached the peak at ₹1,61,101 crore as on December 27, 2010. The WMA ceilings for the Central Government for 2010-11 were fixed at ₹30,000 crore for the first half and ₹10,000 crore for the second half. During 2011-12, due to the elevated temporary mismatches in the Central Government cash balance, *inter alia*, reflecting tax refunds, the WMA limits were revised to ₹30,000 crore for April 1, 2011 to April 20, 2011, ₹45,000 crore for April 21, 2011 to June 30, 2011, ₹30,000 crore for July 1, 2011 to September 30, 2011 and ₹10,000 crore for the second half of the year (October to March).

VII.13 In order to meet the emergent temporary cash flow mismatches, the Reserve Bank in consultation with the Government issued CMBs amounting to ₹58,000 crore during April-July 2011-12 (₹12,000 crore in April-July 2010-11). Moreover, the notified amount for issuance of Treasury bills was increased by ₹61,000 crore over and above the rollover amount during April-July 2011-12 (Chart VII.1).

Chart VII.1: Cash Balance of the Central Government



VII.14 In order to discharge its functions as a banker to the Central and State Governments more effectively and efficiently, the Reserve Bank has initiated a series of measures at the operational and technological levels in the recent years (Box VII.1)

DEBT MANAGEMENT OF STATE GOVERNMENTS

Market Borrowings

VII.15 The market borrowing programme of the State Governments was conducted smoothly during 2010-11. The gross market borrowings were lower than those of the previous year. The net allocation under the market borrowing programme for State Governments for 2010-11 was placed at ₹1,42,157 crore. Taking into account the repayments of ₹15,641 crore and additional allocation of ₹5,971 crore, the gross allocation amounted to ₹1,63,769 crore (while gross sanctions under Article 293(3) amounted to ₹1,09,063 crore). The State Governments raised a gross amount of ₹1,04,039 crore in 2010-11 as against ₹1,31,122 crore in the previous year (Table VII.4). Since 2005-06, the entire market borrowings of State Governments have been by way of issuances of 10-year securities. Hence, securities issued in 2010-11 would mature in 2020-21 (Table VII.5). Arunachal Pradesh, Chhattisgarh, Orissa and Sikkim did not participate in the market borrowing programme in 2010-11 as against one State (*viz.*, Orissa) in 2009-10. Four States did not raise their full sanctions in 2010-11 as against five States in 2009-10.

Table VII.4: States' Market Borrowings

(₹crore)

Item	2009-10	2010-11
1	2	3
Net Allocation	1,02,458	1,42,157
Additional Allocation	2,679	5,971
Maturities during the year	16,238	15,641
Gross Allocation	1,21,375	1,63,769
Gross Sanctions under Article 293 (3)	1,36,948	1,09,063
Gross Amount Raised during the Year@	1,31,122	1,04,039
Net Amount Raised during the Year	1,14,883	88,398
Amount Raised during the year as a % of Total Sanctions	95.8	95.4

@ An amount of ₹500 crore was auctioned on March 31, 2010.

VII.16 The weighted average yield of State Government securities issued during 2010-11 stood higher at 8.39 per cent as compared to 8.11 per cent during the previous year (Table VII.6). 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 of Central Government dated security on the same day) declined to 45 bps during the year from 86 bps during the previous year. The lower spread during 2010-11 reflected several factors including lower market borrowings on account of comfortable cash position of the States, the lower

Table VII.5: Residual Maturity Profile of Outstanding State Development Loans and Power Bonds (as at end-March 2011)

(₹crore)

Year of Maturity	State Development Loans	Power Bonds	Total
1	2	3	4
2011-12	21,989	1,453	23,442
2012-13	30,628	2,870	33,498
2013-14	32,079	2,870	34,949
2014-15	33,384	2,870	36,254
2015-16	35,191	2,785	37,976
2016-17	31,522	1,575	33,097
2017-18	67,779	–	67,779
2018-19	1,18,138	–	1,18,138
2019-20	1,30,622	–	1,30,622
2020-21	1,04,539	–	1,04,539
Total	**6,05,871**	**14,423**	**6,20,294**

Box VII.1
Developments in RBI's role as Banker to Government

The Reserve Bank acts as a banker to the Central and the State Governments in terms of provisions of sections 20, 21 & 21 (A) of the Reserve Bank of India Act, 1934. The Reserve Bank carries out the general banking business of the Governments through its own offices and branches of public sector banks and a few private sector banks (*viz.* HDFC Bank Ltd., ICICI Bank Ltd. and the Axis Bank Ltd.) which act as the Agency Banks. The various measures initiated by the Reserve Bank for further improvement in its functional responsibilities in this regard are summarised below.

- The Public Accounts Departments (PADs) at all the Regional Offices of the Reserve Bank which maintain and operate the accounts of Government departments have now switched over from the erstwhile stand-alone system to a more robust and secured Centralised Web-based application *viz.*, the Centralised Public Accounts Department System (CPADS) for its operations. The CPADS is a user friendly application with multiple facilities.
- For more safe, secure and efficient banking transactions, as a proactive stance, the Reserve Bank has been impressing upon the Government departments to switch over to electronic modes for effecting their payments and receipts through various e-products such as NEFT, NECS/RECS, RTGS, *etc.* which are provided by the Agency Banks. The Regional Offices of the Reserve Bank play a pivotal and pro-active role in offering NEFT facility for remittance of funds to the account holders. As a result, a number of Central and State Government departments have switched over to internet mode of collection of taxes. In the State Finance Secretaries' Conference held at Mumbai in May 2011, the State Governments were also urged upon to draw a roadmap for switching over to e-mode of receipts and payments in a phased and time bound manner.
- As a facilitator to e-payment initiatives of Government of India, the Reserve Bank has also reviewed the performance of the Agency Banks under OLTAS (On Line Tax Accounting System) of the Central Board of Direct Taxes (CBDT) and EASIEST (Electronic Accounting System in Excise and Service Tax) of the Central Board of Excise and Customs (CBEC) on various parameters. Accordingly, the Agency Banks, whose performances were not satisfactory in this regard, were advised to improve their position.
- The Reserve Bank launched an e-payment system in May 2011 for collection of commercial taxes of Government of Karnataka on the lines of Electronic Accounting Solutions for e-Receipts (EASeR) Model of CBEC.
- To provide a platform to the top functionaries of the Central Government, the Reserve Bank, Agency Banks, IBA, NSDL, *etc.* for discussions on various issues, the Reserve Bank has conceptualized and formalized the "High Level Meeting" as a forum, which takes stock of various issues concerning conduct of Government Business through RBI/Agency Banks and provides inputs for policy making.
- The Reserve Bank has been instrumental in playing a pivotal role to ensure timely remittance of funds to the Government accounts. Accordingly, in consultation with the Government, the Reserve Bank prescribes as well as reviews the time limit for remittance of funds collected for credit to the Government accounts by Agency Banks and also the rate of penal interest in case of non-compliance with the prescribed norms. The period of remittance for electronic receipts has been brought down to T+1 days for all Agency Banks with effect from November 2010.
- In terms of the recommendations of a Committee constituted by the Reserve Bank (Chairman: Shri Prabhakar Rao) to look into the customer service aspects of the services rendered by Agency Banks, which included establishment of Centralised Pension Processing Centres (CPPCs) by the Agency Banks for pension disbursement, customer friendly measures in the collection of taxes etc., Agency Banks have been advised to implement the same. Consequently, most of the Agency Banks have established CPPC while others are in the process of establishing them. As a customer friendly measure, the Reserve Bank has also hosted an FAQ on its website for the benefit of pensioners.
- In order to compensate the pensioners for delayed payment of pensions beyond due date, instructions were issued to the Agency Banks to pay penal interest for the delayed period at Bank Rate plus 2 per cent. The compensation shall be credited to the account of the pensioners automatically without waiting for any claim from them.
- As the adviser to the Government of India in the formulation of accounting policies and other related matters of Government Business, the Reserve Bank associates with various Committees constituted by the Government for effective administration of Government revenue collection and accounting system.
- The Reserve Bank also looks after the appointment of Agency Banks, under section 45 of the RBI Act, 1934, to carry out Government Business as agents of the Bank. Recently, the Reserve Bank appointed Jammu & Kashmir Bank Ltd. to conduct the business of the State Government of Jammu & Kashmir as an agent, from April 01, 2011.

average issuance size and lower volatility in the yield of the 10-year benchmark government securities in the secondary market.

VII.17 During 2011-12 (up to July 31, 2011), ten tranches of auctions were conducted under the market borrowing programme of the State

Table VII.6: Yield on State Government Securities

(Per cent)

Year	Range	Weighted Average
1	2	3
1997-98	12.30-13.05	12.82
1998-99	12.15-12.50	12.35
1999-00	11.00-12.25	11.89
2000-01	10.50-12.00	10.99
2001-02	7.80-10.53	9.20
2002-03	6.60-8.00	7.49
2003-04	5.78-6.40	6.13
2004-05	5.60-7.36	6.45
2005-06	7.32-7.85	7.63
2006-07	7.65-8.66	8.10
2007-08	7.84-8.90	8.25
2008-09	5.80-9.90	7.87
2009-10	7.04-8.58	8.11
2010-11	8.05-8.58	8.39
2011-12@	8.36-8.68	8.55

@ Up to July 31, 2011.

Governments and 14 States raised an aggregate amount of ₹37,023 crore on a gross basis (net ₹30,147 crore) as compared to ₹31,640 crore (net ₹23,519 crore) raised by 17 States during the corresponding period of the previous year.

Cash Management

VII.18 The aggregate Normal WMA limit for States, including Government of Union Territory of Puducherry, was placed at ₹9,925 crore for 2010-11, which was the same as in the previous year. Consequent upon the supplementary agreement entered with the Government of Jammu and Kashmir, the aggregate WMA limit for 2011-12 was increased to ₹10,240 crore in April 2011. The rates of interest on Normal and Special WMA and OD continued to be linked to the repo rate. The monthly average utilisation of WMA and OD by the States in 2010-11 was higher than that of 2009-10 (Table VII.7 and 8).

VII.19 Most State Governments have accumulated sizable cash balances in the recent years reflecting the fiscal consolidation measures undertaken since 2005-06. The liquidity pressures during 2010-11 were confined to a few State Governments (Table VII.9). The surplus cash balances of State Governments are automatically invested in 14-day Intermediate Treasury Bills (ITBs), the discount rate of which is presently fixed at 5 per cent. The average investment in 14-day ITBs declined to ₹78,875 crore from ₹84,462 crore during the previous year. The outstanding investments of States in ITBs stood at ₹1,01,301 crore as at end-March 2011 as against ₹ 93,776 crore as at end-March 2010. The average investment of the State Governments in Auction Treasury Bills (ATBs) more than tripled to ₹9,620 crore from ₹2,680 crore in the previous year. The outstanding investment of State Governments in ATBs as at end-March 2011 was higher at ₹10,187 crore than that of ₹250 crore at end-March 2010 (Table VII.9).

Table VII.7: WMA/ OD of State Governments

(Average monthly outstanding)

(₹ crore)

Month	Special WMA			Normal WMA			Overdraft			Total		
	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
1	2	3	4	5	6	7	8	9	10	11	12	13
Apr	619	589	970	294	290	698	111	191	868	1024	1070	2536
May	126	298	619	50	14	114	2	–	39	178	312	772
June	5	36	227	67	–	175	–	–	16	72	36	418
July	76	2	144	7	–	97	–	–	–	83	2	241
Aug	72	6		52	122		–	–		124	128	
Sept	216	120		246	88		77	3		539	211	
Oct	54	821		161	537		2	117		217	1475	
Nov	389	898		74	480		–	242		463	1620	
Dec	22	19		31	60		–	–		53	79	
Jan	120	454		47	112		25	–		192	566	
Feb	523	952		35	522		–	194		558	1668	
Mar	252	893		252	383		90	295		594	1571	
Avg.	206	424		110	217		26	87		341	730	

Table VII.8: No. of Days States Availed of Special / Normal WMA and OD

	Special WMA			Normal WMA			Overdraft		
	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
1	2	3	4	5	6	7	8	9	10
Andhra Pradesh	1	3	–	–	–	–	–	–	–
Haryana	7	10	13	5	10	13	–	8	6
Kerala	18	–	–	2	–	–	–	–	–
Madhya Pradesh	11	–	–	11	–	–	–	–	–
Maharashtra	–	–	–	–	–	–	–	–	–
Karnataka	–	–	–	–	–	–	–	–	–
Nagaland	69	–	11	45	–	6	13	–	–
Punjab	130	133	40	128	132	40	29	13	14
Rajasthan	–	–	–	–	–	–	–	–	–
Uttar Pradesh	8	4	–	8	4	–	–	–	–
West Bengal	95	195	79	15	113	40	8	62	24
Himachal Pradesh	–	–	–	–	–	–	–	–	–
Manipur	–	–	–	–	–	–	–	–	–
Mizoram	29	25	6	15	15	–	–	–	–
Goa	–	–	–	1	–	–	–	–	–
Uttarakhand	69	35	25	26	12	8	9	10	–
Meghalaya	–	1	–	–	–	–	–	–	–
Jharkhand	–	–	4	–	–	4	–	–	–

VII.20 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 and the guarantee redemption fund (GRF), which provides for the servicing of contingent liability arising from invocation of guarantees issued in respect of borrowings by State level undertakings or other bodies. As on March 31, 2011, 20 State Governments including Puducherry had notified CSF and 10 State Governments had set up GRF. The outstanding investments under CSF and GRF amounted to ₹36,504 crore and ₹3,704 crore, respectively, as at end-March 2011.

VII.21 The 24th Conference of the State Finance Secretaries was held in the Reserve Bank of India at Mumbai on May 24, 2011. The issues discussed in the Conference included: States' role in addressing supply side constraints and strengthening Public

Table VII.9 : Investments of the State Governments / UT*

(₹ crore)

Month	Intermediate Treasury Bills			Auction Treasury Bills			Total		
	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
1	2	3	4	5	6	7	8	9	10
April	72,837	77,068	86,409	9,329	250	10,862	82,166	77,318	97,271
May	66,143	76,631	72,810	8,811	250	14,530	74,954	76,881	87,340
June	69,983	78,015	67,789	6,312	635	24,979	76,295	78,650	92,768
July	75,122	84,787	61,389	1,931	3,001	32,644	77,053	87,788	94,033
August	77,321	78,121		1,125	7,995		78,446	86,116	
September	73,617	71,814		1,125	11,263		74,742	83,077	
October	84,369	66,444		798	12,503		85,167	78,947	
November	88,089	68,203		750	13,468		88,839	81,671	
December	98,003	82,494		637	15,462		98,640	97,956	
January	99,668	76,754		500	18,323		100,168	95,077	
February	103,214	80,347		500	17,830		103,714	98,177	
March	105,182	105,818		339	14,461		105,521	120,279	
Average	**84,462**	**78,875**	**72,099**	**2,680**	**9,620**	**20,754**	**87,142**	**88,495**	**92,853**

* Average of daily data.

Distribution System for better inflation management; challenges in the management of Central Government borrowing programme during 2011-12; management of cash balances and market borrowings of the State Governments for 2011-12; repayment / exchange rate risk in States' borrowing and building of sinking funds to meet these obligations; risks to State finances on account of power sector utilities; switch over to electronic mode of payment and receipt for Governments' banking business and proposed classification structure of Union and State Governments' accounts.

VII.22 Notwithstanding the relatively lower budgeted market borrowings of the Central Government in 2011-12, managing the borrowing programme would be a challenge in view of tight liquidity conditions and high level of excess SLR holdings of the banks and non-availability of MSS securities for unwinding. Accordingly, the conduct of the market borrowing programme will be influenced by the ability of the Government to rein in the fiscal deficit and its financing by way of market borrowings at the budgeted level coupled with the monetary policy actions that anchor inflationary expectations.

VIII CURRENCY MANAGEMENT

Notwithstanding the increasing use of technology driven non-cash modes of payment, the demand for currency continues to rise. The Reserve Bank in pursuing its clean note policy has made provision for a steady supply of fresh banknotes in response to the speedier disposal of soiled banknotes. While the current financial year marks the end of circulation for coins of denomination of 25 paise and below, the economy continues to witness a compositional shift towards higher denomination banknotes. 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.

VIII.1 The management of currency being one of the core functions of a central bank, commands a high degree of public visibility. Section 22 of the Reserve Bank of India Act, 1934, empowers the Reserve Bank as the sole authority to issue banknotes in India. Although one rupee notes / rupee coins and 50 paise coins are issued by the Government, they are put into circulation only through the Reserve Bank of India. Also, the Act casts upon the Reserve Bank, not only the responsibility of providing banknotes in adequate quantity throughout the country, but also maintaining the quality of banknotes in circulation.

VIII.2 The Reserve Bank has, accordingly, carried out the functions of note issue and currency management during 2010-11. Prevention and detection of counterfeit notes continued to be accorded high priority. The ongoing process of enhancing security features of the banknotes was pursued with renewed vigour. Further, so as to encourage reporting of counterfeit notes, conscious efforts were made for simplifying the administrative and legal procedures. Technology driven improvements in customer service were also undertaken.

BANKNOTES IN CIRCULATION

VIII.3 Value, as well as volume, of the banknotes continued to increase during 2010-11 (Table VIII.1). Growth in the value of banknotes outpaced that of volume, reflecting the continuing compositional shift towards higher denomination banknotes, particularly ₹1,000 and ₹500.

COINS IN CIRCULATION

VIII.4 The total value of coins, including small coins in circulation, increased by 14.1 per cent during 2010-11 as compared with 12.2 per cent in the previous year. In volume terms, the increase was 6.5 per cent during 2010-11 as compared with 5.8 per cent a year ago (Table VIII.2).

VIII.5 In the exercise of powers conferred by Section 15A of the Coinage Act, 1906 (3 of 1906), the Government of India decided to call in from circulation coins of denomination of 25 paise and below with effect from end-June, 2011. Thereafter, these coins will cease to be legal tender for payment as well as on account. Exchange facilities for these

Table VIII.1: Banknotes in Circulation

Denomination	Volume (Million pieces) End - March			Value (₹ crore) End - March		
	2009	2010	2011	2009	2010	2011
1	2	3	4	5	6	7
₹2 & ₹5	7,865	7,953	11,116	2,936	2,930	4,281
	(16.0)	(14.1)	(17.2)	(0.4)	(0.4)	(0.5)
₹10	12,222	18,536	21,288	12,222	18,536	21,288
	(25.0)	(32.8)	(33.0)	(1.8)	(2.4)	(2.3)
₹20	2,200	2,341	3,020	4,399	4,681	6,040
	(4.5)	(4.1)	(4.7)	(0.6)	(0.6)	(0.7)
₹50	4,888	4,211	3,196	24,440	21,057	15,980
	(10.0)	(7.4)	(5.0)	(3.6)	(2.7)	(1.7)
₹100	13,702	13,836	14,024	1,37,028	1,38,364	1,40,243
	(28.0)	(24.5)	(21.7)	(20.1)	(17.6)	(15.0)
₹500	6,166	7,290	8,906	3,08,304	3,64,479	4,45,311
	(12.6)	(12.9)	(13.8)	(45.3)	(46.2)	(47.6)
₹1,000	1,918	2,383	3,027	1,91,784	2,38,252	3,02,713
	(3.9)	(4.2)	(4.7)	(28.2)	(30.2)	(32.4)
Total	**48,963**	**56,549**	**64,577**	**6,81,133**	**7,88,299**	**9,35,856**

Note: Figures in parentheses represent percentage share in total.

Table VIII.2: Coins in Circulation

Denomination	Volume (Million pieces) End - March			Value (₹ crore) End - March		
	2009	2010	2011	2009	2010	2011
1	2	3	4	5	6	7
Small coin	54,736 (57.7)	54,738 (52.0)	54,797 (48.9)	1,455 (14.6)	1,455 (13.1)	1,458 (11.5)
₹1	26,975 (27.0)	29,461 (28.0)	32,675 (29.1)	2,696 (27.1)	2,964 (26.8)	3,267 (25.9)
₹2	11,179 (11.2)	13,198 (12.5)	15,342 (13.7)	2,236 (22.4)	2,640 (23.8)	3,068 (24.3)
₹5	7,141 (7.1)	7,760 (7.4)	9,070 (8.1)	3,570 (35.9)	3,880 (35.0)	4,535 (35.9)
₹10	-	149 (0.0)	300 (0.3)	-	149 (1.3)	300 (2.4)
Total	**100,013**	**105,306**	**112,184**	**9,957**	**11,070**	**12,628**

Note: Figures in parentheses represent percentage share in total.

coins were made available at the branches of banks maintaining small coin depots and also at offices of the Reserve Bank.

CURRENCY OPERATIONS

VIII.6 In a continued endeavour to provide good quality banknotes, the Reserve Bank of India pursued its multi-pronged approach involving regular supply of fresh banknotes, speedier disposal of soiled banknotes and mechanisation of cash processing activity. Various options to enhance the life of banknotes so as to ensure the clean note policy, and measures to address the menace of counterfeit notes were continuously examined.

Infrastructure for Currency Management

VIII.7 Through its 18 Issue Offices, one sub-office at Lucknow, a currency chest at Kochi and a wide network of 4,247 currency chests and 4,017 small coin depots, the Reserve Bank carries out the issue of notes and management of currency. The Reserve Bank of India has agency agreement with SCBs, under which the currency chest facility is granted to them. Currency chests with Sub Treasury Offices (STOs) are being gradually phased out and their number has reduced to 11 during 2010-11.The State Bank of India and its associates continue to have the largest share (71 per cent) of currency chests followed by nationalised banks (26 per cent) (Table VIII.3).

Table VIII.3: Currency Chests and Small Coin Depots

(as on December 31, 2010)

Category	No. of Currency Chests	No. of Small Coin Depots
1	2	3
Treasuries	11	-
State Bank of India	2,120	2,050
SBI Associate Banks	886	868
Nationalised Banks	1,112	982
Private Sector Banks	110	109
Co-operative Banks	1	1
Regional Rural Banks	3	3
Foreign Banks	4	4
Total	**4,247**	**4,017**

CLEAN NOTE POLICY

Indent and Supply of Fresh Banknotes and Coins

VIII.8 About 93 per cent of the indent for banknotes for 2010-11 was met by the printing presses. The total supply increased from 16.4 billion pieces in 2009-10 to 16.5 billion pieces in 2010-11. The supply in volume and value affirms the effective monitoring of supplies as also efficient allocation and management of the capacities at the presses (Table VIII.4 and 5).

Disposal of Soiled Banknotes

VIII.9 During 2010-11, as many as 13.9 billion pieces of soiled banknotes (21.4 per cent of banknotes in circulation) were processed and removed from circulation (Table VIII.6). The number of banknotes withdrawn from circulation and eventually disposed at the Reserve Bank offices

Table VIII.4: Indent and Supply of Banknotes (April – March)

Volume (Million pieces)

Denomination	2009-10		2010-11		2011-12
	Indent	Supply	Indent	Supply	Indent
1	2	3	4	5	6
₹5	1,000	548	-	674	-
₹10	5,000	5,060	5000	5,143	5,700
₹20	800	820	1,500	1,104	600
₹50	1,000	1,004	2,000	1,602	1,200
₹100	4,000	3,969	4,300	3,420	6,100
₹500	4,000	4,008	4,000	4,130	2,000
₹1,000	1,000	1,007	1,000	467	2,000
Total	**16,800**	**16,416**	**17,800**	**16,540**	**17,600**

Table VIII.5: Indent and Supply of Coins

Denomination	Volume (Million pieces)					Value (₹ crore)			
	2009-10		2010-11		2011-12	2009-10		2010-11	
	Indent	Supply	Indent	Supply	Indent	Indent	Supply	Indent	Supply
1	2	3	4	5	6	7	8	9	10
50 paise	200	100	70	59	70	10	5	4	3
₹1	3,000	2,918	2,600	2,746	1,600	300	292	260	275
₹2	2,000	2,284	1,700	1,811	2,900	400	457	340	362
₹5	800	778	1,300	1,292	800	400	389	650	646
₹10	100	205	1,000	232	1,000	100	205	1,000	232
Total	**6,100**	**6,285**	**6,670**	**6,140**	**6,370**	**1,210**	**1,348**	**2,254**	**1,518**

increased during the year. This is in line with the on-going efforts for speedier removal of soiled banknotes from currency chests and augmenting the disposal at Reserve Bank offices.

VIII.10 Out of the 13.9 billion pieces of banknotes disposed during 2010-11, 8.05 billion pieces were processed through 54 Currency Verification and Processing Systems (CVPS). The remaining banknotes were disposed under the Dynamic Working Model (DWM).

VIII.11 To further augment the processing and disposal capacity of soiled notes, 5 new CVPS machines have been installed during the year in 5 select offices of the Reserve Bank.

Measures to Improve the Quality of Banknotes in Circulation

VIII.12 All currency chest branches are equipped with Note Sorting Machines (NSMs). Banks have been advised to ensure that all notes received by them are processed before re-issuing them to public. In compliance to one of the recommendations of the High Level Group on Systems & Procedures for Currency Distribution, banks have been further directed that notes in the denomination of ₹100 and above are to be processed through machines conforming to "Note Authentication and Fitness Sorting Parameters" prescribed by Reserve Bank from time to time, before issuing them over the counters or through ATMs. Bank branches having average daily cash receipts of ₹50 lakh and above shall put to use such machines by end-March 2011.

Table VIII.6: Disposal of Soiled Notes and Supply of Fresh Banknotes

Volume (Million pieces)

Denomination	2008-09		2009-10		2010-11	
	Disposal	Supply	Disposal	Supply	Disposal	Supply
1	2	3	4	5	6	7
₹1,000	39	664	78	865	179	706
₹500	735	2,611	1,247	3,513	1,864	4,347
₹100	3,690	4,277	4,307	3,935	5,227	4,085
₹50	2,403	1,042	2,400	791	2,095	1,114
₹20	1,003	605	790	467	664	1,296
₹10	3,700	4,607	3,832	4,975	3,657	5,580
Up to ₹5	392	3	418	441	166	549
Total	**11,962**	**13,809**	**13,072**	**14,987**	**13,852**	**17,677**

Note: Supply indicates fresh notes supplied to currency chests and members of public .

VIII.13 As on April 2011, the banks have installed 4,091 NSMs in their branches in above categories. Further, the banks have also made arrangements for issue of machine processed notes for another 1,823 branches.

VIII.14 The above measure, besides promoting efficient Banknote sorting, is seen to provide an impetus to both the Clean Note Policy and the detection of counterfeit notes.

VIII.15 The Reserve Bank continued with its efforts to introduce polymer / plastic banknotes in the denomination of ₹10, on a "field trial" basis, in select locations of the country. While the process relating to the "field trial" is under progress, the Reserve Bank commissioned a study on the "environmental impact (Carbon Footprint) of cotton based banknotes *vis-a-vis* polymer based alternative".

COUNTERFEIT BANKNOTES

VIII.16 Counterfeit banknotes detected during the year were higher in magnitude on account of

Table VIII.7: Counterfeit Notes Detected

(No. of pieces)

Year	Detection at Reserve Bank	Detection at other banks	Total
1	2	3	4
2008-09	55,830 (14.0)	342,281 (86.0)	398,111
2009-10	52,620 (13.1)	348,856 (86.9)	401,476
2010-11	45,235 (10.4)	390,372 (89.6)	435,607

Note: Figures in parentheses represent percentage share in total.

heightened awareness amongst banks and increased use of Note Sorting Machines. Almost 90 per cent of the 0.4 million counterfeit notes identified were detected at bank branches, reflecting increased use of NSMs (Table VIII.7).

VIII.17 In conjunction with other steps to check the menace of counterfeit banknotes such as strengthening of security features, training to banks and other organisations, rationalisation of procedure for dealing with counterfeit currency (Box VIII.1), improvements in the area of mechanised processing of notes, etc., the Reserve Bank has also launched an awareness campaign on Indian banknotes.

VIII.18 Under this campaign, initially an ad film titled *"Paisa Bolta Hai"* in Hindi was launched on Doordarshan in August, 2010. Subsequently, the film has been translated in 11 major Indian languages and is being shown over the regional channels of Doordarshan. The film's primary message to the common man is to form a habit of examining banknotes and it also aims at educating the general public (Aam Aadmi) about the security features of Indian banknotes. Future plans include campaigns through various media *viz*., other TV channels, radio, newspapers, *etc.*

VIII.19 The Reserve Bank has also prepared a microsite for the web page which has incorporated all information on genuine Indian banknotes for the benefit of the public. The Microsite, named "Paisa Bolta Hai", is displayed on the home page of the RBI website and can also be accessed from the URL http://www.paisaboltahai.rbi.org.in/

VIII.20 The government introduced the Coinage Bill, 2011 which has been passed by the Lok Sabha in March, 2011. The Bill, apart from seeking to consolidate the laws relating to coinage and the Mints, also endeavours to prohibit as also impose penalty on the melting or destruction of coins, unlawful making, or issue or possession of metal pieces to be used as money.

Box VIII.1

Procedure for Dealing with Counterfeit Currency

Printing and/or circulation of forged Indian Currency Notes is an offence under Sections 489A to 489E of the Indian Penal Code. As per Section 39 of the Criminal Procedure Code, every person, aware of the commission of or of the intention of any other person to commit certain offences, including those relating to counterfeiting of currency, is required to immediately give information about such commission or intention to the nearest magistrate or police officer. Accordingly, the procedure prescribed by the Reserve Bank of India for the commercial banks requires impounding all counterfeit notes detected by the banks and sending them to the police for lodging an FIR in accordance with the law.

With the increase in incidence of counterfeit notes, individuals may come in possession of a counterfeit note without their knowledge of it being a counterfeit and unintentionally become a conduit for its circulation by presenting it to a bank or business establishment.

The High Level Group constituted by the Reserve Bank on Systems and Procedures for Currency Distribution, in its report in August 2009, had recommended rationalizing the procedure with regard to the filling of FIR on detection of forged notes.

The matter was taken up with the Ministry of Home Affairs, Central Government and an in-principle decision has been taken to :

i) Consider designating one nodal police station at each district for registration of cases of forged note offences. Correspondingly, banks would designate one nodal officer in a district with responsibility of registering such cases with police.

ii) The nodal officer of the bank will register a single report to designate police station with detailed information where recovery of forged notes in 1 piece to 4 pieces in a single transaction.

iii) In case of recovery of 5 or more pieces in a single transaction separate FIR would be filed.

While several states have designated nodal police stations, simplification of reporting system is under consideration of the Central Government.

CUSTOMER SERVICE

VIII.21 A simplified Note Refund Rules, 2009, for exchange of soiled and mutilated / torn notes, came into force in August, 2009. These are simple, easy to comprehend and implement, leaving less scope for subjectivity. The procedure required to be followed by the branches for acceptance, adjudication, and maintenance of records of mutilated notes was brought out as a booklet and distributed to all currency chests.

VIII.22 The Citizens' Charter containing detailed information on exchange of soiled and mutilated notes on public counters, procedure, cost, time for availing these services and mechanism for grievance redressal has been displayed on the Bank's website.

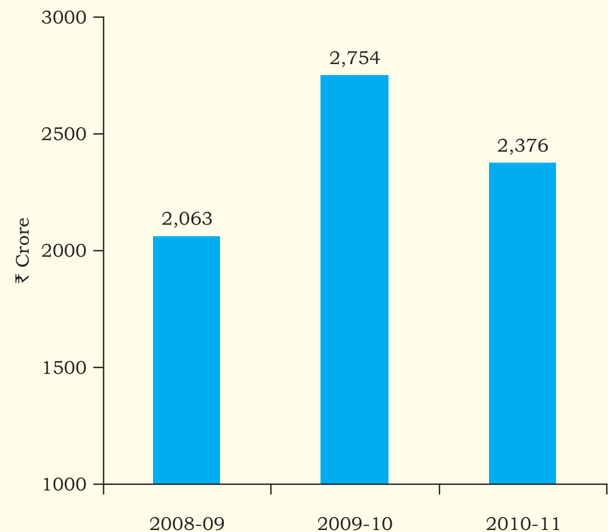
VIII.23 The RBI as the monetary authority of the country has initiated the documentation and preservation of its rich and varied legacy of coins through the Monetary Museum in Mumbai. The museum has also been envisioned as a window to RBI's outreach programme. With a display of around 8,000 coins and 730 currency notes depicting the cultural and historical heritage of the country, the museum was visited by nearly 27,468 visitors during 2010.

INDIGENISATION OF PAPER, INK AND OTHER RAW MATERIALS FOR PRODUCTION OF BANKNOTES

VIII.24 The work relating to establishment of a paper mill as a joint venture between Bharatiya Reserve Bank Note Mudran Private Limited (BRBNMPL) and Security Printing & Minting Corporation of India Limited (SPMCIL) on 50:50 shareholding basis has been initiated. The first line of production with an annual capacity of 6000 MT is being setup at Mysore. The Reserve Bank, in consultation with the Government of India, is pursuing the goal of indigenisation of other critical inputs for production of banknotes.

EXPENDITURE ON SECURITY PRINTING AND DISTRIBUTION

VIII.25 The expenditure incurred on security printing charges (note forms) in 2010-11 (July-June) decreased by ₹378 crore (13.7 per cent) mainly on account of decrease in supply of banknotes, in certain denominations, in 2010-11 *vis-a-vis* the indent (Chart VIII.1 and Table VIII.4).



VIII.26 Expenditure on remittance of treasure has increased from ₹37 crore in 2009-10 (July–June) to ₹45.5 crore in 2010-11 mainly on account of increased supply of banknotes / coins to the currency chests.

VIII.27 The Reserve Bank would continue to provide adequate quantity of banknotes and coins to the public. Suitable measures would be taken to further improve the customer service. Withdrawal of soiled notes and supply of clean banknotes would continue on priority with due emphasis on further progress of the currency operations through improvement of systems and leveraging of technology. Capacity creation for mechanised processing / distribution of banknotes and coins will receive high attention.

VIII.28 The Bank will continue with its sustained efforts towards mitigating the risk posed by counterfeiting through awareness campaigns, inter-agency coordination and rationalisation of systems and procedures. The Reserve Bank would also persist with its efforts to strengthen the security features of Indian banknotes so as to render them more difficult to counterfeit.

IX PAYMENT AND SETTLEMENT SYSTEMS AND INFORMATION TECHNOLOGY

Reflecting the need for technologically advanced, secure, efficient, accessible payment and settlement systems, the Reserve Bank persisted in its endeavour to incentivise electronic modes of payment. Enhanced use of prepaid payment instruments and mobile phone based payment services have been promoted with adequate security measures in place. Driven by the objective of reinforcing RBI as a knowledge hub, the Bank has striven towards strategic use of IT and its applications.

IX.1 In a system of inter-woven financial and international economic linkages, an efficient payment and settlement system is paramount. In the Indian set up with an enormous spread of banking and non-bank financial institutions and other financial organisations, ensuring adequate payment and settlement structures with strong security measures to harness efficacy assumes critical significance and hence is yet another unique responsibility of the Reserve Bank.

IX.2 During the year, various payment and settlement systems in the country continued to function efficiently, thereby facilitating smooth functioning of the financial markets in particular and the economy in general. The total turnover under the various payment and settlement systems both in value as well as volume terms, exhibited a steady growth of 10 per cent in 2010-11 (Table IX.1).

OVERSIGHT OF PAYMENT SYSTEMS IN INDIA

IX.3 The Payment and Settlement Systems Act, 2007 (PSS Act) empowers the Reserve Bank of India to regulate and supervise payment systems within the country.[1] The scope of the oversight function of the Bank is guided by the policy objectives spelt out in the Mission Statement "Payment Systems in India Vision 2009-12 (July-June)", in terms of which the Bank would strive "to ensure that all payment and settlement systems operating in the country are safe, secure, sound, efficient, accessible and authorised". Oversight necessitates that "the objectives of safety and efficiency are promoted by monitoring existing and planned systems, assessing them against these objectives and, where necessary, inducing change"[2].

IX.4 In terms of the PSS Act, the Reserve Bank monitors all planned payment systems and ensures that only those payment systems with strong system design, adequate risk management solutions and sound financial parameters are authorized to operate in the country.

IX.5 All authorised entities are assessed against their individual authorisation conditionalities and relevant policy guidelines issued by the Bank. The assessment process comprises of off-site surveillance as well as on-site inspections.

IX.6 Off-site surveillance involves data collection and analysis, self-assessment by the authorised entities, periodical system audits by qualified professionals and market intelligence. Periodical analysis of the data is carried out to discern patterns and/or trends for further policy actions, if any. System audit has been prescribed to ensure that the authorised payment systems perform to the best standards of data security and integrity and that the processes and procedures are in sync with the authorisation conditions.

[1] The powers to regulate and supervise comprise: Power to determine standards (Section 10); Notice of change in the payment system (Section 11); Power to call for returns, documents or other information (Section 12); Access to information (Section 13); Power to enter and inspect (Section 14); Power to carry out audit and inspection (Section 16); Power to issue direction (Section 17); Power of Reserve Bank to give directions generally (Section 18); Directions of RBI to be generally complied with (Section 19).

[2] Central Bank Oversight of Payment and Settlement Systems, May 2005, CPSS, BIS.

Table IX.1: Payment System Indicators - Annual Turnover

Item	Volume (in million)			Value (₹ crore)		
	2008-09	2009-10	2010-11	2008-09	2009-10	2010-11
1	2	3	4	5	6	7
Systemically Important Payment Systems (SIPS)						
1. High Value Clearing	21.8	5.5	0.0	45,50,667	18,61,560	0
2. RTGS	13.4	33.2	49.3	3,22,79,881	3,94,53,359	4,84,87,234
Total SIPS (1+2)	**35.2**	**38.8**	**49.3**	**3,68,30,548**	**4,13,14,919**	**4,84,87,234**
				(6.6)	**(6.3)**	**(6.2)**
Financial Markets Clearing						
3. CBLO	0.1	0.1	0.1	88,24,784	1,55,41,378	1,22,59,744
4. Government Securities Clearing	0.3	0.3	0.4	62,54,519	89,86,718	69,70,236
5. Forex Clearing	0.8	0.9	1.2	1,69,37,489	1,42,11,486	1,91,60,153
Total Financial Markets Clearing (3-5)	**1.2**	**1.4**	**1.7**	**3,20,16,792**	**3,87,39,582**	**3,83,90,133**
				(5.7)	**(5.9)**	**(4.9)**
Others						
6. MICR Clearing	1,142.0	1,144.2	1,155.1	58,57,575	66,69,957	83,01,218
7. Non-MICR Clearing	233.6	230.6	232.3	20,60,893	18,78,425	18,32,909
Retail Electronic Clearing						
8. ECS DR	160.1	149.3	156.7	66,976	69,524	73,646
9. ECS CR	88.4	98.1	117.3	97,487	1,17,613	1,81,686
10. EFT/NEFT	32.2	66.3	132.3	2,51,956	4,09,507	9,39,149
Total Retail Electronic Clearing	**280.6**	**313.8**	**406.4**	**4,16,419**	**5,96,644**	**11,94,481**
Cards						
11. Credit Cards	259.6	234.2	265.1	65,356	61,824	75,516
12. Debit Cards	127.7	170.2	237.1	18,547	26,418	35,705
Total Cards	**387.2**	**404.4**	**502.2**	**83,903**	**88,242**	**1,14,207**
Total Others (6 to 12)	**2,043.4**	**2,092.9**	**2,296.0**	**84,18,790**	**92,33,268**	**1,14,35,745**
				(1.5)	**(1.4)**	**(1.5)**
Grand Total (1 to12)	**2,079.8**	**2,133.0**	**2,346.9**	**7,72,66,130**	**8,92,87,769**	**9,83,13,112**
				(13.9)	**(13.6)**	**(12.5)**

Note: 1. High value clearing has been discontinued w.e.f. April 1, 2010.
2. Settlement of Government securities clearing and forex transactions is through Clearing Corporation of India Ltd.
3. At the end of April 2011, the MICR clearing was available at 66 centres (65 centres during previous year).
4. The figures of cards are for transactions at POS terminals only.
5. Figures in parentheses are ratios to GDP at current market prices.

IX.7 Additionally, each authorised entity is required to carry out a self-assessment of its operations, risk management and business continuity arrangements amongst other parameters based on international standards prescribed by the Committee on Payment and Settlement Systems (CPSS), the global standards setting body for payment and settlement systems. The results of the self-assessment shared with the Reserve Bank, are used to create a risk profile of the entity. The inputs gathered through market intelligence are also used as a pointer. A need based on-site inspection complements the assessment process.

IX.8 Based on the assessment carried out and market intelligence including consultation with stakeholders, the Reserve Bank induces changes in the payment system/s for improving their safety and efficiency as well as customer convenience and service. Rules, regulations, procedural guidelines, access criteria and minimum standards for operational efficiency for various products including the large-value and retail payments are used for this purpose. Statutory powers conferred by the PSS Act are also used for giving necessary directions.

IX.9 To aid the process of oversight, Regional Offices have been set up at four metros.

POLICY INITIATIVES

IX.10 Under the guidance of the Board for Regulation and Supervision of Payment and Settlement Systems (BPSS) several important policy initiatives were taken.

Paper-based Payment Systems

IX.11 The magnitude of the paper transactions despite recording a fall of 5 per cent over the previous year, continued to dominate the payment system accounting for 59 per cent of the total volume of transactions. The Reserve Bank took several steps to both reduce the settlement time of paper clearing and also encourage the shift towards electronic mode of payments.

i) To further refine the acceptance of multi-user inputs in a networked environment, core-banking integration and graphic interface compatibility, a new automation software package called 'Express Cheque Clearing System' (ECCS) has been developed. It incorporates all the latest features and is expected to be rolled out across all the non-Magnetic Ink Character Recognition (MICR) locations in the country by September 2011 along with the speed clearing facility at all the centres.

ii) Speed clearing has since been extended to 216 centres including all 66 MICR centres.

iii) The service charge for cheque processing through MICR CPC and collection charge for outstation/speed clearing have been rationalized.

iv) The second phase of the grid-based Cheque Truncation System (CTS) is nearing implementation at Chennai incorporating the CTS Standards-2010.

Electronic Payment Systems

IX.12 The electronic payment products provide speedier, cost effective and secure payment mechanism to customers in comparison to traditional paper based payment instruments. The evolution of electronic payment products in the country has progressed through two phases: (i) introductory phase and (ii) rationalisation phase.

IX.13 During the introductory phase, electronic products like Electronic Clearing Service (ECS) and Electronic Funds Transfer (EFT) were introduced by the Reserve Bank. These systems were decentralised, serving the population of specific areas. The focus during the rationalisation phase has been to introduce centralised pan-India payment solutions like the Real Time Gross Settlement (RTGS), National Electronic Funds Transfer (NEFT) and National Electronic Clearing Service (NECS) that enable servicing customers spread throughout the country with settlement at a central location. This phase also coincided with the implementation of Core Banking Solutions (CBS)/centralised liquidity management solutions in banks.

IX.14 The RTGS system, in operation since March 2004, has witnessed a steady growth in both value and volume terms (Table IX.1).

IX.15 Various initiatives taken to further refine the centralised systems during the year are as follows:

i) To streamline the process flow in credit-push systems like NEFT, RTGS, ECS (Credit) and NECS systems, banks can credit beneficiaries' accounts based solely on account number details subject to safeguards.

ii) RBI has been waiving processing charges for retail electronic payment systems since the year 2006. It has now been decided to allow the clearing houses/processing centres to levy processing charges on the originating banks. Further, the destination banks will also levy some nominal charges on the originating banks as a compensation for usage of their infrastructure.

iii) Regional Electronic Clearing Service (RECS) introduced in 2009 for facilitating state-wide payment and receipts, has been successfully

operating at Bengaluru, Chennai, Thiruvananthapuram, Ahmedabad, Hyderabad, Guwahati, Kolkata, Bhubaneswar and Jaipur. While all these centres operate the credit scheme, Bengaluru and Chennai also operate the debit scheme.

iv) A new value band in the ₹1-2 lakh segment under NEFT was created, with customers having to pay lower charges. The threshold value for RTGS transactions has since been raised to ₹2 lakh.

IX.16 The efforts of RBI aimed at promoting electronic payment systems *vis-à-vis* paper based payments are evident, with both the value and volumes of these systems registering impressive growth rates (Chart IX.1).

IX.17 To ensure timely resolution of disputes between system providers and system participants, a Dispute Resolution Mechanism (DRM) under the PSS Act, 2007 has been framed. A time frame of a maximum 15 working days has been laid down for resolution of disputes.

IX.18 The PSS Act, 2007 and regulations framed thereafter have provided a firm legal basis for the process of netting and settlement finality. To amplify these aspects, a directive on Settlement and Default Handling Procedures has been issued which covers all multilateral and deferred net settlement systems authorised by the Reserve Bank of India.

New Payment Channels

IX.19 The card based payment systems cover credit/ debit and prepaid cards. With more than 250 million cards (debit, credit) issued in the country, a spurt in the usage of these cards across various delivery channels like Automated Teller Machines (ATMs), Points of Sale (POS), e-commerce, m-commerce, Interactive Voice Response (IVR), *etc.* has been observed. On an average, 400 million transactions valuing over a ₹1,000 billion are being processed during a month using these cards.

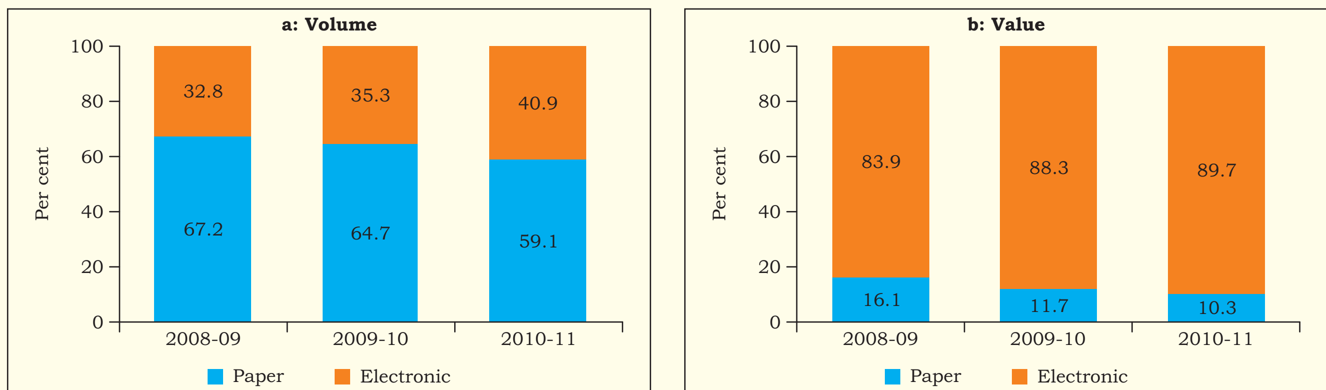
IX.20 To ensure the security in the usage of these products, the Reserve Bank has mandated

i) An additional factor of authentication for all card-not-present transactions except the Mail Order Telephone Order (MOTO) transactions. The Bank is in the process of addressing the security of card present transactions (transactions effected with cards at ATM and POS channels). A working group constituted by the Reserve Bank for securing card present transactions has submitted its recommendations which are being evaluated for implementation.

ii) Online alerts effective from July 01, 2011 for all types of card transactions irrespective of the amount and channel used.

IX.21 Subsequent to issuance of the guidelines on prepaid payment instruments, this segment has also

Chart IX.1: Share of Paper Based *Vs* Electronic Transaction



seen a spurt in activity. Banks as well as non-banks currently operate in the prepaid payments system segment. This product is being leveraged by non-bank system providers for entry into payments arena. Fifteen non-bank entities have been authorised to issue these products, and this has ushered in innovative payment products leveraging payment channels like e-commerce and m-commerce. The semi closed m-wallets can be issued for value up to ₹50,000 bringing them on par with other semi closed prepaid instruments.

IX.22 The guidelines on prepaid instruments have been amended to (i) extend the use of semi closed prepaid instruments intended for payment of utility bills/essential services, for purchase of air/train travel tickets (ii) permit banks to issue semi closed prepaid instruments through the agents in addition to the business correspondents and (iii) permit the issue of co-branded and gift prepaid payment instruments (iv) permit banks to issue prepaid instruments to government organisations and other financial institutions for onward issuance to the beneficiaries/ customers and to beneficiaries under Money Transfer Service Scheme (MTSS) for loading cross border inward remittances received by them.

IX.23 Mobile phone based banking, one of the important evolutions in payment systems, is currently being provided by 38 banks. Banks have also been permitted to facilitate mobile banking transactions without end-to-end encryption up to ₹5000.

IX.24 As a further step to ensure timely and speedy reconciliation of failed ATM transaction, effective from July 2011, the time limit for resolution of complaints has been reduced from 12 to 7 working days from the date of complaint, failing which ₹100 per day is payable as penalty by the bank (provided the complaint is lodged by the customer within 30 days of the transaction).

IX.25 To ensure a level playing field among the stakeholders, banks have been advised that the five free transactions in a month permitted to savings bank account holders at other bank ATMs would include all types of transactions - financial and non-financial.

Interdependencies in Payment Systems

IX.26 The payment and settlement infrastructure of the country is becoming increasingly interdependent due to the direct/indirect relationships between systems and the use of common third party service providers. As a consequence, the settlement flows, operational processes and risk management procedures of many systems have become increasingly interdependent. Thus, the smooth functioning of an individual system often depends on the smooth functioning of other related systems (Box IX.1).

CPSS INITIATIVES

IX.27 A joint Working Group (WG) of the CPSS and the Technical Committee of the International Organisation of Securities Commissions (IOSCO) was formed in June 2009 to provide guidance on the application of the recommendations for central counterparties (CCPs) to OTC derivatives and for trade repositories in OTC derivatives markets[3]. The CPSS formed two other Working Groups in June 2009 to study the repo clearing and settlement arrangements and post trade services.

IX.28 The first Working Group in its September 2010 report[4] studied the extent to which the clearing and settlement infrastructure for repos contributed to the instability evident in some repo markets during the crisis, and suggested that a review of the existing clearing and settlement arrangements for repos could

[3] The two reports of this working group, Guidance on the application of 2004 CPSS-IOSCO recommendations for central counterparties to OTC derivatives CCPs and Considerations for trade repositories in OTC derivatives markets, were issued as consultative reports in May 2010. The feedback received during the consultative process for both the reports has been incorporated in the FMI report.

[4] 'Strengthening repo clearing and settlement arrangements'.

Box IX.1
Interdependencies in Payment Systems

Highlighting the increasing interdependencies in payment system infrastructure and knock-on effects which could affect multiple systems due to their inter-linkages and interdependencies, the Committee on Payment and Settlement Systems (CPSS), BIS, published a report on 'The interdependencies of payment and settlement systems' in June 2008 which identifies various interdependencies that exist among the systems of CPSS countries; analyses the risk implications of these interdependencies; and assesses any associated risk management challenges.

The report states that the development of tight interdependencies has on the one hand helped in strengthening the global payment and settlement systems infrastructure by reducing various costs and risks, but on the other hand also increased the potential for disruptions to spread quickly and widely across multiple systems and markets. It has highlighted the need for system operators, participants and service providers to recognise, understand and manage these risks effectively arising out of the interdependencies for the safe and efficient functioning of the payments and settlement infrastructure.

A study on the interdependencies in the Indian payment and settlement system infrastructure was carried out, keeping in view the international efforts in this regard and the development of different market segments within the country and the inter-linkages between them.

Some of the key takeaways from the study are as follows:

- The Indian payments system infrastructure is characterised by a large number of payment systems such as the large value payment system (RTGS), CCIL operated systems (Government securities, Forex, CBLO), centralised retail payment systems with a pan-Indian presence such as NEFT, NECS, NFS-ATM, and other retail systems such as MICR cheque clearing in Mumbai, settling in central bank money. In addition, clearing corporations such as India Clearing Corporation Limited (ICCL) and National Securities Clearing Corporation Limited (NSCCL) settle the funds leg of the corporate bond transactions in central bank money in the RTGS system on a Delivery *versus* Payment (DvP) basis. Thus, the use of central bank money as a settlement asset for these key payment systems in the country has contributed to the reduction of both credit and liquidity risk.
- The settlement in central bank money is a key characteristic which has led to the Indian payments system becoming a highly integrated and interdependent web of interrelationships with the central bank (RBI) at its centre. This in turn has had an impact on the settlement flows between various systems and determines the smooth settlement of all payment obligations in central bank money. Owing to the interconnectedness of systems the credit and liquidity risks can spread very fast throughout the system. The potential for disruption has, however, been minimised through the use of the Central Counterparty (CCP) infrastructure for various markets such as USD-INR Forex segment, CBLO and G-Sec markets.
- The study has also highlighted the presence of cross-system liquidity and operational risks in the Indian payments and settlement system infrastructure. This is especially evident in the case of CCIL which while minimising liquidity needs and providing a guaranteed settlement in various market segments, is by itself the biggest source of concentration of counterparty risk and operational risk to the Indian payments and settlement system infrastructure.
- Using the evidence presented in the Financial Stability Report (FSR), the study also recognises that concentration risk is evident with few participants accounting for the bulk of transactions pointing to the potential disruption of operations in various payment systems on account of failure or disruption in the operations of one or more than one amongst the largest five participants.
- On account of the high level of integration and inter-linkages of the Indian payments and settlement system, it is essential that the individual risk management rules and regulations of each payment system are understood for overall containment of systemic risk. The study in its conclusion accordingly advocates for the adoption of international best practises in the conduct of oversight by the Reserve Bank.

be undertaken with a view to making necessary improvements.

IX.29 The other Working Group on post-trade services in its November 2010 report[5] detailed the developments in the clearing industry and market structures between the years 2000 and 2010 in the CPSS countries and the impact of these developments on new risks which could have a bearing on the robustness of CCPs.

[5] 'Market structure developments in the clearing industry: implications for financial stability'.

Principles for Financial Market Infrastructure

IX.30 In response to the Asian crisis in the late 90s, the CPSS and the Technical Committee of the IOSCO came out with three sets of standards for strengthening payments and settlement system infrastructure (including both payment and securities settlement systems). These are: (i) the CPSS produced "Core principles for systemically important payment systems (CP) (2001); (ii) the joint CPSS-IOSCO "Recommendations for Securities settlement systems (RSSS) (2001); and (iii) the joint CPSS-IOSCO "Recommendations for central counterparties" (RCCP) (2004).

IX.31 The recent global financial crisis necessitated a relook at these standards. Accordingly, a joint CPSS-IOSCO Steering Group was formed to chalk out a comprehensive list of standards incorporating not only the lessons from the crisis but also the experience of using these standards over the past decade in assessing and strengthening the payment and settlement system infrastructure in many countries.

IX.32 This initiative also supports the Financial Stability Board's (FSB) efforts in strengthening financial systems through identification of gaps, if any, in international standards and addressing them. Towards this end, the consultative report "Principles for Financial Market Infrastructures" (FMI) has been released for public comments in March 2011.

IX.33 An FMI is defined as 'a multilateral system among participating financial institutions, including the operator of the system, used for the purposes of recording, clearing or settling payments, securities, derivatives or other financial transactions'. FMIs typically possess a set of common rules and procedures for all participants, a technical infrastructure, and a risk management framework.

IX.34 The principles in the consultative report when finalised would replace the above three sets of standards, with a single set of standards. The Principles (24 in total) cover the entire gamut of the payment and settlement system landscape and encompass payment systems, central securities depositories, securities settlement systems, CCPs and a new category of FMI *viz.*, trade repositories.

INFORMATION TECHNOLOGY

IX.35 During 2010-11 the Reserve Bank continued in its endeavour to facilitate the alignment of banking sector with innovations in technology by improving its own IT infrastructure, implementing new applications and initiating steps for further adoption of technology in the banking sector.

IX.36 The IT Vision document 2011-17 prepared by a High Level Committee (Chairman Dr. K.C. Chakrabarty) with members from Indian Institute of Technology (IIT), Indian Institute of Management (IIM), Institute for Development and Research in Banking Technology (IDRBT), banks and the Reserve Bank, was released. *Inter alia*, the vision document discusses the road map for enabling IT as a strategic resource for positioning RBI as a knowledge organisation, and the steps to be taken for harnessing its human resource potential. For commercial banks, it envisages leveraging technology for enhanced efficiency, reduction in small transactions cost, improved customer service and better information flow to regulators (Box IX.2).

IX.37 In order to improve the quality of data/ information received from commercial banks, a project for automating the flow of data from the core banking solution or other IT systems of banks to the Reserve Bank by a straight through process has been taken up . A core group consisting of experts from banks, the Reserve Bank, IDRBT and the Indian Banks Association (IBA) was constituted for preparing an approach paper on the same. The project will be implemented in a phased manner taking into account the technology and process maturity of individual banks.

INFORMATION TECHNOLOGY INFRASTRUCTURE

IX.38 The vision to reinforce RBI as a knowledge organisation has invigorated an internal technological

Box IX.2
IT Vision Document: 2011-17

The IT Vision of the Reserve Bank of India 2011-17 was prepared by a High Level Committee, chaired by Dr. K.C. Chakarbarty, Deputy Governor with experts from varied backgrounds within and outside Reserve Bank as members.

The objective of the IT Vision for 2011-17 is to enable IT as a strategic resource for (i) enhancing enterprise knowledge, (ii) improving customer service, (iii) strengthening governance, (iv) increasing overall efficiency, and (v) ensuring environment friendly systems.

The steps to attain the envisioned state have been identified as:

- Adopting appropriate business process re-engineering and allocating resources before taking up the development of any new project;
- Conforming to internationally accepted data standards;
- Using business intelligence tools for analysing information;
- Ensuring automated flow of data from the source systems of banks to their Management Information Systems (MIS) and then to the Reserve Bank without any manual intervention;
- Improving IT governance;
- Effective project management;
- Evolving well defined information policies as well as information security framework; and
- Better vendor management and outsourcing practices.

For commercial banks, enhanced use of IT in areas like MIS, regulatory reporting, adoption of technology based strategies for financial inclusion, need for risk mitigation, use of analytics for improved customer relationship management (CRM) have been set as priorities.

The vision document discusses the need to move towards an integrated IT environment. Desirability of evolving a Centre of Excellence (CoE) for serving the technical and technological needs of the banking sector, which may also serve as a laboratory for research and development activity has also been mentioned in the document.

Department of Information Technology (DIT) in RBI would be the nodal department for coordinating and monitoring the progress of implementation of the recommendations of vision document.

revamp augmented by the significant updation to the existing infrastructure support.

IX.39 *Enterprise Knowledge Portal (EKP):* An interdepartmental Technical Advisory Group with an external expert has been constituted to work towards the enhancement of the EKP, the intranet site of the Bank for effective internal communication.

IX.40 The *Data Centres* continued to provide necessary infrastructure support for running the critical payment and non-payment systems of the Bank. Adequate redundancy has been built to ensure uninterrupted availability of applications and data. To test the preparedness for business continuity, three disaster recovery (DR) drills were conducted during the year for payment system applications. For non-payment applications, DR drills have been conducted on a quarterly basis.

IX.41 *Network:* The INdian FInancial NETwork (INFINET), the communication backbone for the Indian Banking and financial sector managed by IDRBT provides a secured platform for access to all payment and settlement applications. During the year, all offices of the Reserve Bank have migrated to the more reliable and cost effective Multi Protocol Label Switching (MPLS) technology. The network availability has considerably improved. The banks are gradually migrating to MPLS.

IX.42 *LAN revamping at all RBI locations:* The Local Area Network (LAN) was installed in phased manner during 1999 to 2002, at various offices of the Bank to provide connectivity to the users. During the year, the LAN has been upgraded in each RBI office to take care of present and near future requirements. Simultaneously, the process of providing a single domain across all the RBI offices has been initiated.

INFORMATION TECHNOLOGY APPLICATIONS

IX.43 The RBI manages multiple IT applications which are utilised by external and internal users for the purposes of payment and settlement, currency management, debt management, bank and government account management, regulatory

surveillance, internal accounts management, database management and communication.

IX.44 *Real Time Gross Settlement System (RTGS):* Patches for removal of positive Inter-Bank Funds Transfer Processor (IFTP) acknowledgement and multithreading for handling increased volume of incoming messages in Participant Interface (PI) software were successfully deployed. During the year, participant banks have migrated their PI to Windows 2008 environment. Steps have been initiated to replace the existing RTGS system with the Next Generation Real Time Gross Settlement (NG-RTGS) system for adopting the latest technology and emerging business processes. Some of the new features proposed to be implemented in the NG-RTGS system are advanced liquidity management facility; extensible mark-up language (XML) based messaging system conforming to ISO 20022 standards; and real time information and transaction monitoring and control system.

IX.45 *Public Debt Office: Negotiated Dealing System (PDO-NDS):* The application was suitably modified to support the system with respect to introduction of call and put options for Government securities, extinguishing bought back securities, buyback auctions for Market Stabilisation Scheme (MSS) and normal securities and development of Marginal Standing Facility (MSF) for SCBs (other than RRBs).

IX.46 *Centralised Public Accounts Department Systems (CPADS):* A centralised web based application with Public Key Infrastructure (PKI) based security for handling government transactions is working successfully from the data centres. During the year, a significant development in this application was related to the software developed for collection of e-payment of commercial taxes for the state of Karnataka by Public Accounts Department (PAD), Bangalore. This module is functioning from the secured web site and all the participating banks along with PAD Bangalore have been provided access to carry out e-payment of commercial taxes. This has facilitated the State Government of Karnataka to collect the commercial taxes through banks on T+0 basis.

IX.47 *Integrated Accounting System (IAS):* BASIS has been replaced by IAS and has been rolled out in all centres.

IX.48 *Core Banking Solution (CBS):* A project for developing and implementing an RBI specific CBS has been taken up and is expected to integrate activities of the banking departments *i.e.,* Public Debt Office (PDO), Public Accounts Department (PAD) and Deposit Accounts Department (DAD).

IX.49 *Database Management:* A significant amount of statistical data is collected, compiled and disseminated by the Reserve Bank. This data generating system augments the policy making processes, which is the core function of the Bank. Advanced IT applications have been used by the Bank to enhance the efficacy of the data management and dissemination process (Box IX.3).

Box IX.3

Information Technology as a Vehicle for Data Dissemination

The Reserve Bank of India compiles monetary, banking, and financial statistics for India while Central Statistics Office produces most of the economic statistics. Recognizing the potential use of information technology solutions in the data management processes, the Bank has been using IT solutions consistently to enhance both coverage and quality of data to contribute to the policy making processes.

Presently, multiple domain specific Statistical Information Systems, ranging from stand-alone spreadsheet based systems to sophisticated systems based on Business Intelligence (BI) tools are being used in the Bank. In order to further improve efficiency, a centralised approach is being envisaged for better manageability and control.

The approach may include centralisation of computing infrastructure, generalisation of data handling processes and integration of data elements. The technologies adopted will span across the entire spectrum of the Generic Statistical Business Processes (GSBPM 4.0, 2009) like data design, collection, processing, analysis, dissemination, *etc*.

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Improvement in the data collection and data exchange processes, particularly from the banks, has been facilitated by use of Online Return Filing System (ORFS) for submission of returns as against the earlier paper format or unstructured excel format. Under ORFS, a single window returns submission system, commercial banks enter data or upload returns online through the web based front-end. Returns submitted by banks first reaches a central data pool, which is then pushed to the user departments in the Reserve Bank.

While ORFS takes care of data capturing and transmission of returns from banks to the Reserve Bank, it doesn't incorporate any standard for exchange of data. Aligning with international standards on financial reporting, Reserve Bank has adopted eXtensible Business Reporting Language (XBRL) format for reporting data by banks and financial institutions. Technically, XBRL is an extension of XML in finance and accounting, and XBRL is leveraging XML to the maximum extent.

Recently, the Bank prepared an Approach Paper on Automated Data Flow (a straight through process) from the CBS or other IT systems of commercial banks to the Reserve Bank, according to which banks would be required, in the first phase, to ensure seamless flow of data from their transaction server to their MIS server and automatically generate all returns from the MIS server, without any manual intervention. In the second phase, the Reserve Bank would introduce a system for the flow of data from the MIS server of banks in a straight through process.

With time, the scope of data released by the Reserve Bank has enlarged and the manner in which the data were released has changed from print to electronic version. The Bank is using various IT solutions to improve the dissemination of statistical data and chief among them is the Bank's data warehouse platform.

Data are now made available in downloadable and reusable formats through the Bank's data warehouse, which the RBI had set up for its internal use in December 2002. For the benefit of researchers, analysts and others users of such data outside the RBI, internet access to the publishable part of the data warehouse has been provided by the Bank to the public through a link called 'Database on Indian Economy: RBI's Data Warehouse' on its website (www.rbi.org.in). This effort has been generally welcomed by the academicians, researchers and general public.

The data capturing process itself has been automated using ETL (Extract, Transform and Load) tools, which update the data warehouse on incremental basis as per the pre-defined data load strategy which includes push/pull technology based on data changes in the source system. ETL tool carries out data cleansing and data transformation to integrate related data from various sources, as a result data in data warehouse stands up-to-date.

For the first time "Hand Book of Statistics on the Indian Economy" was generated and printed directly from RBI data warehouse and has been made available online also making it nearly real time. Apart from this "Statistical Tables related to Banks in India" is also being brought out directly from data warehouse and more publications are envisaged to be added on this platform.

POLICY INITIATIVES

IX.50 The review process of the Information Security Policy, which was issued in 2005, has been initiated in the backdrop of a changed environment for centralisation of all IT systems and also changes in the IT industry. To take this forward an interdepartmental committee has been formed with an external expert as the Chairman.

IX.51 The continuity of critical services in case of a disaster has always been a priority. But with the adoption of technology based systems and applications to provide such services, business continuity preparedness has assumed greater significance. To address this issue, a comprehensive Business Continuity Planning (BCP) document covering business continuity as well as disaster recovery aspects for all the functions of the Bank is being prepared. DIT has been entrusted with this responsibility, with suitable inputs from business owner departments.

X GOVERNANCE, HUMAN RESOURCES DEVELOPMENT AND ORGANISATIONAL MANAGEMENT

The Reserve Bank has been entrusted with the responsibility of handling diverse functions ranging from monetary policy, ensuring orderly conditions in the financial markets, regulation and supervision of banks and non-banking financial companies to maintaining financial stability. Governance, human resource development and organisation management is crucial to deliver on these multi-dimensional tasks efficiently. The Reserve Bank has taken several initiatives in recent years covering improved transparency and governance and knowledge initiatives apart from recruitment, training of staff, schemes for higher studies and incentive schemes for attaining professional qualifications by the staff. Some departments of the Reserve Bank were reorganised with a view to harnessing greater synergies. As part of corporate social responsibility, several green initiatives were undertaken by the Bank.

INITIATIVES FOR IMPROVED GOVERNANCE

X.1 The Reserve Bank has been steadily improving its governance in the recent years within its legal structure (Box X.1). The focus on governance has become necessary in view of the increasing complexities of the economy amidst a mandate that is wider than most other central banks. The RBI Act, 1934 indicates that issuance of currency and acting as a monetary authority are core to the RBI functioning. However, the Act also entrusts other functions to the Reserve Bank such as regulation of non-bank financial intermediaries, financial institutions, management of foreign exchange reserves, management of sovereign debt - by statute in respect of central government and by agreement in respect of state governments, regulation of forex, money and government securities markets and their derivatives. Various other statutes also entrust RBI with the responsibility of oversight of payment and settlement systems and strengthens its regulatory and supervisory activities.

X.2 Amidst diverse functions, RBI has created a multi-layered governance structure that allows decision-making to proceed smoothly in accordance with the statutory provisions. It has also taken steps for providing more frequent and more reliable information to the members of its decision-making and advisory bodies. In addition, it has taken steps for improved communication of its decisions or the recommendations made by its advisory bodies (Paragraphs X.19 to X.25).

Meetings of the Central Board and its Committee

X.3 The Central Board held seven regular meetings during the year 2010-11 (July-June). Of these, four were held at traditional metro centres including the post-Budget meeting which was graced by the Hon'ble Finance Minister Shri Pranab Mukherjee, two were held at non-traditional centres and one at Agartala, Tripura where a new office was opened in May 2011.

X.4 Forty six weekly meetings of the Committee of the Central Board (CCB) were held during the year in Mumbai. The CCB attended to the current business of the Bank, including approval of the weekly accounts of Issue and Banking Departments.

Directors/Members of the Central Board/Local Boards – Changes since July 1, 2010

X.5 Smt Usha Thorat, Deputy Governor, retired as at the close of business on November 9, 2010. She was appointed as Director of Centre for Advanced Financial Research and Learning (CAFRAL), Mumbai.

X.6 Smt Shyamala Gopinath, Deputy Governor retired from Bank's service with effect from the forenoon of June 20, 2011. She was appointed Deputy Governor of the Bank on September 21, 2004.

X.7 Shri Anand Sinha took over the office of Deputy Governor of the Bank on January 19, 2011.

Box X.1
Governance Framework in the Reserve Bank

While Board practices differ widely amongst different central banks (Laybek and Morris, 2004), there has been an increasing focus on governance issues amongst central banks (BIS, 2009; BIS, 2010). The central bank governance deals with the ways in which the governments mandate the central banks certain objectives or sets goals or targets and central banks through their institutional arrangements go about delivering them. It is about how boards, managements and other decision making bodies function in order to deliver the central bank objectives that are mandated. Just as in case of corporate governance, it covers the contractual and legal arrangements and managerial practices.

There are fundamental differences between corporate and central bank governance. Governance in the case of corporate firms is best described as the ways in which the suppliers of finance to the corporations assure themselves of getting return on their investment. However, central bank governance is not about profit maximisation as central bank performs services in nature of pubic goods. It is about legal foundations, practices, governance and accountability in relation to the mandate it has.

While several central banks, post-crisis have broadened their mandate to perform activities other than monetary policy, the Reserve Bank of India since long been functioning as a full-service central bank in terms of its wide mandate. The Reserve Bank functions as regulator and supervisor of the banks and non-bank financial companies, the payment and settlement systems and regulator of money, forex, government securities and credit markets, banker to the Governments and banks and also as lender of the last resort. The Reserve Bank derives its mandate from the Reserve Bank of India Act, 1934 and from other specific statutes. Keeping in view its mandate, the Reserve Bank continues to strive for improvement in its functioning and raising its governance standards relating to the systems, processes and implementation mechanism in response to the evolving global and domestic situations. What sets apart the Reserve Bank from other central banks is the developmental role it plays in the economy, in particular, in the rural economy as also in responding and reaching out to the needs of the under-privileged people of the society.

Governance Structure

The Central Board of Directors

The Central Board of Directors appointed by the Government of India is entrusted with the governance functions of the Reserve Bank in accordance with the RBI Act. The Central Board reviews key economic, monetary and financial developments and provides overall direction to the Bank's affairs. The Central Board is assisted by various Committees and Sub-committees for smooth functioning of the affairs of the Reserve Bank.

Committees

The Committee of the Central Board (CCB) with a balanced representation of management representatives and Directors meets every week to attend to the current business of the Bank including approval of the Reserve Bank's weekly accounts pertaining to the Issue and Banking Departments and assist the Central Board in the monitoring of implementation of various policy decisions.

A Board for Financial Supervision (BFS), as a Committee of the Central Board undertakes consolidated supervision of the financial sector comprising commercial banks, financial institutions and non-banking finance companies.

A Board for Payment and Settlement Systems (BPSS) also a Committee of the Central Board, regulates, supervises and ensures smooth operation of the payment and settlement systems. The BPSS is also empowered to set standards for existing and future systems, authorise the payment and settlement systems, determine criteria for membership to these systems, including continuation, termination and rejection of membership.

Sub-committees

The Inspection and Audit Sub-committee examines the critical areas emanating from the Management Audit and Systems Inspection (MASI) of the Central Office Departments and Regional Offices through compliance check and feedback to executive management. The Human Resources Management Sub-committee reviews manpower planning in the Bank and gives necessary approval for addition/ upgradation of posts. The Building Sub-committee advises Reserve Bank on various matters, including construction of staff quarters, renovation of office and residential buildings. The Building sub-committee also reviews the utilisation of capital budgets during the year.

Local Boards

Four Local Boards representing as far as possible, the territorial and economic interests of the local co-operatives and indigenous banks of the four regions of the country advise the Central Board on various matters relating to the regional issues of economic interest.

Technical Advisory Committee on Monetary Policy

A Technical Advisory Committee (TAC) on Monetary Policy first constituted in July 2005, advises the Reserve Bank on the stance of monetary policy and monetary measures that may be undertaken in the ensuing policy reviews. It comprises the Governor as chairman, the Deputy Governor in charge of monetary policy as the vice chairman and other three Deputy Governors as members. Besides, the committee has five external members who are appointed by the Governor. The role of the TAC is advisory in nature and

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the responsibility, accountability and time path of the decision making remains entirely with the Reserve Bank. The minutes of the meetings of the TAC are now being posted on the RBI website with a time lag.

Other Senior Management Group/Committee

A Top Management Group (TMG) under the Chairmanship of Governor and attended by DGs, EDs and select HODs of the Reserve Bank, meets once in a month and discusses key issues and prepares strategy for the future course of action in the short and medium term. A Committee of Deputy Governors meets at regular intervals to discuss and decide on various policy matters referred to it. Governor chairs several sideline meetings generally held during Central Board meetings and also during his visits to the Regional Offices. The Governor meets the departmental heads and direct recruits of the Regional Offices, bankers of the region as also senior State Government officials and discusses various specific developmental and implementational issues. The decisions taken in these meetings are followed-up with the entities concerned for implementation.

Improving Governance

The Reserve Bank is not an inflation targeting central bank and there is no formal memorandum of understanding (MoU) or a 'Results Agreement' between the Government and the Reserve Bank. Nevertheless, the Reserve Bank has functioned independently within a broad two-way consultative process with the Government. It has taken several steps for improved governance by wide consultations for policy formulation and for intensive policy interactions communicating its stance, action, expected outcomes, policy successes and failures through several channels (Subbarao, 2011). This has enhanced autonomy and accountability even in the absence of formal mechanism. The Reserve Bank has made extensive use of communication policy with the objective of transparency, timeliness and credibility. The Reserve Bank communicates by way of website, publications, press releases, press meets, periodicals, monetary policy statements, speeches of Governor / Deputy Governors, daily / weekly statistical dissemination and interaction with the media. The Reserve Bank reiterates its resolve towards transparency and responsibility to the members of the public and other stakeholders through these public responses, thus enhancing accountability.

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Subbarao, D. (2011), "Central Bank Governance Issues: Some RBI Perspectives", Address to the Meeting of the Central Bank Governance Group in Basel on May 9, 2011.

X.8 Shri R Gopalan, Secretary, Department of Economic Affairs, Ministry of Finance, Government of India was nominated on the Central Board of the Bank with effect from February 15, 2011 in place of Shri Ashok Chawla, who retired at the close of business on January 31, 2011.

X.9 Shri Harun Rashid Khan took over the office of Deputy Governor of the Bank on July 4, 2011

X.10 Shri Kamal Kishore Gupta, Chartered Accountant and Shri Mihir Kumar Moitra were appointed as members of the Local Board (Northern Area) with effect from August 26, 2010 and September 24, 2010, respectively.

X.11 Md Sohrab was appointed to the Local Board (Eastern Area) on December 28, 2010. His resignation was accepted with effect from May 13, 2011 consequent upon his becoming a Member of the Legislative Assembly of West Bengal.

Appointment/Retirement of Executives

X.12 Shri C. Krishnan, Executive Director, retired from the Bank's service as at the close of business on February 28, 2011.

X.13 Shri S. Karuppasamy and Shri R. Gandhi were appointed as Executive Directors with effect from February 02, 2011 and March 01, 2011, respectively. Shri P. Vijaya Bhaskar and Shri B. Mahapatra were appointed as Executive Directors with effect from June 13, 2011. Shri G Padmanabhan was appointed as the Executive Director with effect from July 4, 2011.

Awards

X.14 Shri Azim Premji, Director of the Central Board as also Shri Montek Singh Ahluwalia and Dr. Vijay Kelkar, former Government Directors of the Central Board of the Bank were conferred Padma Bhushan Award on Republic Day, 2011 for Trade and Industry and Public Affairs, respectively.

Obituary

X.15 Prof. Suresh D. Tendulkar (72), Director of the Central Board of the Bank passed away on June 21, 2011 at Pune. Prof. Tendulkar was an outstanding scholar and was widely respected across the academic and civil society for his ability to apply economic theory and insights to real world problems of poverty and inequality. He was most known for his extensive work on poverty and had also written extensively on Indian development issues and policies, including liberalization and globalization. He was a former Chairman of the Prime Minister's Economic Advisory Council. He was nominated on the Bank's Central Board on June 27, 2006. Prof. Tendulkar was also a member of the Eastern Area Local Board and a member of Human Resource Sub-Committee of the Bank.

X.16 Smt Shashi Rajagopalan (60), Director on the Central Board of the Reserve Bank passed away on August 5, 2011 at Hyderabad. She was nominated on the Central Board on June 27, 2006 and was a member of the Board for Financial Supervision. She was also a RBI nominee on the Board of National Bank for Agriculture and Rural Development (NABARD) and Chairperson of the Audit Committee constituted by its Board. Smt Rajagopalan promoted credit co-operatives among rural women. She was a member of expert committee to review co-operative laws set up by International Labour Organisation (ILO). She had a long and illustrious career with several civil society organisations. She was actively involved in the watershed development in the country. She was a member of the Sub-Committee of the Central Board to study 'Issues and Concerns in MFI Sector'.

Visit of Foreign Dignitaries

X.17 During the year, 38 delegations from seventeen countries visited the Bank. The delegations held interactive meetings with the Governor and other senior executives. A wide spectrum of issues came up for discussion, including the functions and policies of the Reserve Bank, facets of monetary policy, banking supervision, economic policy, trade and bilateral relations.

X.18 Several high profile dignitaries visited the Bank during 2010-11 including, *inter alia*, the Rt. Hon. George Osborne, UK Chancellor of the Exchequer, U. S. Secretary of Commerce Gary Locke, Senator Christopher J. Dodd, Chairman of the Banking, Housing and Urban Affairs Committee, USA, The Lord Mayor of the City of London Alderman Nick Anstee, Lord Stephen Green, Minister of State for Trade and Investment, UK, H.E. Dr. Yuval Steinitz, Minister of Finance, Israel, Prof. Stanley Fischer, Governor, Bank of Israel, Mr. Rundeersing Bheenick, Governor of Bank of Mauritius, and Dr. Ngozi Okonjo-Iweale, Managing Director of World Bank (Annex II). These high level visits helped in exchange of ideas and signified the keen interest taken by the world community to understand India's economic and financial sector policies, which had enabled the country to successfully cope with the global crisis.

INITIATIVES FOR IMPROVED COMMUNICATION

X.19 The Reserve Bank has been striving towards a transparent communication policy and has taken several initiatives in this direction. Its publications have become concise with precise messages. The publications include the two statutory publications - the Annual Report and the Report on Trend and Progress of Banking in India - and other publications such as the Report on Currency and Finance, as also the Monetary Policy and the Macroeconomic and Monetary Developments. Accompanied by crisp press releases, these publications are well-read and commented upon by researchers and analysts as well as by media.

Monetary policy communication

X.20 With a view to further improving monetary policy communication three new initiatives were taken by the Reserve Bank during 2010-11. First, it started teleconferencing with researchers and analysts after announcing the annual and mid-term policies, as also after the two quarterly policies. This enabled a first hand understanding of the rationale of the policy directly from policy makers. Second, from April 2011, it started live telecast of the Governor's statement to the bankers, which enabled the Reserve Bank to bring in public domain the stance of the policy directly from the Governor before the market begins to analyse the policy. Third, it has started disseminating minutes of the Technical Advisory Committee on Monetary Policy with a lag, as per the best international practices.

Promoting interaction with stakeholders for better understanding

X.21 In an effort to promote research, the Reserve Bank has been holding seminars on its research publications relating to monetary policy, surveys done by the Reserve Bank as a precursor to monetary policy, regulatory issues and on developmental measures such as financial inclusion. These seminars have helped in increasing interaction with various stakeholders and promoted a better understanding. Workshops on central banking functions for journalists who follow central banking were also organized which contributed towards creating a better understanding between the media and the central bank. Sessions on financial literacy aimed at educating the audience about functions and working of the Reserve Bank were also organised.

X.22 As part of its financial literacy initiatives, regular educational visits to the Central Office of the Reserve Bank are organised for students as well as senior citizens and young entrepreneurs. The participants get an opportunity to visit the Monetary Museum to get a glimpse of the Reserve Bank's history and the National Clearing Cell to see the cheque clearing process. An interactive session with Reserve Bank executives is also part of these visits. Starting from 2008 till date, more than 150 educational visits have been conducted.

Outreach Programmes

X.23 During its Platinum Jubilee last year, the Reserve Bank had launched an 'outreach' programme in which the senior management of the Reserve Bank visited remote villages across the country to create awareness about banking and central banking. This has proved to be an immensely rewarding learning experience for the Reserve Bank and it was decided to continue the outreach programme as a regular activity through 2010-11.

X.24 In an effort to bring the central bank closer to the common man, the Reserve Bank has decided to conduct one town hall event every year. The event for 2010 was conducted in Chandigarh, with student community as the main audience. A newsibition was created out of Mint Road Milestones - the Reserve Bank's Platinum Jubilee publication brought out in 2010 that recorded milestones in the Reserve Bank's history largely drawing from reports and photographs appearing in newspapers. After its inaugural run in Kolkata in December 2010, the newsibition is now scheduled to travel to ten centres, mainly second tier and remote cities.

X.25 The Reserve Bank also continued to make extensive use of its web-site to communicate with external audiences. The site today has nearly 53,000 registered users. The size of the regional language websites has also increased significantly.

Right to Information Act (RTI), 2005

X.26 As part of its transparency goal and as part of the statutory obligations, RBI has been providing the necessary information under the RTI Act. The heads of various Central Office Departments and the 15 Banking Ombudsmen have been designated as Central Public Information Officers (CPIOs), with Executive Director (Shri V. S. Das) as the Appellate Authority. In compliance with the directions of the Central Information Commission (CIC), the Chief General Manager-in-Charge of Department of Administration and Personnel Management has been designated as the Transparency Officer.

X.27 The number of requests for information under RIA has increased from 3,333 in 2008-09 (July-June) to 4,350 in 2009-10 and further to 5,087 in 2010-11. During 2010-11 (July-June) about 97 per cent of requests had been responded.

X.28 The Bank has initiated steps to digitise all the records which are frequently required for furnishing the information sought under the RTI Act. In compliance with the directions of the CIC, the Reserve Bank of India has formulated indicative negative list/ classes of information which the Reserve Bank considers as exempt from disclosure under the provisions of the RIA. This list was approved by the Committee of the Central Board and has been hosted on the Bank's website.

HUMAN RESOURCE DEVELOPMENT INITIATIVES

Training / deputation / higher studies / distance learning

X.29 The Reserve Bank continued to provide avenues for skill upgradation to its staff, with a view to enhance the quality of human capital in the Bank. The two training establishments of the Reserve Bank, *viz.,* the Reserve Bank Staff College (RBSC), Chennai and the College of Agricultural Banking (CAB), Pune cater to the training needs of the officers of the Reserve Bank and the banking industry and serve the objectives for human resource development. They have been consistently striving for skill upgradation, while modernising the techniques for imparting training as well as revamping the course content in response to the evolving challenges for central banks and the changing needs for training in the banking sector. The four Zonal Training Centres (ZTCs) mainly focus on training of Class III and IV staff of the Reserve Bank (Table X.1).

Repositioning of Zonal Training Centres (ZTCs)

X.30 The Zonal Training Centres (ZTCs), established in 1963, at the four metros were mandated to cater to the training needs of workmen employees of the Bank. The capacity and infrastructure of these institutes were underutilised while the colleges were finding it difficult to cope up with the increase in training requirements. The ZTCs have therefore been repositioned as training centres for officers in basic skill building, both functional and soft. They will, however, continue to conduct training programmes for workmen employees also.

Training at external institutions

X.31 During 2010-11, 1,090 officers were deputed by the Bank 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. In addition, 166 Class III employees and 295 Class IV employees were deputed for in-house programmes within the Bank. The Reserve Bank deputed 578 officers to attend training courses, seminars, conferences and workshops conducted by

Table X.1: Reserve Bank Training Establishments - Programmes Conducted

Training Establishment	2008-09(July-June)		2009-10(July-June)		2010-11 (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	149	3,015	143	2,960	147	2,904*
CAB, Pune	161	4,867	160	4,885	162	4,951@
ZTCs (Class I)	17	370	47	1,066	57	1,140
ZTCs (Class III)	150	2,602	112	1,826	87	1,310
ZTCs (Class IV)	64	1,329	63	1,214	70	1,422

* : Includes 19 concurrent auditors, 4 chartered accountants and 31 foreign participants.
@: Includes 29 foreign participants.
RBSC: Reserve Bank Staff College. CAB: College of Agricultural Banking. ZTC : Zonal Training Centre.

Table X.2: Number of Officers Trained in External Training Institutions in India and Abroad

Year	No. of officers trained in India	No. of officers trained abroad
1	2	3
2008-09	718	426
2009-10	1,104	553
2010-11	1,090	578

banking and financial institutions and multilateral institutions in more than 34 countries (Table X.2).

X.32 Four officers were selected during the year under the Golden Jubilee Scholarship Scheme for higher studies abroad during 2011-12. Under this scheme, officers of the Bank get an opportunity to pursue courses in leading international universities. In all, 103 officers have been selected under this scheme since its inception in 1986. One officer was selected during the year under the scheme of sponsoring officers for two-years Post Graduate Programme in Banking and Finance (PGPBF) at NIBM, Pune. Six officers of the Bank availed study leave under different schemes for pursuing higher studies during the year. Furthermore, 450 employees availed the benefits under the incentive scheme for pursuing select categories of part-time and distance education courses during 2010-11.

Joint India-IMF Training Programme (ITP)-Pune

X.33 The Reserve Bank of India and the International Monetary Fund jointly established the Joint India–IMF Training Program (ITP) at NIBM, Pune in May 2006 to impart policy oriented training in economics and related operational areas to Indian officials (from Central Government, State Governments, Reserve Bank and other regulatory bodies) and the officials of countries from South Asia and East Africa. The ITP serves as a platform to disseminate policy lessons learned in other parts of the world and as a forum to discuss regional issues. During the year, six programmes were conducted under this joint training initiative covering topics, *inter-alia*, on macroeconomic management and financial sector issues, government finance statistics, microeconomic diagnostics, monetary and financial statistics and anti-money laundering and combating the financing of terrorism. In all 36 participants from the Reserve Bank took advantage of this training facility in 2010-11.

Operationalisation of CAFRAL

X.34 Launched by the Prime Minister, Dr. Manmohan Singh, CAFL has been set up as a Society on April 19, 2007 and subsequently as a Trust under the Bombay Trust Act 1950. The Centre is a non-profit organization. A Concept Committee for CAFL under the chairmanship of Dr. Ashok S. Ganguly was set up in 2009 which laid down the focus areas for CAFL. The Committee also recommended, inter alia, change of name of Centre from Centre for Advanced Financial Learning (CAFL) to Centre for Advanced Financial Research and Learning (CAFRAL). The CAFRAL has in place a Governing Council, chaired by the Governor of Reserve Bank of India.

Creation of Human Resource Management Department (HRMD)

X.35 Consequent upon the amalgamation of the functions of the erstwhile Department of Administration and Personnel Management (DAPM) and Human Resources Development Department (HRDD), a new department called Human Resource Management Department (HRMD) has been created in the Bank. Governor inaugurated the Department on August 3, 2011. With this merger, it is expected that there would be greater synergy between framing of human resource policies in Reserve Bank and their execution.

INITIATIVES IN ORGANISATION MANAGEMENT

X.36 The Reserve Bank during the year moved to reposition it as a knowledge institution, driving greater focus on the Bank's strategic imperatives and related capacity building measures, undertaking a diagnostic study of engagement levels amongst the Bank's personnel, developing improved ways of employee collaboration and designing clearer and cascaded communication strategies.

Knowledge Initiative

X.37 Knowledge is a multi-dimensional phenomenon, reflected in an organisation through both people and processes. Consequently, to be effective, a Knowledge Policy must articulate objectives and strategies related to both people and processes. With this in mind, the Reserve Bank's Knowledge Policy has been designed with two sets of objectives, short term and medium term (Box X.2).

Reorganisation of Departments

X.38 The Reserve Bank has been increasingly relying on research to provide a more scientific basis for its policy-making. The economic research and analysis requirement of the Bank has increased significantly over last several years, as the economic and operational environment in which the Bank operates has turned increasingly more complex and dynamic. In this context, it was felt necessary to streamline the organisational structure of Department of Economic Analysis and Policy (DEAP), by better aligning the Department's work to the research and analytical needs of the Bank. Based on the report of an Internal Committee, the department was reorganised with thematic units reflecting the core areas of research. The name of the department was also changed to "Department of Economic and Policy Research (DEPR)" from September 2010.

Box X.2
Knowledge Initiative

There is now a fundamental rethinking of the principles of organising, resulting in a quest for designs that are inherently flexible, highly oriented towards problem solving and has a bias for continuous learning through experimentation. The shift is now distinctly to organisations and industries referred to as 'knowledge-based' as opposed to the asset-based model of value creation in traditional organisations and industries.

As work gets increasingly knowledge intensive, there is an emergent need to convert institutions into Knowledge Institutions. Reserve Bank of India has also been seized of this and has, therefore, recently initiated a reorientation initiative which puts a premium on enhancing the knowledge content of all its work practices.

Knowledge is a multi-dimensional phenomenon, reflected in an organisation through both people and processes. Consequently, to be effective, a Knowledge Policy must articulate objectives and strategies related to both people and processes. To the extent that significant change is called for on both fronts, abruptness can be disruptive. The Policy should phase in change so as to minimise disruption in current work practices even while enhancing the knowledge content of these practices.

With this in mind, RBI's Knowledge Policy has been designed with two sets of objectives, differentiated by time horizon. Short-term objectives articulated by the Policy provide the basis for immediate actions, which are intended to exploit available opportunities for knowledge enhancement within existing process and people arrangements. Medium-term objectives are more ambitious, seeking to significantly enhance the role of knowledge in decision-making and implementation by the Bank. These will require changes in both processes and people policies.

The Reserve Bank's Senior Management Retreat for the year 2010 provided a number of inputs for follow-up actions for knowledge management by the Bank. Some of these were consistent with a short-term horizon, while others called for discontinuous change in organisational policies and, therefore, were consistent with a medium-term timeframe.

The Knowledge Policy of the Reserve Bank aims at facilitating the flow of knowledge through the organisation so as to enhance the quality of decision-making and implementation and to initiate a culture of information and knowledge sharing by departments and individuals. It also has medium-term objectives of integrating knowledge into placement and transfer decisions and to design career paths for junior officers.

Apart from deputation on trainings, Reserve Bank has undertaken a number of initiatives to enhance the knowledge base and skills of its human resources. These include (a) Leveraging technology for revamping the Bank's "Enterprise Knowledge Portal' - which helps the employees in keeping abreast of the latest happenings both inside and outside the organization - with a focus shift from information to knowledge customization; (b) Setting up in-house groups across the Bank's offices which, *inter alia* hold seminars on important and emerging issues as also organize broad-based Study Circles in the Bank for discussing and debating ideas and issues of mutual interest and concern; (c) Building up well-stocked libraries at all the offices of Reserve Bank; (d) The 'Knowledge Sharing Series' where external experts are invited to deliver lectures on diverse areas ranging from subjects of general interest, issues of public concern, health, personal investments to women's empowerment; and (e) The 'thematic video conference' every month which is an initiative towards information dissemination within the Bank on important developments in various work areas.

X.39 The vision of DEPR is to be a knowledge centre in policy-oriented research in monetary, financial, banking, international and macroeconomic issues. The management information system (MIS) of DEPR has been strengthened with a view to providing a quick snapshot of data and information coupled with analytical inputs in an integrated format to the top management. A near and medium term research agenda has been formulated to generate research output, which could form inputs for taking policy decisions on wide range of macroeconomic issues.

X.40 In the wake of financial crisis, increased globalisation and changes in monetary and banking regulatory policies, the need for quality and timely statistics as inputs to policy making has been greater than ever before. With the monetary policy announcements becoming more frequent, need for high frequency forward looking information, mostly collected through surveys, has become essential. Against this background, in 2010, the Department of Statistics and Information Management (DSIM) has reorganised and reoriented its statistical activities around data generation, data management, data dissemination, surveys, analysis and research. With a view of disseminating key macroeconomic data more frequently, the 'Handbook of Statistics on Indian Economy' has been made available on near real time basis on the Reserve Bank's web-site.

X.41 A new publication *viz.* 'RBI Working Paper Series' was introduced as an exclusive web publication to provide platform to the Reserve Bank's Staff for presenting their research papers as well as to receive feedback from informed researchers, with the first issue in the series commencing from March 2011. The RBI Working Paper Series would focus on quick analytical research on issues and challenges of contemporary relevance to the Bank. In addition, 'RBI Occasional Papers' continued to disseminate the research work of RBI Staff on broad range of issues, which have been at the forefront of policy discussions, with specific periodicity. Researchers of the Bank have also published several research articles in referred economic domestic as well as international journals.

Promotion of external research activities

X.42 The broad categories of financial assistance provided by the Reserve Bank for promoting external research include: (a) establishment of RBI Chairs in Universities/ Research Institutions, (b) initiating Development Research Group (DRG) Studies, (c) financing of projects, (d) funding seminars/ conferences/workshops, (e) financial support for publication of research journals and (f) scholarship scheme for faculty members from academic institutions.

X.43 In pursuance of the recommendations of the Expert Committee (Chairman: Dr. Bimal Jalan) and taking into account case-by-case analysis of functioning of the existing RBI Chairs, suggestions expressed during interaction with the Chair Professors and norms of pay structure announced in the 6th Pay Commission for UGC Professors, it was decided to enhance the corpus fund for RBI Chairs to Rs. 4 crore and also to strengthen the guidelines for operating various external research schemes. At present, there are 17 RBI Chairs (of which, corpus fund in one RBI Chair is being recalled due to non-compliance of terms and conditions) and two new RBI Chairs have been established to support research activities in emerging areas. Following the recommendations of Dr. Jalan Committee, a Steering Committee on Economic and Policy Research (SCEPR) was constituted with Deputy Governor-in-Charge of Research Departments as Chairman and Executive Director-in-Charge of Research Departments as Vice-Chairman and few distinguished academicians and senior officers of the Reserve Bank as members. The objectives of the Committee include preparing the research agenda and identifying research areas for external research, reviewing and ensuring accountability, transparency and usefulness of research activities funded by the Bank. Three sub-Committees have also been formed to assist SCEPR in achieving its objectives.

Performance Appraisal

X.44 With a view to bringing about transparency in the appraisal process, it has been decided to allow

all officers to view their Performance Appraisal Reports (PAR) after finalisation of the same by the Review Committee. Further, a redressal mechanism to hear appeals, if any, from officers on communication of the entries made in their PAR has also been put in place by designating appellate authorities for officers in all grades.

Engagement Survey

X.45 As part of its organisational development initiatives, the Bank took up, during 2010-11, an Employee Engagement Survey for gauging the engagement levels of its employees across its offices. One of the Bank's empanelled consultants, *i.e.* Aon Hewitt Consultancy got the survey done for the Bank. While the engagement level of the staff has been found to be high, the survey brought out specific areas where engagement appears to be low. Focus on these areas is on the anvil.

Grants and Endowments

X.46 The Reserve Bank has catalysed the creation of four research and training institutions in India, *viz.,* (i) Indira Gandhi Institute of Development Research (IGIDR), Mumbai; (ii) National Institute of Bank Management (NIBM), Pune; (iii) Indian Institute of Bank Management (IIBM), Guwahati; and (iv) Institute for Development and Research in Banking Technology (IDRBT), Hyderabad apart from its own training colleges. During the year 2010-11, Reserve Bank extended financial support of ₹1,800 lakh, ₹263 lakh and ₹75 lakh to IGIDR, NIBM and IIBM, respectively.

Industrial Relations

X.47 Industrial relations in the Bank remained peaceful during the year 2010-11. Recognising the significance of designing reasonable compensation packages for appropriate harnessing of human capital, the pay and allowances of all categories of employees in the Reserve Bank were revised during the year, effective November 01, 2007. These changes have reflected the Reserve Bank's positive approach for organisational development through enhanced productivity strategies and better work-life balances for its employees.

Table X.3: Recruitment by the Reserve Bank – 2010*

Category of Recruitment	Total	of which		Percentage	
		SC	ST	SC	ST
1	2	3	4	5	6
Class I	109	13	08	11.9	7.3
Class III	3	0	0	0.0	0.0
Class IV					
(a) Maintenance Attendant	8	5	1	62.5	12.5
(b) Others	45	0	3	0.0	6.7
Total	**165**	**18**	**12**	**10.9**	**7.3**

* : January-December.

Recruitment

X.48 During 2010 (January-December), the Reserve Bank recruited 165 employees. Of this, 18 belonged to Scheduled Castes (SCs) and 12 to Scheduled Tribes (STs) categories, constituting 18.2 per cent of total recruitment (Table X.3).

Staff Strength

X.49 The total staff strength of the Reserve Bank as on December 31, 2010 was 19,207 as compared to 20,295 a year ago (Table X.4 and Chart X.1). Of the total staff, 21 per cent belonged to Scheduled Castes and 8.9 per cent belonged to Scheduled Tribes.

Chart X.1: Total Staff Strength of the Reserve Bank

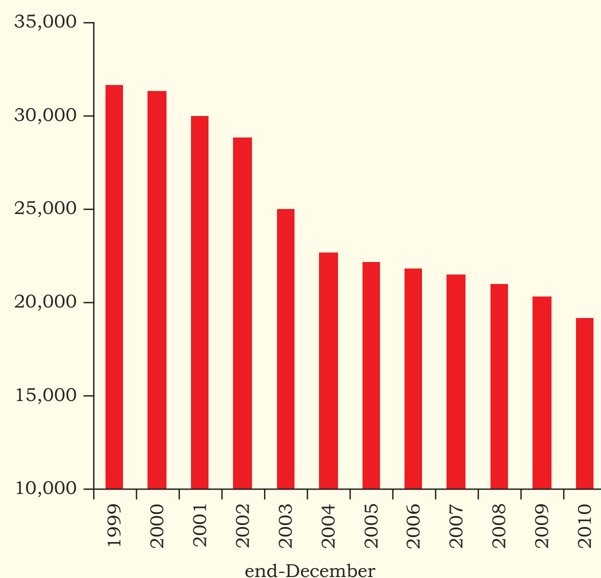

Table X.4: Staff Strength of the Reserve Bank

Category	Total Strength		SC		ST		Per cent to Total Strength SC	ST
	December 31, 2009	December 31, 2010	December 31, 2009	December 31, 2010	December 31, 2009	December 31, 2010	December 31, 2010	
1	2	3	4	5	6	7	8	9
Class I	9,430	8,754	1,365	1,277	658	598	14.6	6.8
Class III	3,789	3,604	596	554	439	422	15.4	11.7
Class IV	7,076	6,849	2,300	2,200	710	688	32.1	10.0
Total	**20,295**	**19,207**	**4,261**	**4,031**	**1,807**	**1,708**	**21.0**	**8.9**

X.50 During the year 2010 (January-December), meetings between the management and the representatives of the All India Reserve Bank Scheduled Castes/Scheduled Tribes and the Buddhist Federation were held on four occasions to discuss issues relating to the implementation of reservation policy in the Reserve Bank. 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, 2010 stood at 942. Of these, 335 were in Class I, 82 in Class III and 525 in Class IV.

X.51 One meeting was held between the management and the representative of the All India Reserve Bank OBC Employees' Welfare Association to discuss issues relating to implementation of reservation policy in Reserve Bank.

X.52 The total strength of ex-servicemen in the Reserve Bank as on December 31, 2010 stood at 216 in Class I, 113 in Class III and 728 in Class IV. The total number of physically handicapped employees in Class I, Class III and Class IV cadres in the Reserve Bank stood at 245, 81 and 136, respectively, as on December 31, 2010.

X.53 Of the total staff, 45.6 per cent belonged to Class I, 18.8 per cent to Class III and the remaining to Class IV (Table X.5).

X.54 Mumbai centre (including the Central Office Departments) continued to have the maximum number of staff (of about 30 per cent) (Table X.6).

Opening of Sub-Office of RBI at Agartala (Tripura)

X.55 The Agartala Sub-Office of the Reserve Bank was opened on May 19, 2011, thus making Tripura the second state in the North-East after Assam to have an office of the Bank. The new office will further co-ordination with banks, State Government, local authorities, *etc*. so as to ensure that targets under

Table X.5: Category-wise Staff Strength

(As on December 31, 2010)

Class		Actual Strength
1		2
A.	**Class I**	**8,754**
1.	Senior Officers in Grade F	93
2.	Senior Officers in Grade E	228
3.	Senior Officers in Grade D	391
4.	Officers in Grade C	939
5.	Officers in Grade B	1,339
6.	Officers in Grade A	5,652
7.	Treasurer	11
8.	Deputy Treasurer	34
9.	Assistant Treasurer	67
B.	**Class III**	**3,604**
1.	Sr. Assistant	1,154
2.	Assistant	876
3.	Secretarial assistant	116
4.	Word Processor Assistant	365
5.	Special Assistant (Teller)	608
6.	Class III (Others)	485
C.	**Class IV**	**6,849**
1.	Maintenance Staff	1,470
2.	Service Staff	4,411
3.	Technical Staff	202
4.	Other Staff	766
Total Strength in the RBI (A+ B+C)		**19,207**

Table X.6 : Reserve Bank's Office-wise Strength of Staff

(As on December 31, 2010)

Office (including sub-offices)		Class I	Class III	Class IV	Total
1	2	3	4	5	6
1.	Ahmedabad	379	179	298	**856**
2.	Bengalaru	468	145	260	**873**
3.	Belapur	155	68	233	**456**
4.	Bhopal	184	26	96	**306**
5.	Bhubaneswar	209	73	227	**509**
6.	Chandigarh	199	34	114	**347**
7.	Chennai	541	316	517	**1,374**
8.	Dehradun	11	2	3	**16**
9.	Gangtok	4	0	0	**4**
10.	Guwahati	244	99	219	**562**
11.	Hyderabad	353	127	294	**774**
12.	Jaipur	290	125	226	**641**
13.	Jammu@	102	8	61	**171**
14.	Kanpur	285	182	393	**860**
15.	Kochi	52	44	44	**140**
16.	Kolkata	701	417	671	**1,789**
17.	Lucknow	200	58	135	**393**
18.	Mumbai	972	534	1,152	**2,658**
19.	Nagpur	300	250	275	**825**
20.	New Delhi	594	275	409	**1,278**
21.	Panaji, Goa	7	4	2	**13**
22.	Patna	258	69	286	**613**
23.	Pune-CAB-CRDC-ITP	69	19	84	**172**
24.	Raipur	12	0	0	**12**
25.	Ranchi	11	0	0	**11**
26.	Shimla	7	0	0	**7**
27.	Thiruvananthapuram	218	71	167	**456**
A.	**Total**	**6,825**	**3,125**	**6,166**	**16,116**
B.	**CODs #**	**1,929**	**479**	**683**	**3,091**
	Grand Total	**8,754**	**3,604**	**6,849**	**19,207**

CAB : College of Agricultural Banking.
CRDC : Central Records and Documentation Centre.
ITP : IMF Training Programme, Pune
@ : Includes Srinagar Sub-Office.
# : Central Office Departments
Note: Agartala Sub-Office was opened on May 19, 2011.

special dispensation scheme and roadmap for providing banking services in villages with population of more than 2,000 under financial inclusion plans are met, as also to ensure that banks take initiative to inculcate the habit of banking amongst the 'no- frills' account holders. It would also explore new avenues for credit so as to improve the CD ratio for the state and monitor availability of good quality currency notes.

Rajbhasha

X.56 The Reserve Bank continued with its efforts to promote the use of Hindi in its working during 2010-11 in pursuance of the statutory requirements of Rajbhasha policy. During the year, several Hindi training programmes were conducted. A quarterly Hindi magazine on banking *viz*. "Banking Chintan-Anuchintan", containing original Hindi articles, with its special issue on 'Co-operative Banking', was published. A reporting package on Rajbhasha was made live ensuring online submission of quarterly reports regarding the use of Hindi by the Regional Offices (ROs)/ Central Office Departments (CODs) of the Bank. Rajbhasha Officers' conference as well as region-wise review meetings with the concerned Rajbhasha Officers were held to monitor the progress made in the use of Hindi. All the handouts were made available in bilingual form in its training colleges and the Bank continued to bring out various publications in bilingual form *i.e*. both in Hindi and English.

Management of the Bank's Premises

X.57 Premises Department continued its efforts towards providing residential accommodation to the officers in a planned way during the year. In all, six projects including four projects for officers' flats and two projects for student hostels in IGIDR and RBSC have been taken up under 'design and build (DB)' mode, which are expected to be completed by mid-2013. All these buildings will be developed as one single project, which is first of its kind in the Bank. The contractor *viz*. M/s Shapoorji Pallonji & Co. Ltd. would be responsible for the planning, designing, obtaining permission from the controlling civic authorities and executing them, while Premises Department will monitor the mile stone events of the project with a view to complete the projects as per the specified quality and time.

The Green Initiatives

X.58 As a part of the Bank's corporate social responsibility, many initiatives aiming at environment preservation and protection have been undertaken. Premises Department undertakes energy as well as water audit to identify areas of wastages and devise more efficient ways of resource utilisation. New equipments for performance measurements on use of water and electricity have been installed at various points in Central Office Building. Further, most of the

old central air-conditioning equipments have been replaced with new energy efficient air-conditioning equipments using environment friendly refrigerants and the remaining equipments will also be replaced in the next two years.

X.59 The old lift equipments are being replaced with new energy efficient equipments based on 'variable voltage variable frequency (VVVF)' technology with microprocessor based smart traffic management systems. As a pilot project, recently an exercise has also been taken up for Carbon Footprint mapping for the Central Office Building. As a result of all these efforts, 24 of the Reserve Bank's office buildings have received star ratings from the Bureau of Energy Efficiency, Ministry of Power. The new building construction projects being undertaken are as per the latest green building requirements.

Internal Audit/Inspection in the Reserve Bank

X.60 Inspection Department examines and evaluates systems, processes and controls to provide objective feedback to the top management regarding health of various offices / departments of the Bank. A compendium of Information Systems (IS) audit guidelines covering both generic as well as application specific areas was prepared and circulated during 2010-11 to all stakeholders. The five regional offices were covered under Risk Based Internal Audit (RBIA) during the year 2010-11 in an endeavor to qualitatively enhance audit process. Management audit of four offices of Banking Ombudsman (BO) were also carried out during the year. Technology audit of Enterprise Knowledge Portal (EKP), Mail Message Service (MMS) and Integrated Computerised Currency Operations Management System (ICCOMS) were also carried out by external experts during the year.

X.61 Quality assurance of Inspection Department was carried out by a team from Institute of Internal Auditors (IIA) in December 2010, which conferred the highest rating *viz*. 'generally conforms' on the Department. Based on suggestions of the audit, an internal group was constituted with some Central Office Departments of the Bank to prepare criticality matrices to facilitate and support Enterprise Risk Management (ERM) and RBIA implementation for the Bank. Action is also initiated with all CODs in identification of functional risks and updation of risk registers and with all CODs and ROs in building up 'Incident Database'. A system of IS audit on continuous assurance basis (akin to concurrent audit) was introduced initially at four metro offices with external assistance.

X.62 Department of Economic and Policy Research (DEPR) received ISO 9001-2008 certification during the year. ISO certification process initiated at eight ROs is at final stage. Information Security Management System (ISMS) certification of Central Accounts Section (CAS), Nagpur and FMD, Mumbai was completed during the year.

XI THE RESERVE BANK'S ACCOUNTS FOR 2010-11

The balance sheet of the Reserve Bank expanded significantly during the year, mainly reflecting the impact of liquidity management operations undertaken by the Bank. The income from foreign assets declined for the second successive year, reflecting the low interest rates in international markets. The decline in income from foreign assets in 2010-11 was, however, more than offset by earnings from domestic assets which have expanded. While the Bank's gross income increased by 12.73 per cent to ₹37,070.12 crore in 2010-11, there was a 3 per cent increase in total expenditure to ₹8,655.22 crore. After meeting the needs of necessary transfer to the Contingency Reserve and the Asset Development Reserve, ₹15,009 crore was allocated for transferring to the Government.

XI.1 The size of the Reserve Bank's balance sheet increased significantly in 2010-11 (July-June) mainly on account of its liquidity management operations. On the liability side, the expansion was on account of a large increase in notes in circulation as also an increase in banks' deposits with the Reserve Bank in line with the deposit growth in the banking system (see Box II.6). On the asset side, there was a significant increase in Bank's portfolio of domestic assets in the form of government securities on account of open market purchases, repo purchases and disinvestment of Government of India's surplus balance parked with the Reserve Bank. The increase in foreign currency assets mainly reflected the valuation effect on the portfolio.

XI.2 The financial statements of the Reserve Bank 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. The Reserve Bank presents two balance sheets. The first one relating to the sole function of currency management is presented as the Balance Sheet of the Issue Department. The second one reflecting the impact of all other functions of the Bank is known as the Balance Sheet of the Banking Department. The key financial results of the Reserve Bank's operations during the year 2010-11(July-June) are presented in this Chapter.

INCOME

XI.3 The Reserve Bank's assets and liabilities reflect the outcome of its operations guided by the overall policy objectives relating to the economy and the financial system and not by commercial considerations.

XI.4 The two major components of the Bank's income are earnings from foreign sources and earnings from domestic sources. The major source of the net interest receipts is augmented by relatively small amounts of income from other sources, *viz.*, discount, exchange, commission, *etc*.

XI.5 The gross income of the Reserve Bank for the year 2010-11 was ₹37,070.12 crore, an increase of 12.73 per cent over the previous year (Table XI.1). The increase in income from domestic sources more than offset the decline in income from foreign sources.

Earnings from Foreign Sources

XI.6 The Reserve Bank's earnings from the deployment of foreign currency assets and gold decreased by ₹3,952.86 crore (15.75 per cent) from ₹25,102.55 crore in 2009-10 to ₹21,149.69 crore in 2010-11. The rate of earnings on foreign currency assets and gold was lower at 1.74 per cent in 2010-11 as compared with 2.09 per cent in 2009-10 (Table XI.2).

Earnings from Domestic Sources

XI.7 The earnings from domestic sources increased by ₹8,138.84 crore from ₹7,781.59 crore in 2009-10 to ₹15,920.43 crore in 2010-11, registering an increase of 104.59 per cent (Table XI.3). The increase was mainly due to the effect of earnings on

Table XI.1: Gross Income

(₹ crore)

Item	2006-07	2007-08	2008-09	2009-10	2010-11
1	2	3	4	5	6
A. Foreign Sources					
Interest, Discount, Exchange	35,152.99	51,883.27	50,796.21	25,102.55	21,149.69
B. Domestic Sources					
(i) Interest	5,144.52	4,958.35	9,056.27	6,646.35	15,031.84
(ii) Profit on sale of shares of SBI	34,308.60	-	-	-	-
(iii) Other Earnings	742.22	909.17	879.50	1,135.24	888.59
Total : [(i)+(ii)+(iii)]	40,195.34 (5,886.74)	5,867.52	9,935.77	7,781.59	15,920.43
C. Total Income (Gross) (A+B)	**75,348.33 (41,039.73)**	**57,750.79**	**60,731.98**	**32,884.14**	**37,070.12**

Note: Figures in parentheses indicate the amount excluding profit of ₹34,308.60 crore on sale of shares in SBI.

LAF operations, governments' cash management operations involving higher availment of ways and means advances (WMA) from the Reserve Bank and higher coupon receipt on an increased portfolio of government securities. The rate of earnings on average domestic assets increased from 3.45 per cent in the previous year to 3.77 per cent in 2010-11.

EXPENDITURE

XI.8 The Reserve Bank's expenditure comprises its establishment expenses besides expenditure that arises in the process of performing statutory functions of the Bank, such as, agency charges and security printing charges. The total expenditure of the Reserve Bank increased by ₹252.10 crore (3.00 per cent) from ₹8,403.12 crore in 2009-10 to ₹8,655.22 crore in 2010-11 largely due to an increase in establishment expenditure and agency charges, moderated by a decline in security printing charges (Table XI.4).

Establishment Expenditure

XI.9 The establishment expenses for 2010-11 were ₹2,300.71 crore as against ₹1,986.82 crore for 2009-10 registering an increase of ₹313.89 crore (15.80 per cent). The increase is mainly due to the revision of wages of all categories of staff with retrospective effect.

Non-Establishment Expenditure

XI.10 The amount of agency charges paid during 2010-11 was ₹3,012.49 crore compared with ₹2,855.02 crore in 2009-10. The increase of ₹157.47 crore (5.52 per cent) is mainly attributable to the increase in the volume of government business conducted by agency banks. Agency charges also includes a small component of fees paid by the Reserve Bank to the Primary Dealers as underwriting commission. This component decreased from ₹64.14 crore in 2009-10 to ₹36.76 crore in 2010-11 and constituted 1.22 per cent of the agency charges in 2010-11.

Table XI.2: Earnings from Foreign Sources

(₹ crore)

Item	As on		Variation	
	June 30, 2010	June 30, 2011	Absolute	Per cent
1	2	3	4	5
Average Foreign Currency Assets (FCA)	12,03,828.90	12,17,751.21	13,922.31	1.16
Earnings (Interest, Discount, Exchange gain/loss, Capital gain/loss on securities)	25,102.55	21,149.69	(-) 3,952.86	(-) 15.75
Earnings as percentage of Average FCA	2.09	1.74		

Table XI.3: Earnings from Domestic Sources

(₹ crore)

Item	As on		Variation	
	June 30, 2010	June 30, 2011	Absolute	Per cent
1	2	3	4	5
Domestic Assets	3,88,594.36	5,35,907.16	1,47,312.80	37.91
Weekly Average of Domestic Assets	2,25,373.78	4,22,033.42	1,96,659.64	87.26
Earnings	**7,781.59**	**15,920.43**	**8,138.84**	**104.59**
of which:				
Interest and Other Income	6,646.35	15,031.84	8,385.49	126.17
(i) Profit on Sale of Securities	8,667.27	3,091.15	(-) 5,576.12	(-) 64.34
(ii) Interest on Securities [a - b]	(-)2,435.08	11,165.65	13,600.73	-
of which				
(a) Interest on Domestic Securities, LAF operations and Dividend	13,027.82	22,321.67	9,293.85	71.34
(b) Depreciation on Securities	15,462.90	11,156.02	(-) 4,306.88	(-) 27.85
(iii) Interest on Loans and Advances	378.97	731.05	352.08	92.90
(iv) Other Interest Receipts	35.19	43.99	8.80	25.01
Other Earnings	1,135.24	888.59	(-) 246.65	(-)21.73
(i) Discount	-	-	-	-
(ii) Exchange	0.01	0.01	0.00	0.00
(iii) Commission	687.08	781.47	94.39	13.74
(iv) Rent realised and others	448.15	107.11	(-) 341.04	(-) 76.10
Memo:				
Earnings in percentage terms (on average domestic assets)	3.45	3.77	-	-

XI.11 The expenditure incurred on security printing charges (cheque, note forms, *etc.*) in 2010-11 decreased by ₹377.75 crore (13.72 per cent) to ₹2,376.37 crore. This decrease was mainly on account of less supply made by presses *vis-à-vis* indents made for notes in the denomination of ₹100 (20 per cent) and ₹1,000 (53 per cent) during 2010-11. Overall, the supply of notes was 7 per cent less than the indent.

Surplus transferable to the Government of India

XI.12 The surplus transferable to the Government of India for the year 2010-11 amounted to ₹15,009 crore. This included ₹1,322 crore payable to the Government towards the interest differential on special securities converted into marketable securities. The interest differential was paid for compensating the Government for the difference in interest expenditure which the Government had to

Table XI.4: Expenditure

(₹ crore)

Item	2006-07	2007-08	2008-09	2009-10	2010-11
1	2	3	4	5	6
I. Interest Payment	**1,135.38**	**2.58**	**1.33**	**1.02**	**55.06**
of which:					
Scheduled Banks	1,134.85	1.90*	0.00*	0.00*	0.00*
II. Establishment	**1,425.81**	**1,430.87**	**2,448.25**	**1,986.82**	**2,300.71**
III. Non-Establishment	**4,603.06**	**4,663.68**	**5,768.30**	**6,415.28**	**6,299.45**
of which:					
a) Agency charges	2,042.50	2,111.14	2,999.19	2,855.02	3,012.49
b) Security printing	2,020.89	2,032.23	2,063.17	2,754.12	2,376.37
Total [I+II+III]	**7,164.25**	**6,097.13**	**8,217.88**	**8,403.12**	**8,655.22**

* : Pursuant to amendment to the Reserve Bank of India Act, 1934, interest payable on eligible CRR balances was withdrawn with effect from fortnight beginning March 31, 2007. The amount in 2007-08 was paid towards interest on CRR balances relating to the previous year.

Table XI.5 : Trends in Gross Income, Expenditure and Net Disposable Income

(₹ crore)

Item	2006-07	2007-08	2008-09	2009-10	2010-11
1	2	3	4	5	6
Total Income (Gross)	**41,039.73** **(75,348.33) #**	**57,750.79**	**60,731.98**	**32,884.14**	**37,070.12**
Less transfer to:					
(i) Contingency Reserve	20,488.97	33,430.74	26,191.40	5,168.39	12,167.27
(ii) Asset Development Reserve	1,971.51	3,207.92	1,309.70	549.63	1,234.63
Total (i + ii)	22,460.48	36,638.66	27,501.10	5,718.02	13,401.90
Total Income (Net)	**18,579.25** **(52,887.85) #**	**21,112.13**	**33,230.88**	**27,166.12**	**23,668.22**
Total Expenditure	**7,164.25**	**6,097.13**	**8,217.88**	**8,403.12**	**8,655.22**
Net Disposable Income	11,415.00 (45,723.60) #	15,015.00	25,013.00	18,763.00	15,013.00
Less : Transfer to Funds *	4.00	4.00	4.00	4.00	4.00
Transfer of surplus to the Government	**11,411.00** **(45,719.60) #**	**15,011.00**	**25,009.00**	**18,759.00**	**15,009.00**

: Figures in parentheses indicate amounts including profit on sale of shares of the State Bank of India (SBI) divested on June 29, 2007.
* : An amount of ₹ one crore each has been transferred to the National Industrial Credit (Long Term Operations) Fund, National Rural Credit (Long Term Operations) Fund, National Rural Credit (Stabilisation) Fund and National Housing Credit (Long Term Operations) Fund during each of the five years.

bear consequent to conversion of such special securities. The position of income, expenditure and surplus transferred to the Government in the last five years is given in Table XI.5.

Internal Reserves

XI.13 Contingency Reserve 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 compulsions. 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 to the Asset Development Reserve. The amounts of transfer to the Contingency Reserve and the Asset Development Reserve and the surplus transferred to the Government as a percentage to the total income are set out in Table XI.6.

BALANCE SHEET

XI.14 The size of the overall balance sheet of the Reserve Bank increased noticeably during 2010-11

Table XI.6: Contingency and Asset Development Reserves and Surplus Transfer to the Government

(₹ crore)

Item	2006-07	2007-08	2008-09	2009-10	2010-11
1	2	3	4	5	6
Total Income (Gross)	**41,039.73 ***	**57,750.79**	**60,731.98**	**32,884.14**	**37,070.12**
Transfer to Contingency Reserve	20,488.97 (49.92)	33,430.74 (57.89)	26,191.40 (43.13)	5,168.39 (15.72)	12,167.27 (32.82)
Transfer to Asset Development Reserve	1,971.51 (4.80)	3,207.92 (5.55)	1,309.70 (2.16)	549.63 (1.67)	1,234.63 (3.33)
Transfer of Surplus to the Government	11,411.00 * (27.80)	15,011.00 (25.99)	25,009.00 (41.18)	18,759.00 (57.05)	15,009.00 (40.49)
Transfer of Surplus to the Government as percentage of Total Income (Gross) less Expenditure	33.69	29.06	47.62	76.63	52.82

* : Excluding profit on account of sale of shares of SBI.
Note: Figures in parentheses indicate proportion to the total income (gross).

due to increase in notes in circulation (liabilities of the Issue Department) and increase in the deposits of banks with the Reserve Bank (liabilities of the Banking Department). While the first component is demand driven, the second component changes in relation to growth in deposits as well as monetary policy changes, if any, effected through the instrument of CRR.

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 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 15.11 per cent during 2010-11, as compared with 20 per cent during 2009-10.

Issue Department - Assets

XI.16 In terms of the RBI Act, the eligible assets for the Issue Department consist of gold coin and bullion, foreign securities, rupee coin, Government securities and internal bills of exchange. The total holding of gold by the Reserve Bank stands at 557.75 metric tonnes. A part of gold stock is marked as assets of the Issue Department and reflected accordingly in the balance sheet of the Issue Department. The remaining stock of gold is reckoned as 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 ₹5 crore. The Bank was nationalised with effect from January 1, 1949 and the entire ownership is now vested in the Government of India. The paid-up capital continues to be ₹5 crore as per section 4 of the RBI Act.

b) Reserve Fund: The original Reserve Fund of ₹5 crore 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, ₹6,495 crore was credited to this Fund by way of gain on periodic revaluation of gold up to October 1990, thus taking it to ₹6,500 crore. Since then such valuation gain/loss is booked in the "Currency and Gold Revaluation Account" 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 ₹10 crore plus annual contributions by the Bank for financial assistance to eligible financial institutions. Since 1992-93, only a token amount of ₹1 crore 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 ₹50 crore plus annual contributions by the Bank thereafter for extending financial accommodation to the National Housing Bank. Since 1992-93, only a token amount of ₹1 crore 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 ₹1 crore is made each year to each of these two 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, NABARD, *etc.*, foreign central banks, international financial institutions, the balance in different accounts relating to the Employees' Provident Fund, Gratuity and Superannuation Funds.

f) Bills payable: This represents Demand Drafts (DDs) and Payment Orders 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 the major components of other liabilities. In terms of specific sub-heads, other liabilities include balances in Contingency Reserve (CR), Asset Development Reserve (ADR), Currency and Gold Revaluation Account (CGRA), Exchange Equalisation Account (EEA), Investment Revaluation Account (IRA) and also the surplus pending transfer to the Government and provision for outstanding expenses. Other liabilities increased from ₹3,28,809.36 crore as on June 30, 2010 to ₹4,14,197.15 crore as on June 30, 2011, mainly due to accretion to CGRA.

h) The CR and the ADR reflected in "Other Liabilities" are in addition to the 'Reserve Fund' of ₹6,500 crore 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 foreign currency assets 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 as the Currency and Gold Revaluation Account (CGRA). The balance in this account represents accumulated net gain on valuation of foreign currency assets and gold. During 2010-11, there was an increase of ₹63,152.06 crore in the CGRA, thus increasing its balance from ₹1,19,133.98 crore as on June 30, 2010 to ₹1,82,286.04 crore as on June 30, 2011. This reflected the increase in the value of gold as also appreciation of other currencies against the US dollar.

XI.19 The balance in the Exchange Equalisation Account (EEA) represents provision made for the exchange losses arising out of forward commitments. The balance in the EEA as on June 30, 2011 was ₹1.12 crore.

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 Investment Revaluation Account (IRA). The balance in IRA as on June 30, 2011 was ₹4,269.09 crore. The balances in CGRA, EEA and IRA are grouped under "Other Liabilities" in the balance sheet (Table XI.7).

Contingency Reserve

XI.21 The Reserve Bank maintains a Contingency Reserve (CR) to enable it to absorb unexpected and unforeseen contingencies. With transfer of ₹12,167.27 crore from the Reserve Bank's income to CR during 2010-11, the balance in CR increased to ₹1,70,727.87 crore as on June 30, 2011 from ₹1,58,560.60 crore as on June 30, 2010. The balance available in the CR is considered sufficient to meet contingent liabilities.

Asset Development Reserve

XI.22 To meet the internal capital expenditure and make investments in its subsidiaries and associate institutions, the Reserve Bank had created a separate Asset Development Reserve (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 set for CR and ADR taken together. In 2010-11, an amount of ₹1,234.63 crore was transferred from income to ADR raising its level from

Table XI.7: Balances in Currency and Gold Revaluation Account (CGRA), Exchange Equalisation Account (EEA) and Investment Revaluation Account (IRA)

(₹ crore)

As on June 30	CGRA	EEA	IRA
1	2	3	4
2007	21,723.52	9.68	–
2008	1,63,211.83	0.00	–
2009	1,98,842.03	26.98	–
2010	1,19,133.98	18.87	9,370.96
2011	1,82,286.04	1.12	4,269.09

Table XI.8 : Balances in Contingency Reserve and Asset Development Reserve

(₹ crore)

As on June 30	Balance in CR	Balance in ADR	Total	Percentage to total assets
1	2	3	4 (2+3)	5
2007	93,770.07	9,564.33	1,03,334.40	10.31
2008	1,27,200.81	12,772.25	1,39,973.06	9.57
2009	1,53,392.21	14,081.95	1,67,474.16	11.89
2010	1,58,560.60	14,631.58	1,73,192.18	11.15
2011	1,70,727.87	15,866.21	1,86,594.08	10.34

₹14,631.58 crore as on June 30, 2010 to ₹15,866.21 crore as on June 30, 2011. CR and ADR together constituted 10.34 per cent of the total assets of the Reserve Bank as on June 30, 2011 (Table XI.8). ADR now accounts for 0.88 per cent of the total assets of the 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. They are presented in the balance sheet in the 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.

Balances Held Abroad

XI.25 This represents foreign currency balances held abroad. This is part of Bank's foreign currency assets shown under assets of the Banking Department.

Foreign Currency Assets

XI.26 The foreign currency assets (FCA) comprise foreign securities and balances held abroad. The RBI Act provides the legal framework for deployment of the FCA as well as gold. FCA comprise deposits with other central banks, the Bank for International Settlements (BIS), foreign commercial banks, securities representing debt of sovereigns and supra-national institutions with residual maturity not exceeding 10 years 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 was mainly on account of appreciation of non-US dollar currency assets. The position of outstanding FCA and domestic assets over the last five years is given in Table XI.9.

XI.27 FCA form 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 although SDRs and the Reserve Tranche Position (RTP) form part of India's official reserves, these are held by the Government of India and therefore not reflected in the Reserve Bank's balance sheet.

XI.28 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 (₹62,559.91 crore). As on June 30, 2011, investments amounting to SDR 750 million (₹5,367.90 crore) have been made in notes issued under NAB.

XI.29 The Reserve Bank has agreed to invest up to an amount, the aggregate of which shall not exceed US$ 5 billion (₹22,360 crore), in the bonds issued by the India Infrastructure Finance Company (UK) Limited. As on June 30, 2011, the Reserve Bank had invested US$ 250 million (₹1,118 crore) in such bonds.

Table XI.9: Outstanding Foreign Currency and Domestic Assets

(₹ crore)

As on June 30	Foreign Currency Assets	Domestic Assets
1	2	3
2007	8,39,878.79	1,62,058.59
2008	12,98,552.05	1,64,431.13
2009	12,17,541.80	1,90,652.64
2010	11,64,431.33	3,88,594.36
2011	12,68,743.82	5,35,907.16

Table XI.10 : Foreign Exchange Reserves

(₹ crore)

Item	As on		Variation	
	June 30, 2010	June 30, 2011	Absolute	Per cent
1	2	3	4	5
Foreign Currency Assets (FCA)	11,64,431.33	12,68,743.82	1,04,312.49	8.96
Gold	92,704.13	1,10,317.23	17,613.10	19.00
Special Drawing Rights (SDR)	22,718.63	20,631.97	(-) 2,086.66	(-) 9.18
Reserve Position in the IMF*	6,117.62	13,302.68	7,185.06	117.45
Total Foreign Exchange Reserves (FER)	12,85,971.71	14,12,995.70	1,27,023.99	9.88

***:** Reserve 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.

Investment in Government of India Rupee Securities

XI.30 The investment in Government of India securities increased by ₹1,03,181.38 crore from ₹1,92,901.62 crore as on June 30, 2010 to ₹2,96,083.00 crore as on June 30, 2011, excluding the securities purchased (Repo) under the Liquidity Adjustment Facility (LAF). The increase was primarily on account of open market purchases by the Reserve Bank and disinvestment of surplus cash balance by the Government.

Investments in shares of subsidiaries and associate institutions

XI.31 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 ₹2,000 crore earlier held by the Reserve Bank, 71.5 per cent was transferred to Government of India at par on October 13, 2010. The Reserve Bank now holds one per cent of shareholding in NABARD (Table XI.11). Investments in shares are valued at cost.

Table XI.11 : Investments in Shares of Subsidiaries/Associate Institutions

(₹ crore)

Institution	Book value of shares held as on	
	June 30, 2010	June 30, 2011
1	2	3
1. Deposit Insurance and Credit Guarantee Corporation	50.00	50.00
2. National Bank for Agriculture and Rural Development	1,450.00	20.00
3. National Housing Bank	450.00	450.00
4. Bharatiya Reserve Bank Note Mudran (Pvt.) Ltd.	800.00	800.00
Total	**2,750.00**	**1,320.00**

Other Assets

XI.32 'Other Assets' comprise income accrued but not received, fixed assets (net of depreciation), gold holdings in the Banking Department, amounts spent on projects pending completion and staff advances, *etc*. The value of 'Other Assets' increased by ₹11,172.21 crore from ₹58,676.68 crore as on June 30, 2010 to ₹69,848.89 crore as on June 30, 2011 mainly on account of increase in the value of gold holdings by 19 per cent from ₹44,126.92 crore as on June 30, 2010 to ₹52,510.70 crore as on June 30, 2011.

Auditors

XI.33 The accounts of the Reserve Bank for the year 2010-11 were audited by M/s. V. Sankar Aiyar & Co., Mumbai and M/s. Jain Chowdhary & Co., Mumbai as the Statutory Central Auditors. Branch 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.

RESERVE BANK OF INDIA
BALANCE SHEET AS AT 30th JUNE 2011
ISSUE DEPARTMENT

(₹ Thousands)

2009-10	LIABILITIES		2010-11	2009-10	ASSETS		2010-11
	Notes held in the				Gold Coin and Bullion:		
32,61,51	Banking Department	15,14,26		48577,21,52	(a) Held in India	57806,52,57	
842008,36,40	Notes in Circulation	969261,23,85		–	(b) Held outside India	-	
				792300,92,96	Foreign Securities	910165,61,91	
842040,97,91	Total Notes Issued		969276,38,11	840878,14,48	Total		967972,14,48
				116,40,43	Rupee Coin		257,80,63
				1046,43,00	Government of India Rupee Securities		1046,43,00
				–	Internal Bills of Exchange and other Commercial Paper		–
842040,97,91	Total Liabilities		969276,38,11	842040,97,91	Total Assets		969276,38,11

BANKING DEPARTMENT

2009-10	LIABILITIES	2010-11	2009-10	ASSETS	2010-11
5,00,00	Capital paid-up	5,00,00	32,61,51	Notes	15,14,26
6500,00,00	Reserve Fund	6500,00,00	6,34	Rupee Coin	5,34
	National Industrial Credit		3,08	Small Coin	2,25
19,00,00	(Long Term Operations) Fund	20,00,00			
	National Housing Credit				
193,00,00	(Long Term Operations) Fund	194,00,00		Bills Purchased and Discounted :	
			–	(a) Internal	–
			–	(b) External	–
			–	(c) Government Treasury Bills	–
	Deposits				
	(a) Government		339226,34,23	Balances Held Abroad	303530,92,97
36457,41,08	(i) Central Government	100,51,30			
41,33,15	(ii) State Governments	42,44,43			
	(b) Banks		310068,81,35	Investments	458606,21,75
307759,41,00	(i) Scheduled Commercial Banks	381206,41,38			
4065,43,76	(ii) Scheduled State Co-operative Banks	3679,82,18			
4986,76,82	(iii) Other Scheduled Co-operative Banks	5755,36,42			
68,63,80	(iv) Non-Scheduled State Co-operative Banks	67,31,80			
9224,79,62	(v) Other Banks	10357,81,03			
12807,72,53	(c) Others	12430,75,91		Loans and Advances to :	
			–	(i) Central Government	770,00,00
			73,38,00	(ii) State Governments	76,51,00
79,45,62	Bills Payable	833,14,36		Loans and Advances to:	
			2623,17,00	(i) Scheduled Commercial Banks	1746,69,00
			–	(ii) Scheduled State Co-operative Banks	–
			41,00,00	(iii) Other Scheduled Co-operative Banks	–
			–	(iv) Non-Scheduled State Co-operative Banks	–
			–	(v) NABARD	–
			275,22,98	(vi) Others	795,28,48
328809,35,60	Other Liabilities	414197,15,13		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	–
			–	(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	–
			58676,68,49	Other Assets	69848,88,89
711017,32,98	Total Liabilities	835389,73,94	711017,32,98	Total Assets	835389,73,94

Significant Accounting Policies and Notes to the Accounts as per the Annex.

PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 30th JUNE 2011

(₹ thousands)

2009-10	INCOME		2010-11
27166,12, 24	**Interest, Discount, Exchange, Commission**, *etc.*[1]		23668,21,72
27166,12,24	**Total**		23668,21,72
	EXPENDITURE		
1,01,60	**Interest**		**55,06,44**
1986,82,29	**Establishment**		**2300,70,71**
2,08,15	**Directors' and Local Board Members' Fees and Expenses**		**2,29,61**
37,12,10	**Remittance of Treasure**		**45,52,77**
2855,02,06	**Agency Charges**		**3012,48,83**
2754,12,35	**Security Printing (Cheque, Note forms, *etc.*)**		**2376,37,20**
26,58,89	**Printing and Stationery**		**23,32,59**
42,48,93	**Postage and Telecommunication Charges**		**71,84,43**
85,15,56	**Rent, Taxes, Insurance, Lighting, *etc.***		**85,50,27**
2,51,17	**Auditors' Fees and Expenses**		**3,13,86**
2,75,54	**Law Charges**		**3,26,84**
274,21,93	**Depreciation and Repairs to Bank's Property**		**243,91,95**
333,21,67	**Miscellaneous Expenses**		**431,76,22**
8403,12,24	**Total**		**8655,21,72**
18763,00,00	**Available Balance**		**15013,00,00**
	Less: Contribution To:		
	National Industrial Credit (Long Term Operations) Fund	1,00,00	
	National Rural Credit (Long Term Operations) Fund 2	1,00,00	
	National Rural Credit (Stabilisation) Fund 2	1,00,00	
	National Housing Credit (Long Term Operations) Fund	1,00,00	
4,00,00			**4,00,00**
18759,00,00	**Surplus payable to the Central Government**		**15009,00,00**

1. After making the usual or necessary provisions in terms of section 47 of the Reserve Bank of India Act, 1934 amounting to ₹13401,90,26 thousands (2009-10 - ₹5718,01,83 thousands).
2. These funds are maintained by the National Bank for Agriculture and Rural Development (NABARD).

A.K. Bera	**H.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, 2011 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, 2011 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. The branch audit reports have been furnished to us which we have considered in preparing our report.

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 11, 2011
Place: Mumbai

ANNEX

RESERVE BANK OF INDIA

SIGNIFICANT ACCOUNTING POLICIES AND NOTES TO THE ACCOUNTS FOR THE YEAR 2010-11

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 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 preceding week/preceding month/ year-end as applicable.

3. GOLD AND FOREIGN CURRENCY ASSETS AND LIABILITIES

(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 adjusted 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, assets and liabilities in foreign currencies 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 evaluated half-yearly and net loss, if any, is provided for.

Foreign securities other than Treasury Bills are valued at market price prevailing on the last business day of each month. The 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 opening day of the succeeding financial year.

Foreign Treasury Bills and Commercial Papers are carried at cost as adjusted by amortization 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, except in the case of foreign dated securities, where 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. The depreciation in the value, if any, is adjusted against current interest income.

Treasury Bills are valued at cost.

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 ₹1 lakh and above), motor vehicles, furniture, *etc.* is provided on straight-line basis at the following rates.

Asset Category	Rate of depreciation
Motor vehicles, furniture, *etc.*	20 per cent
Computers, Microprocessors, Software, *etc.*	33.33 per cent

Depreciation on leasehold land and building is provided on written-down value basis at the following rates.

Asset Category	Rate of 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 ₹1 lakh (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.

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 value of securities, exchange guarantees and risks arising out of monetary / exchange rate policy compulsions.

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 ₹1,322.00 crore (previous year – ₹1,407.00 crore) representing interest differential pertaining to the period April 1, 2010-March 31, 2011 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 ₹10,066.55 crore (previous year ₹9,466.68 crore) 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 ₹5.00 crore made by the Government of India and appreciation of ₹6,495.00 crore 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 Government of the Union Territory of Puducherry.

(b) Others

(₹ crore)

Particulars	As on June 30	
	2010	2011
1	2	3
I. Rupee Deposits from the Foreign Central Banks and the Foreign Financial Institutions	3,246.36	725.23
II. Deposits from the Indian Financial Institutions	516.33	198.94
III. Accumulated Retirement Benefits	8,817.13	9,401.14
IV. Miscellaneous	227.91	2,105.45
Total	**12,807.73**	**12,430.76**

5. DETAILS OF OTHER LIABILITIES

(₹ crore)

Particulars	As on June 30	
	2010	2011
1	2	3
I. Contingency Reserve		
Balance at the beginning of the year	1,53,392.21	**1,58,560.60**
Add: Accretion during the year	5,168.39	12,167.27
Balance at the end of the year	1,58,560.60	**1,70,727.87**
II. Asset Development Reserve		
Balance at the beginning of the year	14,081.95	**14,631.58**
Add: Accretion during the year	549.63	1,234.63
Balance at the end of the year	14,631.58	**15,866.21**
III. Currency And Gold Revaluation Account		
Balance at the beginning of the year	1,98,842.03	**1,19,133.98**
Add: Net Accretion (+)/Net Depletion (-) during the year	(-) 79,708.05	63,152.06
Balance at the end of the year	1,19,133.98	**1,82,286.04**
IV. Investment Revaluation Account		
Balance at the beginning of the year	–	**9,370.96**
Add: Net Accretion (+)/Net Utilization (-) during the year	9,370.96	(-)5,101.87
Balance at the end of the year	9,370.96	**4,269.09**
V. Exchange Equalisation Account		
Balance at the beginning of the year	26.98	**18.87**
Transfer from Exchange account	18.87	1.12
Add: Net Accretion (+)/Net Utilization (-) during the year	(-) 26.98	(-) 18.87
Balance at the end of the year	18.87	**1.12**
VI. Settlement Liabilities	-	**16,688.64**
VII. Provision for Outstanding Expenses	1,548.02	**1,517.53**
VIII. Surplus Transferable to the Government of India	18,759.00	**15,009.00**
IX. Miscellaneous	6,786.35	**7,831.65**
Total (I to IX)	**3,28,809.36**	**4,14,197.15**

6. EMPLOYEE BENEFITS

In accordance with the Accounting Standard (AS) 15 – Employee Benefits (Revised), the liability for long term employee benefits has been ascertained under the 'Projected Unit Credit' method and provided for in the accounts.

7. RBI GENERAL ACCOUNT

'Other Assets' include ₹17.19 crore (corresponding figure in previous year was ₹18.37 crore) 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.

8. 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 ₹1,04,690.00 crore (previous year ₹78,630.00 crore) and ₹2,600.00 crore (previous year ₹20.00 crore) respectively.

9. DETAILS OF FOREIGN CURRENCY ASSETS

(₹ crore)

Particulars	As on June 30	
	2010	2011
1	2	3
I. Held in Issue Department	7,92,300.93	9,10,165.62
II. Held in Banking Department		
(a) Included in Investments	32,904.06	55,047.27
(b) Balances Held Abroad	3,39,226.34	3,03,530.93
Total	**11,64,431.33**	**12,68,743.82**

Note :

1. Uncalled amount on partly paid shares of the Bank for International Settlements (BIS) as on June 30, 2011 was ₹ 86.18 crore (SDR 1,20,41,250). The amount was ₹82.98 crore (SDR 1,20,41,250) in the previous year.
2. RBI has agreed to make resources available under the IMF's New Arrangements to Borrow (NAB) {which subsumes the earlier commitment of US$ 10 billion (₹46,600 crore) under the Note Purchase Agreement} up to a maximum amount of SDR 8,740.82 million (₹62,559.91 crore). As on June 30, 2011, investments amounting to SDR 750 million (₹5,367.90 crore) have been made under the NAB.
3. RBI has agreed to invest up to an amount, the aggregate of which shall not exceed US dollar 5 billion (₹22,360 crore), in the bonds issued by India Infrastructure Finance Company (UK) Limited. Presently, RBI has invested US dollar 250 million (₹1,118 crore) in such bonds.

10. DETAILS OF OTHER ASSETS

(₹ crore)

Particulars	As on June 30	
	2010	2011
1	2	3
I. Fixed Assets (net of accumulated depreciation)	516.08	488.28
II. Gold	44,126.92	52,510.70
III. Income accrued but not received	12,969.29	15,901.04
IV. Miscellaneous	1,064.39	948.87
Total	**58,676.68**	**69,848.89**

11. INTEREST, DISCOUNT, EXCHANGE, COMMISSION, *etc.*

Interest, Discount, Exchange, Commission, *etc.* include the following:

(₹ crore)

Particulars	Year ended	
	June 30, 2010	June 30, 2011
1	2	3
I. Profit on sale of Foreign and Rupee Securities	14,764.45	5,537.29
II. Net profit on sale of Bank's Property	1.87	2.93

12. AUDITORS' FEES

Out of total Auditors' Fees and Expenses of ₹3.14 crore, a sum of ₹24.00 lakh was paid to the Bank's Statutory Auditors as audit fees for audit of the Bank's accounts.

13. Previous year's figures have been regrouped / reclassified, wherever necessary, to conform to current year's presentation.

ANNEX I

LIST OF SPEECHES BY GOVERNOR AND DEPUTY GOVERNORS: APRIL 2010 TO AUGUST 2011

Sr. No.	Title of Speech	Speech by	Date
1	2	3	4
1.	Looking Back and Looking Ahead	Dr. Duvvuri Subbarao, Governor	April 1, 2010
2.	Silver Jubilee Function of Institute of Banking Personnel Selection	Dr. K. C. Chakrabarty, Deputy Governor	April 2, 2010
3.	The Economics of Ecosystems and Biodiversity Workshop	Smt. Usha Thorat, Deputy Governor	April 13, 2010
4.	Statement at the IMFC	Dr. Duvvuri Subbarao, Governor	April 24, 2010
5.	India and the Global Financial Crisis: Transcending from Recovery to Growth	Dr. Duvvuri Subbarao, Governor	April 26, 2010
6.	New Paradigms in IT Security in Indian Banks	Dr. K. C. Chakrabarty, Deputy Governor	April 26, 2010
7.	Keynote Address at Review Meet on Implementation of Revival Package for Short-term Rural Co-operative Credit Structure	Dr. K. C. Chakrabarty, Deputy Governor	April 29, 2010
8.	Volatility in Capital Flows: Some Perspectives	Dr. Duvvuri Subbarao, Governor	May 11, 2010
9.	Bank Credit to MSMEs: Present Status and Way Forward	Dr. K. C. Chakrabarty, Deputy Governor	May 21, 2010
10.	RBI Archives – Way Forward	Dr. Duvvuri Subbarao, Governor	June 1, 2010
11.	Financial Regulation and Financial Inclusion – Working Together at Cross-purposes	Smt. Usha Thorat, Deputy Governor	June 2, 2010
12.	Financial Deepening by Putting Financial Inclusion Campaign into Mission Mode	Dr. K. C. Chakrabarty, Deputy Governor	June 17, 2010
13.	Harnessing Technology to Bank the Unbanked	Dr. Duvvuri Subbarao, Governor	June 18, 2010
14.	Banking Technology Beyond CBS: Issues and Way Forward	Dr. K. C. Chakrabarty, Deputy Governor	July 2, 2010
15.	Over-the-counter Derivative Markets in India – Issues and Perspectives	Smt. Shyamala Gopinath, Deputy Governor	July 28, 2010
16.	Macroprudential Approach to Regulation – Scope and Issues	Smt. Shyamala Gopinath, Deputy Governor	August 4, 2010
17.	Financial Crisis – Some Old Questions and Maybe Some New Answers	Dr. Duvvuri Subbarao, Governor	August 5, 2010
18.	Securitisation Markets in India – A Post-Crisis Perspective	Smt. Shyamala Gopinath, Deputy Governor	August 10, 2010
19.	Economic Crisis and Crisis in Economics – Some Reflections	Dr. Duvvuri Subbarao, Governor	August 27, 2010
20.	Technology in Banking: An Instrument for Economic Growth	Dr. K. C. Chakrabarty, Deputy Governor	September 3, 2010
21.	Post-crisis Reforms to Banking Regulation and Supervision – Think Global, Act Local	Dr. Duvvuri Subbarao, Governor	September 7, 2010
22.	Setting New Paradigm in Regulation	Smt. Usha Thorat, Deputy Governor	September 8, 2010
23.	Banking Transactions in the Next Decade: Faster, Cheaper and Easier	Dr. K. C. Chakrabarty, Deputy Governor	September 8, 2010
24.	Preparing Indian Banks for Global Competitiveness: Strategic and Policy Perspectives	Dr. Subir Gokarn, Deputy Governor	September 9, 2010
25.	Perspectives on Financial Sector Strategy	Dr. Subir Gokarn, Deputy Governor	September 20, 2010
26.	Managing the Growth-Inflation Balance in India: Current Considerations and Long-term Perspectives	Dr. Subir Gokarn, Deputy Governor	October 5, 2010
27.	Emerging Market Economies Leading Global Growth	Dr. Duvvuri Subbarao, Governor	October 9, 2010
28.	The Price of Protein	Dr. Subir Gokarn, Deputy Governor	October 26, 2010
29.	Frontier Issues on the Global Agenda: Need for Global Co-operation	Dr. Duvvuri Subbarao, Governor	October 27, 2010
30.	G-20 After the Crisis: An Indian Perspective	Dr. Subir Gokarn, Deputy Governor	October 27, 2010
31.	Developing the Humanware to Improve Customer Service	Dr. K. C. Chakrabarty, Deputy Governor	November 12, 2010
32.	Readers' Interview	Dr. Duvvuri Subbarao, Governor	November 18, 2010
33.	Inaugural Remarks at the Opening of Inter-bank Mobile Payment Service	Smt. Shyamala Gopinath, Deputy Governor	November 22, 2010
34.	Inclusive Growth: Role of Financial Sector	Dr. K. C. Chakrabarty, Deputy Governor	November 27, 2010
35.	Monetary Policy Considerations after the Crisis: Practitioners' Perspectives	Dr. Subir Gokarn, Deputy Governor	December 1, 2010

LIST OF SPEECHES BY GOVERNOR AND DEPUTY GOVERNORS: APRIL 2010 TO AUGUST 2011

Sr. No.	Title of Speech	Speech by	Date
1	2	3	4
36.	Five Frontier Issues in Indian Banking	Dr. Duvvuri Subbarao, Governor	December 3, 2010
37.	Mint Road Milestones	Dr. Duvvuri Subbarao, Governor	December 8, 2010
38.	Prospects for Economic Growth and the Policy Imperatives for India	Dr. K. C. Chakrabarty, Deputy Governor	December 10, 2010
39.	Dilemmas in Central Bank Communication: Some Reflections Based on Recent Experience	Dr. Duvvuri Subbarao, Governor	January 7, 2011
40.	Centrality of Banks in the Financial System	Smt. Shyamala Gopinath, Deputy Governor	January 8, 2011
41.	Emerging Trends in Payment Systems and Challenges	Dr. K. C. Chakrabarty, Deputy Governor	January 19, 2011
42.	Implications of the Expansion of Central Bank Balance Sheets	Dr. Duvvuri Subbarao, Governor	January 31, 2011
43.	Welcome Remarks: Third P. R. Brahmananda Memorial Lecture	Dr. Duvvuri Subbarao, Governor	February 11, 2011
44.	Introduction of IFRS – Issues and Challenges	Dr. K. C. Chakrabarty, Deputy Governor	February 11, 2011
45.	Beyond CBS: Fast Forward to Banking 2.0!	Dr. K. C. Chakrabarty, Deputy Governor	February 18, 2011
46.	Approach to Capital Account Management – Shifting Contours	Smt. Shyamala Gopinath, Deputy Governor	February 18, 2011
47.	The Reserve Bank of India Making a Difference in Your Daily Life	Dr. Duvvuri Subbarao, Governor	February 24, 2011
48.	Banking and Beyond: New Challenges before Indian Financial System	Dr. K. C. Chakrabarty, Deputy Governor	March 15, 2011
49.	Financial Inclusion: A Consumer-centric View	Dr. Subir Gokarn, Deputy Governor	March 21, 2011
50.	Frontier Issues on the Global Agenda: Emerging Economy Perspective	Dr. Duvvuri Subbarao, Governor	March 29, 2011
51.	Linking Entrepreneurship with Credit - The Role of Financial System	Dr. K. C. Chakrabarty, Deputy Governor	April 4, 2011
52.	Sustainability of Economic Growth and Controlling Inflation: The Way Forward	Dr. Subir Gokarn, Deputy Governor	April 5, 2011
53.	The Global Economy and Framework	Dr. Duvvuri Subbarao, Governor	April 15, 2011
54.	Statement at IMFC	Dr. Duvvuri Subbarao, Governor	April 16, 2011
55.	Global Challenges, Global Solutions: Some Remarks	Dr. Duvvuri Subbarao, Governor	April 16, 2011
56.	Regulatory Perspectives on Derivatives Markets in India	Dr. Subir Gokarn, Deputy Governor	May 4, 2011
57.	Central Bank Governance Issues! Some RBI Perspectives	Dr. Duvvuri Subbarao, Governor	May 9, 2011
58.	Policy Discipline and Spillovers in an Inter-connected Global Economy	Dr. Duvvuri Subbarao, Governor	May 10, 2011
59.	Banking on Technology	Shri Anand Sinha, Deputy Governor	May 13, 2011
60.	Talent Acquisition and Management	Dr. K. C. Chakrabarty, Deputy Governor	May 31, 2011
61.	Macroprudential Policies: Indian Experience	Shri Anand Sinha, Deputy Governor	June 2, 2011
62.	Non-financial Reporting - What, Why and How - Indian Perspective	Dr. K. C. Chakrabarty, Deputy Governor	June 6, 2011
63.	Financial Stability Mandate of Central Banks: Issues in the International and Indian Context	Dr. Duvvuri Subbarao, Governor	June 10, 2011
64.	Challenges and Opportunities in a Trillion Dollar Economy	Dr. K. C. Chakrabarty, Deputy Governor	June 17, 2011
65.	Mutual Funds and Market Development in India	Dr. Subir Gokarn, Deputy Governor	June 22, 2011
66.	India and the Global Financial Crisis: What Have We Learnt?	Dr. Duvvuri Subbarao, Governor	June 23, 2011
67.	Economic Reforms for Sustainable Growth	Dr. Subir Gokarn, Deputy Governor	June 23, 2011
68.	Challenges for Next Generation Banking	Dr. K. C. Chakrabarty, Deputy Governor	June 25, 2011
69.	Striking the Balance between Growth and Inflation in India	Dr. Subir Gokarn, Deputy Governor	June 27, 2011
70.	Connecting the Dots	Dr. K. C. Chakrabarty, Deputy Governor	June 28, 2011
71.	Statistics in the World of RBI	Dr. Duvvuri Subbarao, Governor	July 5, 2011
72.	Technology in Banking – In pursuit of Excellence	Shri Anand Sinha, Deputy Governor	August 4, 2011
73.	Indian Education System – Issues and Challenges	Dr. K. C. Chakrabarty, Deputy Governor	August 5, 2011

ANNEX II

VISITS OF FOREIGN DELEGATIONS TO THE RESERVE BANK OF INDIA DURING JULY 01, 2010 TO JUNE 30, 2011

Sr. No.	Date of Meeting	Foreign Delegates/Delegation	RBI Executives
1	2	3	4
1.	July 09, 2010	Senator Christopher J. Dodd, U.S. Senator, Chairman of the Banking, Housing and Urban Affairs Committee.	Dr. D. Subbarao, Governor, Smt. Shyamala Gopinath, Deputy Governor, Anand Sinha, Executive Director.
2.	July 18, 2010	The Rt. Hon. George Osborne, UK Chancellor of the Exchequer.	Dr. D. Subbarao, Governor, Smt. Shyamala Gopinath, Smt. Usha Thorat, Dr. K. C. Chakrabarty and Dr. Subir Gokarn, Deputy Governors, S/Shri V. K. Sharma, C. Krishnan, Anand Sinha, V. S. Das, G. Gopalakrishna, H. R. Khan and Deepak Mohanty, Executive Directors, and Smt. Grace Koshie, Chief General Manager & Secretary.
3.	August 10, 2010	Lord Megnad Desai and Mr. David Wayne Marsh, SCCO International, London, UK.	Dr. D. Subbarao, Governor, Dr. Subir Gokarn, Deputy Governor, S/Shri H. R. Khan and Deepak Mohanty, Executive Directors
4.	August 25, 2010	Ms. Subrino Chow, Director, Hong Kong Economic & Trade Office in Singapore, Government of the Hong Kong Special Administrative Region.	Smt. Grace Koshie, Chief General Manager & Secretary.
5.	September 06, 2010	Mr. Song Xuejun, Commercial Consul, Chinese Consulate and Head of the Economic and Commercial Section and Mr. Sun Xiang, Head of the Industrial and Commercial Bank of China preparatory working team.	Smt. Usha Thorat, Deputy Governor.
6.	September 07, 2010	Lord James Sassoon, Commercial Secretary to the Treasury, UK.	Smt. Usha Thorat, Deputy Governor.
7.	September 09, 2010	Mr. Robert D. Hormats, Under Secretary, Economic, Energy and Agricultural Affairs, USA.	Dr. Subir Gokarn, Deputy Governor, Shri Deepak Mohanty, Executive Director.
8.	October 20, 2010	Delegation from the State of Guernsey led by Ms Carla McNutty Bauer, Minister, Commerce & Employment, Guernsey Government.	Shri Deepak Mohanty, Executive Director.
9.	October 27, 2010	Mr. Rundeersing Bheenick, Governor of Bank of Mauritius.	Dr. D. Subbarao, Governor.
10.	October 28, 2010	Canadian delegation led by Mr. Michael R. P. Rayfield, Vice Chair, Investment and Corporate Banking, BMO Capital Markets.	Dr. Subir Gokarn, Deputy Governor, S/Shri Anand Sinha, H. R. Khan and Deepak Mohanty, Executive Directors.
11.	October 28, 2010	High level delegation of the European Parliament led by Mr. Jose Manuel Garcia-Margallo Y Marfil, Member of the European Parliament (EPP), Vice President of the Committee on Economic and Monetary Affairs Committee.	Dr. Subir Gokarn, Deputy Governor, Shri Anand Sinha, Executive Director.
12.	October 29, 2010	The Lord Mayor of the City of London, Alderman Nick Anstee and his delegation, UK.	Smt. Shyamala Gopinath and Smt. Usha Thorat, Deputy Governors, S/Shri Anand Sinha, H. R. Khan and Deepak Mohanty, Executive Directors.
13.	November 03, 2010	Mr. C. Lawrence Greenwood, Vice President, Asian Development Bank.	Dr. Subir Gokarn, Smt. Shyamala Gopinath, Deputy Governors, S/Shri V. K. Sharma, H. R. Khan, Deepak Mohanty, Executive Directors.
14.	November 11, 2010	Consortium of Cooperative Banks from the Trentino region in Italy called ASDIR.	Shri V. K. Sharma, Executive Director.
15.	November 22, 2010	Mr. Edgardo Torija-Zane, Economist responsible for the emerging Asia macroeconomic scenario at the Economic Research Department of Natixis.	Shri Deepak Mohanty, Executive Director.

Sr. No.	Date	Foreign Delegates/Delegation	RBI Executives
1	2	3	4
16.	November 29, 2010	Young Parliamentary Delegation from Australia.	Smt. Shyamala Gopinath, Deputy Governor, S/Shri Anand Sinha and Deepak Mohanty, Executive Directors.
17.	November 30, 2010	Mr. John Clark, Sr. Vice President, Federal Reserve Bank of New York's Emerging Group.	Shri Deepak Mohanty, Executive Director.
18.	December 14, 2010	Mr. Anil Kakani, Sr. Adviser for India, US Treasury Department.	Dr. Subir Gokarn, Deputy Governor.
19.	January 18, 2011	BBVA delegation headed by Mr. Francisco Gonzalez, Chairman and CEO of BBVA, Spain.	Smt. Shyamala Gopinath, Deputy Governor, S/ Shri Anand Sinha and Deepak Mohanty, Executive Directors.
20.	February 11, 2011	U.S. Secretary of Commerce Gary Locke and his delegation.	Dr. D. Subbarao, Governor, Dr. K. C. Chakrabarty, Dr. Subir Gokarn and Shri Anand Sinha, Deputy Governors, S/Shri H. R. Khan and Deepak Mohanty, Executive Directors.
21.	February 11, 2011	Prof. Stanley Fischer, Governor, Bank of Israel.	Dr. D. Subbarao, Governor, Dr. K. C. Chakrabarty, Dr. Subir Gokarn and Shri Anand Sinha, Deputy Governors.
22.	February 22, 2011	Mr. Seiji Nakamura, Member of Policy Board, Bank of Japan.	Dr. D. Subbarao, Governor, Shri Anand Sinha, Deputy Governor and Shri Deepak Mohanty, Executive Director.
23.	February 25, 2011	11 Congressional Staffers from U.S.	Smt. Shyamala Gopinath, Deputy Governor, S/Shri H. R. Khan and Deepak Mohanty, Executive Directors.
24.	February 28, 2011	Mr. Jiang Jianquing, Chairman of Board of ICBC, China and his delegation.	Dr. D. Subbarao, Governor and Shri Anand Sinha, Deputy Governor.
25.	March 03, 2011	Ms. Lael Brainard, Under Secretary for International Affairs, USA.	Dr. D. Subbarao, Governor, Dr. Subir Gokarn, Deputy Governor, Shri Deepak Mohanty, Executive Director and Shri Chandan Sinha, Regional Director, RBI, New Delhi.
26.	March 16, 2011	Lord Stephen Green, Minister of State for Trade and Investment, UK.	Dr. D. Subbarao, Governor and Shri Anand Sinha, Deputy Governor.
27.	March 18, 2011	Macroeconomic analysis team of Agence Francaise Development (AFD), France.	Shri K. U. B. Rao, Officer-in-Charge and other senior officers from Department of Economic and Policy Research.
28.	March 29, 2011	Mr. Russel Green, Treasury Attaché, U. S. Treasury and Consulate.	Mr. H. R. Khan, Executive Director.
29.	March 31, 2011	H.E. Dr. Yuval Steinitz, Minister of Finance, Israel.	Dr. D. Subbarao, Governor.
30.	April 26, 2011	Mr. Akitaka Saiki, Ambassador of Japan to India.	Dr. D. Subbarao, Governor.
31.	April 26, 2011	Mr. Florent Dauba, Economic Attaché, Consulate General of France and Economic Service of Bombay.	Shri H. R. Khan, Executive Director.
32.	May 09, 2011	Canadian delegation of eight Assistant Deputy Ministers under Canada's Advanced Leadership Program (ALP).	Shri Anand Sinha, Deputy Governor,S/Shri G. Gopalakrishna, H. R. Khan and Deepak Mohanty, Executive Directors.
33.	May 16, 2011	Dr. Ngozi Okonjo-Iweale, Managing Director of World Bank.	Dr. D. Subbarao, Governor, Dr. K. C. Chakrabarty, Dr. Subir Gokarn, Shri Anand Sinha, Deputy Governors and Shri V. K. Sharma, Executive Director.
34.	June 14, 2011	H.E. Mr. Pierre Vaesen, Ambassador of Belgium to India.	Dr. D. Subbarao, Governor.
35.	June 14, 2011	Mr. Spencer Dale, Chief Economist at Bank of England.	Dr. Subir Gokarn, Deputy Governor.
36.	June 16, 2011	Sir Richard Stagg, High Commissioner, UK.	Dr. D. Subbarao, Governor.
37.	June 17, 2011	Mr. Freddy Svane, Danish Ambassador	Dr. D. Subbarao, Governor.
38.	June 27, 2011	Mr. Michael C. Camunez, U. S. Assistant Secretary of Commerce for Market Access and Compliance (MAC).	Shri B. Mahapatra, Executive Director.

APPENDIX TABLE 1: MACROECONOMIC AND FINANCIAL INDICATORS

Item	Average 1990-91 to 1999-2000 (10 years)	Average 2000-01 to 2009-10 (10 years)	Average 2003-04 to 2007-08 (5 years)	2008-09	2009-10	2010-11
1	2	3	4	5	6	7
I. Real Economy						
I.1 Overall Real GDP (% change)	5.7	7.3	8.9	6.8	8.0 QE	8.5 RE
a) Agriculture (% change)	3.2	2.4	5.0	-0.1	0.4	6.6
b) Industry (% change)	5.7	7.3	9.0	4.0	8.3	7.8
of which :						
Manufacturing (% change)	5.6	8.0	10.0	4.2	8.8	8.3
c) Services (% change)	7.1	9.0	10.1	9.5	9.7	9.2
Demand Side Aggregates						
d) Final Consumption Expenditure (% change)	5.0	6.3	7.2	8.2	8.7	8.0
of which :						
PFCE (% change)	4.8	6.4	7.4	7.7	7.3	8.6
GFCE (% change)	6.3	5.8	5.6	10.7	16.4	4.8
e) Gross Fixed Capital Formation (% change)	7.2	10.2	15.7	1.5	7.3	8.6
I.2 Share in GDP						
a) Agriculture (%)	28.4	19.4	18.9	15.7	14.6	14.4
b) Industry (%)	20.1	20.0	20.1	20.1	20.2	20.0
c) Services (%)	51.5	60.6	61.1	64.2	65.2	65.6
I.3 Foodgrains Production (Million tonnes)	188.6	210.5	213.6	234.5	218.1	241.6
of which :						
Rice	80.1	89.2	90.7	99.2	89.1	95.3
Wheat	63.9	73.4	72.9	80.7	80.8	85.9
Pulses	13.5	13.5	14.1	14.6	14.7	18.1
I.4 Commercial Crops (Million tonnes) $	308.0	341.9	347.9	345.4	353.3	414.3
of which :						
Oilseeds	21.3	23.8	26.3	27.7	24.9	31.1
Sugarcane	265.5	289.9	291.2	285.0	292.3	339.2
I.5 Food Stocks (Million tonnes)						
a) Procurement	23.3	42.0	38.4	55.3	58.0	56.8
b) Off-take	20.6	39.5	41.5	39.5	48.9	52.9
c) Stocks at end-March	19.3	30.1	18.6	35.6	43.4	44.4
I.6 Index of Industrial Production (% change)	6.3	7.4	12.4	2.5	5.3	8.2
Sectoral						
a) Mining	3.4	4.3	4.0	2.6	7.9	5.2
b) Manufacturing	6.5	8.0	14.5	2.5	4.8	9.0
c) Electricity	7.0	4.8	6.3	2.7	6.1	5.5
Use-Based						
d) Basic Goods	6.3	5.6	8.0	1.7	4.7	6.0
e) Capital Goods	5.5	13.3	30.0	11.3	1.0	14.8
f) Intermediate Goods	7.5	6.2	8.5	0.0	6.0	7.4
g) Consumer Goods	5.9	8.2	14.8	0.9	7.7	8.6
I.7 Core Infrastructure Industries (% change)	6.3	5.5	5.8	2.8	6.6	5.8
I.8 Gross Domestic Saving Rate (% of GDP)	23.0	30.7	33.3	32.2	33.7 QE	_
of which :						
Household	17.7	23.1	23.5	23.8	23.5	–
Private Corporate	3.8	6.3	7.4	7.9	8.1	–
Public	1.5	1.3	2.4	0.5	2.1	–
I.9 Gross Domestic Investment Rate (% of GDP)	24.4	31.2	34.3	34.5	36.5 QE	–
II. Prices						
II.1 Wholesale Price Index Annual Average (% change)						
All Commodities	8.1	5.4	5.5	8.1	3.8	9.6
All Commodities-Point to Point	–	–	–	1.6	10.4	9.7
Primary Articles	9.4	6.4	6.0	11.0	12.7	17.7
of which :						
Food Articles	10.2	5.8	5.2	9.1	15.3	15.6
Non-food Articles	8.3	6.1	5.5	12.9	5.5	22.3
Fuel and Power	10.6	8.9	7.3	11.6	-2.1	12.3
Manufactured Products	7.1	4.1	5.0	6.2	2.2	5.7
of which :						
Food Products	8.6	4.7	4.8	8.7	13.5	3.7
Non-Food Products	6.8	4.0	5.0	5.7	0.2	6.1

APPENDIX TABLE 1: MACROECONOMIC AND FINANCIAL INDICATORS *(Contd.)*

Item	Average 1990-91 to 1999-2000 (10 years)	Average 2000-01 to 2009-10 (10 years)	Average 2003-04 to 2007-08 (5 years)	2008-09	2009-10	2010-11
1	2	3	4	5	6	7
II.2 Consumer Price Index (CPI) (Average % Change)						
a) CPI- Industrial Workers	9.5	5.9	5.0	9.1	12.4	10.4
of which :						
CPI- Industrial Workers Food	9.8	6.2	5.5	12.3	15.2	9.9
b) CPI- Agricultural Labourers	9.3	5.4	5.1	10.2	13.9	10.0
III. Money and Credit						
III.1 Reserve Money (M_0) (% change)	13.9	15.4	20.4	6.4	17.0	19.1
Adjusted Reserve Money (% change)	–	–	–	19.0	12.9	18.2
a) Currency in Circulation (% change)	15.2	15.1	15.9	17.0	15.7	18.8
b) Bankers' Deposits with RBI (% change)	11.5	17.9	33.1	-11.3	21.0	20.2
III.2 Narrow Money (M_1) (% change)	15.6	16.0	19.6	9.0	18.2	9.8
III.3 Broad Money (M_3) (% change)	17.2	17.5	18.6	19.3	16.8	16.0
a) Currency with Public (% change)	15.2	15.1	15.9	17.1	15.3	19.1
b) Bank Credit to Commercial Sector (% of GDP)	28.7	42.9	44.5	54.0	53.3	53.8
c) Bank Credit to Government (% of GDP)	22.7	23.1	21.5	22.9	25.5	25.2
d) Currency-Deposit Ratio (%)	23.1	18.3	18.3	16.1	15.9	16.4
e) Money Multiplier	3.4	4.5	4.7	4.9	4.8	4.7
III.4 Scheduled Commercial Banks						
a) Aggregate Deposits (% change)	17.2	18.1	19.0	19.9	17.2	15.9
b) Time Deposits (% change)	17.4	18.5	18.5	23.9	16.2	18.7
c) Demand Deposits (% change)	16.5	16.4	21.9	-0.2	23.4	-0.6
d) Bank Credit (% change)	15.9	21.8	25.5	17.5	16.9	21.5
e) Non-food Credit (% change)	15.4	22.4	26.7	17.8	17.1	21.3
f) Investment in Government Securities (% change)	20.9	17.7	13.3	20.6	19.3	8.6
g) Credit-Deposit Ratio (%)	55.1	64.8	68.0	72.4	72.2	75.7
h) Credit-GDP Ratio (%)	20.6	37.7	39.5	49.7	49.5	50.0
IV. Financial Markets						
IV.1 Interest rates (%)						
a) Call / Notice Money rate	11.7	6.1	5.6	7.1	3.2	5.8
b) 10 year G-Sec yield	12.3	7.5	7.0	7.5	7.2	7.9
c) 91-Days T-bill yield	9.4	6.1	5.8	7.1	3.6	–
d) Weighted Average interest rate on Central Government Borrowings	12.3	7.8	7.2	7.7	7.2	–
e) Commercial Paper	12.5	8.2	7.7	10.8	6.3	8.7
IV.2 Liquidity (₹crore)						
a) LAF Outstanding	–	–	–	1,485	990	-1,06,005
b) MSS Outstanding	–	–	–	88,077	2,737	–
c) Average Daily Call Money Market Turnover	–	–	18,492	22,436	15,924	17,727
d) Average Daily G-Sec Market Turnover	–	–	7,709	10,879	14,426	14,256
V. Government Finances						
V.1 Central Government Finances (% of GDP) #						
a) Total Revenue Receipts	9.2	9.5	9.9	9.7	8.7	10.0
i) Tax Revenue	6.8	7.2	7.6	7.9	7.0	7.2
ii) Non Tax Revenue	2.5	2.3	2.3	1.7	1.8	2.8
b) Total Expenditure	16.0	15.4	14.8	15.8	15.6	15.4
i) Revenue Expenditure	12.3	12.9	12.2	14.2	13.9	13.4
of which :						
Interest Payment	4.2	4.0	3.8	3.4	3.3	3.1
ii) Capital Expenditure	3.7	2.5	2.6	1.6	1.7	2.1
c) Revenue Deficit	3.0	3.4	2.3	4.5	5.2	3.4
d) Fiscal Deficit	5.9	4.8	3.6	6.0	6.4	5.1
e) Primary Deficit	1.6	0.8	-0.2	2.6	3.1	2.0
f) Domestic Debt	48.0	56.7	58.2	54.4	51.7	47.9
V.2 State Finances #						
a) Revenue Deficit (% of GDP)*	1.2	1.0	0.5	-0.2	0.5	0.3
b) Gross Fiscal Deficit (% of GDP)*	3.1	3.1	2.7	2.4	2.9	2.6
c) Primary Deficit (% of GDP)*	1.2	0.8	0.3	0.6	1.2	1.0
d) Outstanding Liabilities (% of GDP)*	22.3	29.3	30.1	26.3	25.0	23.0

APPENDIX TABLE 1: MACROECONOMIC AND FINANCIAL INDICATORS *(Concld.)*

Item	Average 1990-91 to 1999-2000 (10 years)	Average 2000-01 to 2009-10 (10 years)	Average 2003-04 to 2007-08 (5 years)	2008-09	2009-10	2010-11
1	2	3	4	5	6	7
VI. External Sector						
VI.1 Balance of Payments						
a) Merchandise Exports (% change) ∆	8.6	17.7	25.3	13.7	-3.6	37.4
Oil Exports (% change) ∆	-13.5	505.3 ×	62.6	-2.9	2.3	48.7
Non Oil Exports (% change) ∆	8.9	18.5 ×	31.0	17.2	-4.6	35.4
b) Merchandise Imports (% change) ∆	9.6	19.5	32.3	19.8	-2.6	26.7
Oil Imports (% change) ∆	17.7	22.9	35.7	17.6	-7.0	21.7
Non Oil Imports (% change) ∆	8.8	18.5	31.0	20.7	-0.6	28.8
c) Trade Balance/GDP (%)	-2.8	-5.3	-5.4	-9.8	-8.6	-7.5
d) Invisible Balance/GDP (%)	1.6	4.8	5.1	7.5	5.8	5.0
e) Current Account Balance/GDP (%)	-1.3	-0.5	-0.3	-2.3	-2.8	-2.6
f) Net Capital Flows /GDP(%)	2.2	3.4	4.6	0.6	3.9	3.5
g) Current Account Balance (US$ billion)	-4.4	-8.3	-4.7	-27.9	-38.4	-44.3
Net Invisibles	6.0	44.2	45.8	91.6	80.0	86.2
of which : Services	1.3	21.5	23.4	53.9	35.7	47.7
Private Transfers	7.8	27.9	27.6	44.6	52.1	53.4
Investment Income	-3.5	-5.0	-4.9	-6.6	-7.2	-13.9
h) Net Capital Flows (US$ billion)	7.7	31.0	44.4	6.8	53.4	59.7
of which : FDI to India	1.6	16.3	15.3	37.7	33.1	23.4
FIIs	1.3	7.1	10.6	-15.0	29.0	29.4
NRI Deposits	1.3	2.5	2.0	4.3	2.9	3.2
i) Reserve Changes (BoP basis) (US $ billion) [(Increase (-)/Decrease (+)]	-3.3	-22.9	-40.3	20.1	-13.4	-13.1
VI.2 External Debt Indicators						
a) External Debt Stock (US$ billion)**	93.0	157.0	156.0	224.5	261.0	305.9
b) Debt-GDP Ratio (%)	29.0	19.0	17.7	20.5	18.0	17.3
c) Import cover of Reserves (in Months) **	6.5	12.5	14.0	9.8	11.1	9.6
d) Short-term Debt to Total Debt (%)	6.0	11.8	13.6	19.3	20.0	21.2
e) Debt Service Ratio (%)	24.9	8.8	8.3	4.4	5.5	4.2
f) Reserves to Debt (%) **	23.0	96.0	114.2	112.2	106.9	99.6
VI.3 Openness Indicators (%)						
a) Export plus Imports of Goods/GDP	18.8	29.5	30.4	41.0	35.0	36.5
b) Export plus Imports of Goods & Services/GDP	22.9	39.2	40.8	54.0	46.3	49.0
c) Current Receipts plus Current Payments/GDP	26.8	45.1	46.6	61.1	52.8	54.4
d) Gross Capital Inflows plus Outflows/GDP	15.1	33.6	36.8	51.1	46.2	53.9
e) Current Receipts & Payments plus Capital Receipts & Payments /GDP	41.9	78.7	83.5	112.2	99.1	108.3
VI.4 Exchange Rate Indicators						
a) Exchange Rate (Rupee/US Dollar)						
End of Period	34.1	45.4	43.1	50.9	45.1	44.6
Average	32.7	45.6	44.1	45.9	47.4	45.6
b) 36 - Currency REER (Percentage Change)	-0.04 @@	0.4	1.0	-9.9	-3.1	7.7
c) 36 - Currency NEER (Percentage Change)	-1.3 @@	-0.3	0.5	-10.9	-2.6	2.9
d) 6 - Currency REER (Percentage Change)	0.4 @@	1.5	2.5	-9.3	-0.3	13.1
e) 6 - Currency NEER (Percentage Change)	-4.0 @@	-1.4	0.4	-13.6	-3.7	5.7

QE : Quick Estimates.
RE : Revised Estimates.
$: Includes oilseeds, sugarcane, cotton (lint) and raw jute and mesta.
- : Not Available/Not applicable.
: Data for 2010-11 relates to Revised estimates.
* : Data for 2009-10 and 2010-11 pertains to 28 States of which five are Vote on Account.
∆ : 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.

Notes: 1. PFCE: Private Final Consumption Expenditure; GFCE: Government Final Consumption Expenditure; REER: Real Effective Exchange Rate.
2. Agricultural production figures for 2010-11 are based on Fourth Advance Estimates as on 19-07-2011.
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 2005-06 to 2010-11	2006-07	2007-08	2008-09	2009-10*	2010-11#	2006-07	2007-08	2008-09	2009-10*	2010-11#
1	2	3	4	5	6	7	8	9	10	11	12
1. Agriculture and Allied Activities	**3.7**	**4.2**	**5.8**	**-0.1**	**0.4**	**6.6**	**17.4**	**16.8**	**15.7**	**14.6**	**14.4**
of which :											
Agriculture	3.1	4.1	6.3	-0.6	-0.1	..	14.7	14.3	13.3	12.3	..
2. Industry	**8.5**	**12.9**	**9.2**	**4.0**	**8.3**	**7.8**	**20.6**	**20.6**	**20.1**	**20.2**	**20.0**
of which :											
a) Mining and quarrying	4.4	7.5	3.7	1.3	6.9	5.8	2.6	2.5	2.3	2.3	2.3
b) Manufacturing	9.3	14.3	10.3	4.2	8.8	8.3	16.0	16.1	15.8	15.9	15.8
c) Electricity, gas and water supply	6.9	9.3	8.3	4.9	6.4	5.7	2.1	2.0	2.0	2.0	1.9
3. Services	**10.0**	**10.1**	**10.4**	**9.5**	**9.7**	**9.2**	**62.0**	**62.6**	**64.2**	**65.2**	**65.6**
of which :											
a) Construction	9.1	10.3	10.7	5.4	7.0	8.1	8.0	8.1	8.0	7.9	7.9
b) Trade, hotels and restaurants	9.1	11.0	10.0	5.5	6.7	9.0	16.7	16.8	16.6	16.4	16.5
c) Transport, storage and communications	12.7	12.7	12.9	11.1	15.0	12.3	8.9	9.2	9.5	10.2	10.5
d) Financing, insurance, real estate and business services	11.7	14.0	11.9	12.5	9.2	9.9	15.7	16.1	17.0	17.2	17.4
e) Community, social and personal services	8.0	2.9	6.9	12.7	11.8	7.0	12.7	12.4	13.1	13.6	13.4
4. Gross Domestic Product at factor cost	**8.6**	**9.6**	**9.3**	**6.8**	**8.0**	**8.5**	**100**	**100**	**100**	**100**	**100**

Memo : (₹ crore)

Sector	(at current prices)				
	2006-07	**2007-08**	**2008-09**	**2009-10***	**2010-11#**
1. Agriculture and Allied Activities	7,22,984	8,36,518	9,28,943	10,89,297	13,86,882
2. Industry	8,17,768	9,41,362	10,39,030	11,52,164	13,28,887
3. Services	24,11,489	28,03,542	33,14,113	38,91,769	45,91,221
4. Gross Domestic Product at factor cost	39,52,241	45,81,422	52,82,086	61,33,230	73,06,990

Sector	(at constant prices)				
	2006-07	**2007-08**	**2008-09**	**2009-10***	**2010-11#**
1. Agriculture and Allied Activities	6,19,190	6,55,080	6,54,118	6,56,975	7,00,390
2. Industry	7,36,372	8,04,474	8,36,363	9,06,081	9,76,634
3. Services	22,10,449	24,39,404	26,72,028	29,30,687	32,00,819
4. Gross Domestic Product at factor cost	35,66,011	38,98,958	41,62,509	44,93,743	48,77,842

* : 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 ₹ crore		
	Average 2004-05 to 2009-10	2007-08	2008-09 P	2009-10*	2007-08	2008-09 P	2009-10*
1	2	3	4	5	6	7	8
1. Household Saving	**23.3**	**22.5**	**23.8**	**23.5**	**11,19,829**	**13,31,033**	**15,36,071**
of which :							
a) Financial Assets	11.2	11.7	10.8	11.8	5,81,935	6,00,141	7,71,527
b) Physical Assets	12.1	10.8	13.1	11.7	5,37,894	7,30,892	7,64,544
2. Private corporate sector	**7.9**	**9.4**	**7.9**	**8.1**	**4,68,707**	**4,38,376**	**5,31,403**
3. Public sector	**2.7**	**5.0**	**0.5**	**2.1**	**2,48,962**	**28,938**	**1,39,949**
4. Gross Domestic Saving	**33.9**	**36.9**	**32.2**	**33.7**	**18,37,498**	**17,98,347**	**22,07,423**
5. Net capital inflow	**1.5**	**1.3**	**2.3**	**2.8**	**64,430**	**1,28,760**	**1,81,790**
6. Gross Domestic Capital Formation	**35.4**	**38.1**	**34.5**	**36.5**	**19,01,928**	**19,27,107**	**23,89,213**
7. Errors and Omissions	**0.1**	**0.1**	**-0.8**	**0.7**	**5,365**	**-46,428**	**45,034**
8. Gross Capital Formation	**35.3**	**38.0**	**35.4**	**35.8**	**18,96,563**	**19,73,535**	**23,44,179**
of which :							
a) Public sector	8.5	8.9	9.5	9.2	4,41,923	5,29,231	6,01,618
b) Private corporate sector	13.4	17.3	11.5	13.2	8,63,154	6,41,199	8,64,643
c) Household sector	12.1	10.8	13.1	11.7	5,37,894	7,30,892	7,64,544
d) Valuables #	1.3	1.1	1.3	1.7	53,592	72,213	1,13,374
Memo:							
Total Consumption Expenditure (a+b)		67.3	69.4	69.7			
a) Private Final Consumption Expenditure		57.0	58.4	57.7			
b) Government Final Consumption Expenditure		10.3	11.0	12.0			
Saving-Investment Balance (4-6)		-1.2	-2.3	-2.8			
Public Sector Balance #		-3.9	-9.0	-7.0			
Private Sector Balance #		3.8	7.1	6.7			
a) Private Corporate Sector		-7.9	-3.6	-5.1			
b) Household Sector		11.7	10.8	11.8			
GDP at Market Prices (at current prices)		49,86,426	55,82,623	65,50,271			

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 Total Financial Saving			₹crore		
	2008-09 R	2009-10 R	2010-11 P	2008-09 R	2009-10 R	2010-11 P
1	2	3	4	5	6	7
Financial Saving (Gross)	100.0	100.0	100.0	7,26,889	9,91,582	10,43,977
a) Currency	12.7	9.8	13.3	92,188	96,940	1,39,344
b) Deposits	60.7	47.2	47.3	441,063	4,67,575	4,93,237
i) With Commercial Banks	52.8	41.7	42.0	3,83,679	4,13,313	4,38,048
ii) With Non-banking Companies	2.0	1.9	2.9	14,742	19,220	30,343
iii) With Coperative Banks and Societies	4.7	3.6	2.5	34,154	36,140	25,943
iv) Trade Debt (Net)	1.2	-0.1	-0.1	8,488	-1,097	-1,097
c) Share and Debentures *of which :*	-0.7	4.6	-0.4	-5,070	45,338	-4,636
i) Private Corporate Business	1.0	1.3	1.2	7,441	12,758	12,483
ii) Banking	0.0	0.1	0.1	231	954	766
iii) Bonds of public Sector undertakings	0.1	0.1	0.1	446	606	828
iv) Mutual Funds (including UTI)	-1.4	3.3	-1.8	-10,450	33,041	-18,713
d) Claims on Government	-3.8	4.3	6.5	-27,551	42,872	67,954
i) Investment in Government securities	0.0	0.0	0.0	271	389	321
ii) Investment in Small Savings, etc.	-3.8	4.3	6.5	-27,822	42,484	67,633
e) Life Insurance Funds *of which :*	21.0	22.6	24.2	1,52,861	2,24,487	2,52,919
i) Life Funds of LIC and private insurance companies	20.3	22.0	23.8	1,47,795	2,17,973	2,47,993
f) Provident and Pension Funds	10.1	11.5	9.1	73,397	1,14,369	95,159

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	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11#
1	2	3	4	5	6	7	8	9	10	11
I. All Crops: Annual Growth Rate (per cent) $	**6.0**	**-12.8**	**7.4**	**-1.6**	**12.2**	**14.3**	**3.2**	**-6.3**	**-1.4**	**11.8**
A) Foodgrains	9.4	-18.5	22.6	-7.1	5.7	4.1	6.2	1.6	-7.0	8.2
B) Non-foodgrains	2.0	-5.7	-8.9	1.6	16.1	19.5	1.8	-9.9	1.5	13.5
A Foodgrains (1+2+3+4, a+b)	**212.9**	**174.8**	**213.2**	**198.4**	**208.6**	**217.3**	**230.8**	**234.5**	**218.1**	**241.6**
1. Rice	93.3	71.8	88.5	83.1	91.8	93.4	96.7	99.2	89.1	95.3
2. Wheat	72.8	65.8	72.2	68.6	69.4	75.8	78.6	80.7	80.8	85.9
3. Coarse Cereals	33.4	26.1	37.6	33.5	34.1	33.9	40.8	40.0	33.6	42.2
of which :										
i) Jowar	7.6	7.0	6.7	7.2	7.6	7.2	7.9	7.2	6.7	6.7
ii) Bajra	8.3	4.7	12.1	7.9	7.7	8.4	10.0	8.9	6.5	10.1
iii) Maize	13.2	11.2	15.0	14.2	14.7	15.1	19.0	19.7	16.7	21.3
4. Pulses	13.4	11.1	14.9	13.1	13.4	14.2	14.8	14.6	14.7	18.1
of which :										
i) Tur	2.3	2.2	2.4	2.4	2.7	2.3	3.1	2.3	2.5	2.9
ii) Gram	5.5	4.2	5.7	5.5	5.6	6.3	5.8	7.1	7.5	8.3
a) Kharif	**112.1**	**87.2**	**117.0**	**103.3**	**109.9**	**110.6**	**121.0**	**118.1**	**104.0**	**120.2**
1. Rice	80.5	63.1	78.6	72.2	78.3	80.2	82.7	84.9	75.9	80.7
2. Coarse Cereals	26.7	20.0	32.2	26.4	26.7	25.6	31.9	28.5	23.8	32.4
of which :										
i) Jowar	4.2	4.2	4.8	4.0	4.1	3.7	4.1	3.1	2.8	3.5
ii) Bajra	8.3	4.7	12.1	7.9	7.7	8.4	10.0	8.9	6.5	10.1
iii) Maize	11.3	9.3	12.7	11.5	12.2	11.6	15.1	14.1	12.3	16.3
3. Pulses	4.8	4.2	6.2	4.7	4.9	4.8	6.4	4.7	4.2	7.1
of which :										
i) Tur	2.3	2.2	2.4	2.4	2.7	2.3	3.1	2.3	2.5	2.9
b) Rabi	**100.8**	**87.6**	**96.2**	**95.1**	**98.7**	**106.7**	**109.8**	**116.3**	**114.2**	**121.4**
1. Rice	12.8	8.7	9.9	10.9	13.5	13.2	14.0	14.3	13.2	14.7
2. Wheat	72.8	65.8	72.2	68.6	69.4	75.8	78.6	80.7	80.8	85.9
3. Coarse Cereals	6.7	6.1	5.4	7.1	7.3	8.3	8.9	11.5	9.7	9.8
of which :										
i) Jowar	3.3	2.8	1.8	3.2	3.6	3.4	3.8	4.2	3.9	3.3
ii) Maize	1.9	1.9	2.3	2.7	2.6	3.5	3.9	5.6	4.4	5.0
4. Pulses	8.5	7.0	8.7	8.4	8.5	9.4	8.4	9.9	10.5	11.0
of which :										
i) Gram	5.5	4.2	5.7	5.5	5.6	6.3	5.8	7.1	7.5	8.3
B Non-foodgrains										
1. Oilseeds++	20.7	14.8	25.2	24.4	28.0	24.3	29.8	27.7	24.9	31.1
of which :										
i) Groundnut	7.0	4.1	8.1	6.8	8.0	4.9	9.2	7.2	5.4	7.5
ii) Rapeseed & Mustard	5.1	3.9	6.3	7.6	8.1	7.4	5.8	7.2	6.6	7.7
iii) Sunflower	0.7	0.9	0.9	1.2	1.4	1.2	1.5	1.2	0.9	0.6
iv) Soyabean	6.0	4.7	7.8	6.9	8.3	8.9	11.0	9.9	10.0	12.7
2. Sugarcane	297.2	287.4	233.9	237.1	281.2	355.5	348.2	285.0	292.3	339.2
3. Cotton @	10.0	8.6	13.7	16.4	18.5	22.6	25.9	22.3	24.2	33.4
4. Jute and Mesta +	11.7	11.3	11.2	10.3	10.8	11.3	11.2	10.4	11.8	10.6
5. Tea*	851.4	846.0	878.7	906.8	948.9	973.1	987.0	972.8	991.2	966.7
6. Coffee*	300.6	275.3	270.5	275.5	274.0	288.0	262.0	262.3	289.6	299.0

: Fourth Advance Estimates as on July 19, 2011.
$: Growth rates are based on Index of Agricultural Production with base triennium ending 1993-94=100. Data for 2010-11 are averages for period 1994-95 to 2007-08.
@ : 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 is average of 2001-02 to 2009-10.

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	9.93	12.33	22.16	11.63	12.72	24.35	13.06	7.76	20.82
1996-97	11.88	8.16	20.04	12.31	13.32	25.63	13.17	3.24	16.41
1997-98	14.54	9.30	23.84	11.20	7.76	18.96	13.05	5.08	18.12
1998-99	11.55	12.65	24.20	11.83	8.90	20.73	12.16	9.66	21.82
1999-00	16.62	14.14	30.76	12.42	10.63	23.05	15.72	13.19	28.91
2000-01	18.93	16.36	35.29	10.42	7.79	18.21	23.19	21.50	44.98
2001-02	21.12	20.63	41.75	15.32	15.99	31.30	24.91	26.04	51.02
2002-03	19.00	19.03	38.03	24.85	24.99	49.84	17.16	15.65	32.81
2003-04	20.78	15.80	36.58	25.04	24.29	49.33	13.07	6.93	20.65
2004-05	24.04	16.80	40.83	23.20	18.27	41.47	13.34	4.07	17.97
2005-06	26.69	14.79	41.48	25.08	17.17	42.25	13.68	2.01	16.62
2006-07	26.31	9.23	35.53	25.06	11.71	36.77	13.17	4.70	17.93
2007-08	26.29	11.13	37.42	25.22	12.20	37.43	13.84	5.80	19.75
2008-09	32.84	22.69	55.53	24.62	14.88	39.50	21.60	13.43	35.58
2009-10	32.59	25.38	57.98	26.89	21.97	48.86	26.71	16.13	43.36
2010-11P	31.13	25.92	56.79	29.80	23.07	80.57	28.82	15.36	44.35
2011-12P	7.77	27.88	35.65	2.28	1.68	3.96	25.27	35.88	61.30

* : Stocks as at end-March.
\# : Includes coarse grains.
P : Provisional.
\- : Not Available.
Note : Off-take for 2011-12 is for the month of April. Procurement for 2011-12 is as on August 12, 2011.
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
2006-07	107.5	5.2	126.8	15.0	112.8	7.3	122.6	12.9
		(5.3)		(89.0)		(5.6)		(100.0)
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 P	131.0	5.2	175.7	9.0	138.0	5.5	165.5	8.2
		(7.3)		(86.7)		(5.9)		(100.0)
2009-10								
April-June	117.4	6.2	149.9	-3.7	129.6	6.1	143.2	-1.8
July-September	113.7	7.2	158.1	1.8	131.6	7.4	149.1	2.9
October-December	127.1	7.5	162.0	6.1	127.8	3.8	153.5	6.1
January-March	139.9	10.3	175.1	15.4	134.1	7.1	165.9	14.0
April-September	115.5	6.7	154.0	-1.0	130.6	6.8	146.1	0.5
October-March	133.5	9.0	168.5	10.7	131.0	5.4	159.7	10.1
2010-11 P								
April-June	126.8	8.0	165.4	10.3	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	176.9	9.2	136.1	6.5	166.7	8.6
January-March	141.4	1.0	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	3.5	183.8	9.1	140.6	7.3	172.9	8.3

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 Statistical 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 2010	March 2011	2009-10	2010-11	July 2010	July 2011 P
1	2	3	4	5	6	7	8
All Commodities	**100.0**	**10.4**	**9.7**	**3.8**	**9.6**	**10.0**	**9.2**
I. Primary Articles	**20.1**	**22.2**	**13.4**	**12.7**	**17.7**	**19.1**	**11.3**
1. Food Articles	14.3	20.6	9.4	15.3	15.6	18.5	8.2
a) Cereals	3.4	10.5	3.5	12.6	5.3	8.3	5.3
i) Rice	1.8	8.1	2.3	12.3	5.9	9.6	2.5
ii) Wheat	1.1	14.7	0.2	12.8	3.0	6.5	1.9
b) Pulses	0.7	25.0	-4.0	22.4	3.2	14.4	-7.4
c) Fruits and Vegetables	3.8	16.3	18.9	9.6	16.4	13.2	11.7
d) Milk	3.2	24.9	4.4	18.8	20.1	26.1	10.8
e) Eggs, Meat and Fish	2.4	35.5	13.5	20.8	25.5	31.4	9.2
f) Condiments and Spices	0.6	33.7	20.4	20.8	33.6	43.5	2.3
g) Tea and Coffee	0.2	-4.5	4.7	12.1	-7.3	-17.7	24.8
2. Non-Food Articles	4.3	20.4	27.3	5.5	22.3	15.3	15.5
a) Fibres	0.9	20.5	87.7	1.6	41.7	16.2	29.7
i) Raw Cotton	0.7	20.0	103.0	-1.9	43.9	13.2	35.3
b) Oilseeds	1.8	6.7	10.9	2.9	4.7	2.2	14.0
c) Sugarcane	0.6	53.3	7.1	5.2	46.8	53.3	7.1
3. Minerals	1.5	37.9	15.2	8.8	24.8	31.6	25.0
a) Iron Ore	0.2	42.1	40.2	-1.1	78.8	117.0	8.9
b) Crude Petroleum	0.9	58.3	6.3	21.2	11.8	13.0	46.3
II. Fuel and Power	**14.9**	**13.8**	**12.5**	**-2.1**	**12.3**	**13.3**	**12.0**
1. Coal	2.1	7.9	13.3	3.4	5.7	7.9	13.3
2. Mineral Oils	9.4	18.6	14.7	-4.3	16.0	15.9	15.4
3. Electricity	3.5	3.4	3.6	1.0	5.4	8.6	-1.3
III. Manufactured Products	**65.0**	**5.3**	**7.4**	**2.2**	**5.7**	**5.8**	**7.5**
1. Food Products	10.0	15.1	2.4	13.5	3.7	7.3	7.6
a) Dairy Products	0.6	19.6	4.8	12.9	9.6	15.7	6.7
b) Grain Mill Products	1.3	12.8	0.7	6.1	5.7	10.2	1.2
c) Sugar, Khandsari and Gur	2.1	41.7	-7.8	51.6	-0.9	14.1	3.2
d) Edible Oils	3.0	0.4	13.0	-5.9	5.4	2.3	14.1
e) Oil Cakes	0.5	10.7	1.5	15.3	0.8	-3.5	5.8
2. Beverages, Tobacco and Tobacco Products	1.8	8.1	8.8	6.1	7.4	7.3	12.6
3. Textiles	7.3	9.1	18.3	3.4	12.1	10.1	12.9
a) Cotton Textiles	2.6	12.7	33.1	6.0	18.7	14.5	22.5
b) Man Made Textiles	2.2	8.4	12.6	0.9	10.4	9.9	7.9
4. Wood and Wood Products	0.6	6.6	3.6	9.6	4.0	4.9	9.4
5. Paper and Paper Products	2.0	2.5	8.4	2.2	5.3	4.6	7.3
6. Leather and Leather Products	0.8	2.5	-1.5	4.9	-1.0	0.0	1.1
7. Rubber and Plastic Products	3.0	3.7	10.6	0.7	6.7	5.0	7.7
8. Chemicals and Chemical Products	12.0	3.7	7.4	-0.3	5.3	4.4	7.9
a) Basic Inorganic Chemicals	1.2	-0.6	4.1	-0.9	1.0	0.3	9.1
b) Basic Organic Chemicals	2.0	10.8	8.8	-1.9	7.5	6.9	10.9
c) Fertilizers	2.7	1.9	9.9	1.2	8.0	7.3	10.0
d) Pesticides	0.5	-0.7	1.9	0.1	2.7	2.9	-0.6
e) Drugs and Medicines	0.5	0.7	3.4	1.2	2.4	2.2	3.0
9. Non-Metallic Mineral Products	2.6	3.2	3.7	7.0	2.7	3.1	3.3
a) Cement and Lime	1.4	2.3	1.7	7.5	1.2	2.5	0.5
10. Basic Metals, Alloys and Metal Products	10.7	2.2	11.7	-6.1	8.7	7.9	10.1
a) Ferrous Metals	8.1	0.5	11.7	-9.0	8.7	7.7	9.8
b) Non-Ferrous Metals	1.0	8.4	2.3	-3.2	5.3	6.9	2.5
c) Metal Products	1.7	5.8	17.0	5.0	10.7	8.8	15.5
11. Machinery and Machine Tools	8.9	1.5	3.2	0.5	2.8	2.3	2.7
a) Non-Electrical Machinery	1.0	7.5	1.3	3.3	2.8	4.5	1.1
b) Electrical Machinery, Equipment and Batteries	2.3	-1.1	3.2	-1.3	1.5	-0.3	3.3
12. Transport, Equipment and Parts	5.2	1.2	3.6	3.1	3.0	3.8	2.9

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 ₹crore)

Item	Outstanding as on March 31, 2011	Variations							
		Financial year				Year-on-year			
		2009-10		2010-11		up to Aug 13, 2010		up to Aug 12, 2011	
		Absolute	Per cent	Absolute	Per cent	Absolute	Per cent	Absolute	Per cent
1	2	3	4	5	6	7	8	9	10
Reserve Money	**13,76,881**	**1,67,688**	**17.0**	**2,21,195**	**19.1**	**2,43,754**	**26.1**	**1,93,523**	**16.5**
(C.1+C.2+C.3 = S.1+S.2+S.3+S.4+S.5-S.6)									
Components									
C.1. Currency in Circulation	9,49,659	1,08,395	15.7	1,50,111	18.8	1,44,155	20.2	1,31,423	15.3
C.2. Bankers' Deposits with the RBI	4,23,509	61,024	21.0	71,211	20.2	1,00,173	47.0	64,317	20.5
of which :									
Scheduled Commercial Banks	4,02,656	56,474	20.4	68,720	20.6	95,592	47.9	62,368	21.1
C.3. 'Other' Deposits with the RBI	3,713	-1,731	-31.1	-126	-3.3	-574	-12.0	-2,216	-52.5
Sources									
S.1. Net RBI Credit to Government (a+b)	3,96,555	1,50,006	–	1,84,969	–	2,02,713	–	1,60,964	–
a) Net RBI credit to Central Government (i-ii)	**3,94,035**	**1,49,820**	**–**	**1,82,454**	**–**	**2,02,725**	**–**	**1,60,740**	**–**
i) Claims on Central Government	3,94,135	65,185	–	1,71,462	–	1,44,542	–	1,60,740	–
ii) Deposits of Central Government	100	-84,634	–	-10,992	–	-58,183	–	-1	–
b) Net RBI credit to State Governments (i-ii)	2,520	186	–	2,515	–	-12	–	224	–
i) Claims on State Governments	2,919	-1,632	–	2,873	–	-12	–	225	–
ii) Deposits of State Governments	399	-1,818	–	358	–	0	–	1	–
S.2. RBI's Claims on Commercial and Co-operative Banks	5,159	-9,188	–	3,990	–	1,132	–	-11	–
of which :									
Loans and Advances to Scheduled Commercial Banks	5,115	-8,995	–	3,946	–	1,132	–	-16	–
S.3. RBI's Credit to Commercial Sector	2,164	-12,492	-90.4	836	63.0	-9,033	-87.2	385	29.1
S.4. Net Foreign Exchange Assets of the RBI	**13,28,553**	**-48,167**	**-3.8**	**96,605**	**7.8**	**-16,922**	**-1.3**	**1,14,144**	**8.9**
S.5. Government's Currency Liabilities to the Public	12,724	1,215	12.1	1,455	12.9	1,345	12.9	1,198	10.2
S.6. Net Non-monetary Liabilities of the RBI	3,68,274	-86,315	-22.3	66,660	22.1	-64,520	-16.2	83,157	25.0
S.7. Net Domestic Assets of the RBI (S.1+S.2+S.3+S.5-S.6)	**48,328**	**2,15,856**	**–**	**1,24,591**	**–**	**2,60,676**	**–**	**79,379**	**–**

Data are provisional.

APPENDIX TABLE 10: VARIATIONS IN MONEY STOCK

(Amount in ₹crore)

Item	Outstanding as on March 31, 2011	Variations							
		Financial year				Year-on-year			
		2009-10		2010-11		up to July 30, 2010		up to July 29, 2011	
		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]	**16,35,569**	**2,29,594**	**18.2**	**1,46,268**	**9.8**	**2,46,321**	**19.5**	**68,105**	**4.5**
Broad Money (M_3) (C.1+C.2+C.3 = S.1+S.2+S.3+S.4-S.5)	**64,99,548**	**8,07,919**	**16.8**	**8,96,817**	**16.0**	**7,93,676**	**15.7**	**9,55,700**	**16.4**
Components									
C.1. Currency with the Public	9,14,197	1,02,043	15.3	1,46,704	19.1	1,38,465	20.5	1,20,965	14.9
C.2. Aggregate Deposits with Banks (a+b)	55,81,639	7,07,607	17.2	7,50,239	15.5	6,54,994	15.0	8,36,902	16.7
a) Demand Deposits	7,17,660	1,29,282	22.0	-310	0.0	1,07,640	18.4	-50,692	-7.3
b) Time Deposits	48,63,979	5,78,326	16.4	7,50,549	18.2	5,47,354	14.5	8,87,594	20.5
C.3. 'Other' Deposits with the RBI	3,713	-1,731	-31.1	-126	-3.3	216	5.1	-2,168	-48.5
Sources									
S.1. Net Bank Credit to Government (A+B)	**19,82,771**	**3,91,853**	**30.7**	**3,13,585**	**18.8**	**3,35,120**	**23.6**	**3,76,360**	**21.4**
A. Net RBI credit to Government (a+b)	3,96,555	1,50,006	–	1,84,969	–	1,94,789	–	1,49,499	–
a. Net RBI credit to Central Government	3,94,035	1,49,820	–	1,82,454	–	1,94,789	–	1,49,483	–
b. Net RBI credit to State Governments	2,520	186	–	2,515	–	0	–	16	–
B. Other banks' credit to Government	15,86,216	2,41,847	19.9	1,28,616	8.8	1,40,331	10.1	2,26,861	40.8
S.2. Bank Credit to Commercial Sector (a+b)	**42,35,406**	**4,76,516**	**15.8**	**7,43,997**	**21.3**	**5,98,612**	**19.7**	**6,54,967**	**18.0**
A. RBI's credit to commercial sector	2,164	-12,492	–	836	–	-10,331	-88.6	474	35.8
B. Other banks' credit to commercial sector	42,33,242	4,89,008	16.3	7,43,161	21.3	6,08,943	20.1	6,54,493	18.0
S.3. Net Foreign Exchange Assets of Banking Sector (A+B)	**13,93,327**	**-70,715**	**-5.2**	**1,11,858**	**8.7**	**-20,047**	**-1.5**	**1,07,676**	**8.1**
A. RBI's net foreign exchange assets	13,28,553	-48,167	-3.8	96,605	7.8	-11,025	-0.8	84,775	6.6
B. Other banks' net foreign exchange assets	64,774	-22,548	-31.3	15,254	30.8	-9,022	-17.7	22,900	54.7
S.4. Government's Currency Liabilities to the Public	**12,724**	**1,215**	**12.1**	**1,455**	**12.9**	**1,345**	**12.9**	**1,198**	**10.2**
S.5. Banking Sector's Net Non-Monetary Liabilities (A+B)	**11,24,680**	**-9,050**	**-1.1**	**2,74,079**	**32.2**	**1,21,354**	**15.5**	**1,84,501**	**20.4**
A. Net non-monetary liabilities of RBI	3,68,274	-86,315	-22.3	66,660	22.1	-63,009	-14.9	49,024	13.7
B. Net non-monetary liabilities of other banks (residual)	7,56,406	77,265	16.4	2,07,419	37.8	1,84,363	51.3	1,35,477	24.9

Note : Data are provisional.

APPENDIX TABLE 11: SECTORAL DEPLOYMENT OF GROSS BANK CREDIT

(Amount in ₹ crore)

Sector	Outstanding as on			Variation during			
	March 27, 2009	March 26, 2010	March 25, 2011	2009-10		2010-11	
				Absolute	Per cent	Absolute	Per cent
1	2	3	4	5	6	7	8
I Gross Bank Credit (II + III)	26,47,368	30,88,569	37,31,466	4,41,201	16.7	6,42,897	20.8
II Food Credit	45,544	48,562	64,111	3,018	6.6	15,549	32.0
III Non-food Credit (1 to 4)	26,01,825	30,40,007	36,67,354	4,38,182	16.8	6,27,347	20.6
1. Agriculture & Allied Activities	3,38,656	416,133	4,60,333	77,477	22.9	44,200	10.6
2. Industry (Micro & Small, Medium and Large)	10,54,390	13,11,451	16,20,849	2,57,061	24.4	3,09,398	23.6
3. Services *of which :*	6,46,299	7,26,790	9,00,801	80,491	12.5	1,74,011	23.9
3.1 Transport Operators	39,302	52,516	65,463	13,214	33.6	12,947	24.7
3.2 Professional Services	44,257	43,401	60,271	-856	-1.9	16,870	38.9
3.3 Trade	1,44,377	1,64,497	1,86,286	20,120	13.9	21,789	13.2
3.4 Commercial Real Estate	92,421	92,128	1,11,836	-293	-0.3	19,708	21.4
3.5 Non-Banking Financial Companies (NBFCs)	98,853	1,13,441	1,75,577	14,588	14.8	62,136	54.8
4. Personal Loans *of which :*	5,62,479	5,85,633	6,85,372	23,154	4.1	99,739	17.0
4.1 Consumer Durables	8,187	8,294	10,156	107	1.3	1,862	22.4
4.2 Housing @	2,79,365	3,00,929	3,46,110	21,564	7.7	45,181	15.0
4.3 Advances against Fixed Deposits (Including FCNR(B), NRNR Deposits etc.)	48,676	48,654	60,524	-22	0.0	11,870	24.4
4.4 Credit Card Outstanding	28,000	20,145	18,098	-7,855	-28.1	-2,047	-10.2
4.5 Education	28,579	36,863	43,710	8,284	29.0	6,847	18.6
Memo							
5. Priority Sector *of which :*	9,32,459	10,92,179	12,58,386	1,59,720	17.1	1,66,207	15.2
5.1 Housing#	1,97,110	2,17,877	2,30,686	20,767	10.5	12,809	5.9

@ : Direct housing loans.

\# : Direct as well as indirect housing loan.

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 ₹ crore)

Items	2009-10		2010-11	
	No. of Issues	Amount	No. of Issues	Amount
1	2	3	4	5
I. PRIMARY MARKET				
A. Prospectus and Rights Issues*	**71**	**32,607**	**77**	**37,620**
1. Private Sector (a+b)	**68**	**25,479**	**70**	**24,830**
a) Financial	3	326	6	4,335
b) Non-financial	65	25,153	64	20,496
2. Public Sector (a+b+c)	**3**	**7,128**	**7**	**12,790**
a) Public Sector Undertakings	1	4,026	2	8,025
b) Government Companies	1	2,777	–	–
c) Banks/Financial Institutions	1	325	5	4,765
3. Total (1+2, i+ii, a+b)	**71**	**32,607**	**77**	**37,620**
Instrument type				
(i) Equity	70	32,427	77	37,620
(ii) Debt	1	180	–	–
Issuer Type				
(a) IPOs	39	21,609	51	17,053
(b) Listed	32	10,998	26	20,567
B. Euro Issues (ADRs and GDRs)	**18**	**15,967**	**42**	**9,441**
C. Private Placement				
1. Private Sector (a+b)	**2,270**	**2,33,294**	**1,337**	**1,21,451**
a) Financial	1,630	1,42,441	877	71,975
b) Non-financial	640	90,853	460	49,476
2. Public Sector (a+b)	**218**	**1,09,985**	**250**	**1,16,943**
a) Financial	151	74,290	212	98,983
b) Non-financial	67	35,696	38	17,960
3. Total (1+2, i+ii)	**2,488**	**3,43,279**	**1,587**	**2,38,394**
(i) Equity	49	36,718	19	13,670
(ii) Debt	2,439	3,06,561	1,568	2,24,724
D. Mutual fund Mobilsation (net)				
1. Private Sector		54,928		-19,215
2. Public Sector		28,152		-30,191
II. SECONDARY MARKET				
BSE Sensex: End-Period		17,528		19,445
Period Average		15,585		18,605
Price Earning Ratio@		21		21
Market Capitalisation to GDP Ratio (%)		99		87
Turnover				
Cash Segment		13,78,809		11,03,466
Derivatives Segment		234		154
S&PCNX Nifty: End-Period		5,249		5,834
Period Average		4,658		5,584
Price Earning Ratio@		22		22
Market Capitalisation to GDP Ratio (%)		96		85
Turnover				
Cash Segment		41,38,024		35,77,412
Derivatives Segment		1,76,63,665		2,92,48,221

* : Excluding offers for sale. - : Nil/Negligible. @ : As at end-Period.

Source : Securities and Exchange Board of India, Bombay Stock exchange, National Stock Exchange and various merchant bankers.

APPENDIX TABLE 13: TURNOVER IN INDIAN DERIVATIVES MARKET

(₹ Crore)

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
2008-09	**35,81,870**	**37,31,512**	**34,79,657**	**2,29,227**	**25,54,994**	**40,65,695**	**3,11,389**	**49,04,752**
2009-10	**39,34,485**	**80,28,103**	**51,95,247**	**5,06,065**	**20,35,879**	**31,45,402**	**37,27,262**	**25,69,488**
2010-11	**43,56,909**	**1,72,69,366**	**54,95,757**	**10,30,343**	**28,90,222**	**41,12,539**	**84,06,307**	**47,46,390**
2009-10								
Apr	3,01,766	4,53,788	3,56,383	31,427	1,54,799	2,88,861	77,244	92,148
May	3,17,416	4,30,522	4,48,155	31,168	2,47,737	3,16,486	1,24,900	1,73,946
Jun	3,46,934	5,45,643	5,89,657	49,746	1,79,079	3,10,792	1,43,348	2,44,290
Jul	3,82,924	7,01,247	4,50,632	38,707	1,55,183	3,17,384	1,84,813	1,44,840
Aug	3,66,312	6,58,757	4,12,363	36,214	1,50,272	2,40,148	1,80,688	1,37,524
Sep	3,02,425	6,09,076	4,34,119	42,758	1,40,390	2,13,851	2,17,455	1,62,582
Oct	3,29,610	6,69,591	4,65,829	45,387	1,74,382	2,24,087	3,04,473	2,14,872
Nov	3,63,523	8,16,408	4,38,220	43,666	1,63,409	1,99,740	3,19,195	1,62,024
Dec	3,29,497	7,56,680	3,95,954	42,855	1,59,544	2,40,832	3,89,913	3,27,312
Jan	2,98,931	6,95,988	4,44,134	51,454	1,57,846	2,44,273	5,69,087	2,90,944
Feb	3,26,881	8,47,236	3,54,485	41,285	1,63,438	2,43,864	5,69,510	3,12,326
Mar	2,68,267	8,43,167	4,05,316	51,398	1,89,799	3,05,083	6,46,637	3,06,680
2010-11								
Apr	2,79,573	9,05,472	4,09,844	76,731	1,74,250	2,64,596	7,19,304	2,44,826
May	3,95,617	1,21,458	4,31,593	79,832	2,70,782	2,97,173	7,82,755	3,09,516
Jun	3,72,268	11,69,943	4,21,843	71,547	2,32,419	3,10,394	7,52,470	5,32,618
Jul	2,89,424	10,43,354	4,23,422	73,710	1,95,144	3,16,990	5,33,369	5,50,084
Aug	2,99,133	11,57,466	4,96,267	1,00,865	2,22,722	3,44,994	4,92,257	5,13,510
Sep	3,83,876	16,88,469	5,55,581	1,08,470	2,49,383	3,20,629	8,68,526	3,12,260
Oct	4,02,463	17,05,514	6,08,830	1,07,693	3,12,475	4,28,143	9,05,836	346,354
Nov	4,24,790	19,02,944	5,39,872	98,241	2,72,365	3,89,511	6,76,984	2,77,176
Dec	3,22,806	15,19,280	4,32,644	82,391	2,14,508	3,37,549	5,43,544	3,41,326
Jan	3,84,486	19,62,516	4,11,149	83,685	2,17,049	3,12,753	6,60,076	5,72,318
Feb	4,02,852	20,44,353	4,01,307	80,876	2,38,612	3,27,239	5,97,965	3,35,470
Mar	3,99,621	20,48,597	3,63,405	66,303	2,90,511	4,62,568	8,73,221	4,10,932
2011-12								
Apr	2,82,313	16,45,980	3,53,162	69,993	2,06,047	3,67,137	7,22,275	3,75,446
May	3,05,746	18,92,896	3,36,689	70,090	2,17,188	4,74,893	10,00,498	4,78,938
June	2,65,191	17,84,570	3,22,695	65,792	2,40,047	4,95,622	10,39,010	5,36,776

Source : RBI, BSE, NSE, CCIL and SEBI.

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 (Base 2004-05=100)		6 - Currency Trade-based weights (Base 2004-05=100)	
	REER	NEER	REER	NEER
1	2	3	4	5
2004-05	100.00	100.00	100.00	100.00
2005-06	103.10	102.24	105.17	103.04
2006-07	101.29	97.63	104.30	98.09
2007-08	108.52	104.75	112.76	104.62
2008-09	97.80	93.34	102.32	90.42
2009-10 (P)	94.74	90.94	101.97	87.07
2010-11 (P)	102.04	93.56	115.28	92.02
2009-10 (P)				
April	90.62	89.65	96.12	85.28
May	91.89	90.59	98.51	86.48
June	92.70	91.04	98.71	86.71
July	92.03	89.59	97.84	85.22
August	92.50	89.33	98.90	85.04
September	91.72	88.35	98.48	84.18
October	94.33	90.66	101.53	86.67
November	95.66	90.67	102.86	86.56
December	96.19	91.10	103.99	87.21
January	99.11	92.63	107.33	89.30
February	99.10	93.08	107.98	90.03
March	101.08	94.56	111.43	92.19
2010-11 (P)				
April	103.78	96.35	116.00	94.70
May	102.95	95.55	116.20	94.23
June	102.30	94.66	115.21	93.50
July	99.98	92.03	112.63	90.96
August	99.57	92.02	112.72	90.92
September	100.75	92.87	113.96	91.38
October	102.66	94.51	115.19	92.32
November	101.67	93.34	115.08	91.52
December	103.52	93.82	117.94	92.47
January	102.65	92.72	117.46	91.45
February	101.78	92.32	115.72	90.37
March	102.88	92.54	116.46	90.44
2011-12 (P)				
April	104.37	93.02	118.78	90.60
May	101.20	91.79	117.19	89.48
June	101.51	92.07	117.35	89.48

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@
1	2	3	4	5
Centre				
1990-91	4.1	3.3	7.8	55.2
1995-96	0.9	2.5	5.1	50.9
2000-01	0.9	4.1	5.7	55.6
2007-08	-0.9	1.1	2.6	56.9
2008-09	2.6	4.5	6.0	56.6
2009-10	3.1	5.2	6.4	53.7
2010-11 RE	2.0	3.4	5.1	49.9
2011-12 BE	1.6	3.4	4.6	48.5
States*				
1990-91	1.8	0.9	3.3	22.5
1995-96	0.8	0.7	2.6	20.9
2000-01	1.8	2.6	4.2	28.3
2007-08	-0.5	-0.9	1.5	26.6
2008-09	0.6	-0.2	2.4	26.3
2009-10	1.2	0.5	2.9	25.0
2010-11 RE	1.0	0.3	2.6	23.0
2011-12 BE	0.7	-0.2	2.2	22.4
Combined				
1990-91	5.0	4.2	9.4	64.8
1995-96	1.6	3.2	6.5	61.1
2000-01	3.6	6.6	9.5	70.6
2007-08	-1.1	0.2	4.1	71.4
2008-09	3.4	4.3	8.5	72.1
2009-10	4.5	5.6	9.3	69.2
2010-11 RE	3.2	3.7	7.7	64.3
2011-12 BE	2.4	3.2	6.8	63.0

RE : Revised Estimates. BE : Budget Estimates.

* : Data from 2009-10 onwards are provisional and based on budgets of 28 State governments of which five are Vote on Account.

@ : Includes external liabilities of the Centre calculated at historical exchange rate.

Note : Negative sign (-) indicates surplus in deficit indicators.

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 (₹ crore)

Year	Fiscal Deficit		Primary Deficit		Net RBI Credit#	Conventional Deficit	Revenue Deficit
	Gross	Net	Gross	Net			
1	2	3	4	5	6	7	8
1990-91	18,786	14,531	10,131	8,280	420	-72	5,309
1995-96	30,869	26,845	9,030	10,791	16	-2,680	8,620
2000-01	87,922	85,576	36,936	45,550	-1,092	-2,379	55,316
2007-08	75,455	68,964	-24,376	-18,230	1,140	-13,410	-42,943
2008-09	1,34,589	1,29,690	31,634	43,092	-1,609	-8,959	-12,672
2009-10* P	1,88,820	1,79,418	76,013	81,921	186	7,372	31,018
2010-11* (RE) P	2,07,857	1,95,813	80,908	86,029	2,515	24,867	22,916
2011-12* (BE) P	1,99,427	1,82,541	59,325	59,427	..	-16,136	-16,580
As Percentage to GDP at Current Market Prices							
1990-91	3.30	2.55	1.78	1.45	0.07	-0.01	0.93
1995-96	2.59	2.25	0.76	0.91	0.00	-0.22	0.72
2000-01	4.18	4.07	1.76	2.17	-0.05	-0.11	2.63
2007-08	1.51	1.38	-0.49	-0.37	0.02	-0.27	-0.86
2008-09	2.41	2.32	0.57	0.77	-0.03	-0.16	-0.23
2009-10* P	2.88	2.74	1.16	1.25	0.00	0.11	0.47
2010-11* (RE) P	2.64	2.49	1.03	1.09	0.03	0.32	0.29
2011-12* (BE) P	2.22	2.03	0.66	0.66	..	-0.18	-0.18

B : Select Budgetary Variables of State Governments (Per cent)

Item	1990-00 (Average)	2009-10 P	2010-11 P (RE)	2011-12 P (BE)
1	2	3	4	5
1. GFD / Total Expenditure (excluding recoveries)	22.4	19.0	17.0	14.7
2. Revenue Deficit / Revenue Expenditure	9.5	3.9	2.3	-1.5
3. Conventional Deficit / Aggregate Disbursements	-0.04	0.01	0.6	-0.5
4. Revenue Deficit / GFD	36.2	16.4	11.0	-8.3
5. Non-Developmental Revenue Expenditure / Revenue Receipts	39.8	39.2	37.0	36.3
6. Interest Payments/Revenue Receipts	16.6	14.7	13.1	12.6
7. Developmental Expenditure / GDP	10.0	9.7	10.0	9.7
of which :				
Social Sector Expenditure / GDP	5.7	6.0	6.3	6.1
8. Non-Developmental Expenditure / GDP	4.6	4.7	4.7	4.6
9. States' Own Tax Revenue/GDP	5.2	5.5	5.8	6.0
10. States' Own Non Tax Revenue / GDP	1.7	1.4	1.3	1.1

RE : Revised Estimates. BE : Budget Estimates. .. : Not Available.

P : Provisional data. GFD : Gross Fiscal Deficit.

* : Data from 2009-10 onwards pertain to 28 State Governments *of which* five are Vote on Account.

\# : Data pertain to State governments having accounts with the Reserve Bank of India.

Note : 1. Negative sign (-) indicates surplus in deficit indicators.

2. The net RBI credit to State governments refers to variations in loans and advances given to them by the RBI net of their incremental deposits with the RBI.

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			
	2007-08	2008-09	2009-10R	2010-11 P
1	2	3	4	5
I. Primary Products	**27,551.9**	**25,335.4**	**26,396.5**	**35,358.7**
A. Agricultural & Allied Products	18,432.1	17,534.9	17,734.1	24,696.1
B. Ores & Minerals	9,119.8	7,800.5	8,662.5	10,662.6
II. Manufactured Goods	**102,978.8**	**123,148.9**	**115,180.7**	**168,098.1**
A. Leather & Manufactures	3,502.5	3,556.0	3,361.1	3,789.3
B. Chemicals & Related Products	21,193.8	22,708.1	22,908.8	28,979.6
C. Engineering Goods	37,365.2	47,285.6	38,271.3	68,784.1
D. Textiles & Textile Products	19,425.7	20,016.4	19,853.0	23,312.2
E. Gems & Jewellery	19,678.7	27,955.2	28,996.3	40,790.7
F. Handicrafts	508.2	301.0	224.8	233.1
III. Petroleum Products	**28,363.1**	**27,547.0**	**28,192.0**	**41,918.0**
IV. Others	**4,010.4**	**6,768.2**	**8,982.1**	**9,027.3**
Total Exports (I+II+III+IV)	**162,904.2**	**182,799.5**	**178,751.4**	**254,402.1**
Imports of principal commodities				
I. Bulk Imports	**112,744.7**	**138,791.1**	**125,315.2**	**150,489.7**
A. Petroleum, Petroleum Products & Related Material	79,644.5	93,671.7	87,135.9	106,068.2
B. Bulk Consumption Goods	4,600.3	4,975.3	9,012.7	8,720.3
C. Other Bulk Items	28,499.9	40,144.0	29,166.5	35,701.1
II. Non-Bulk Imports	**138,694.4**	**160,042.8**	**163,057.8**	**202,085.4**
A. Capital Goods	70,110.5	71,833.1	65,865.0	71,627.2
B. Mainly Export Related Items	20,768.3	31,930.8	31,270.0	49,639.4
C. Others	47,815.7	56,278.9	65,922.8	80,818.7
Total Imports (I+II)	**251,439.2**	**298,833.9**	**288,372.9**	**352,575.0**

P : Provisional. R : Revised.

Source : DGCI & S.

APPENDIX TABLE 18: INDIA'S OVERALL BALANCE OF PAYMENTS

Item	₹ crore			US $ million		
	2008-09	2009-10 PR	2010-11 P	2008-09	2009-10 PR	2010-11 P
1	2	3	4	5	6	7
A. CURRENT ACCOUNT						
1 Exports, f.o.b.	8,57,960	8,62,333	11,39,517	189,001	182,235	250,468
2 Imports, c.i.f.	14,05,412	14,23,079	17,34,545	308,521	300,609	380,935
3 Trade Balance	**-5,47,452**	**-5,60,746**	**-5,95,028**	**-119,520**	**-118,374**	**-130,467**
4 Invisibles, Net	4,19,821	3,80,120	3,92,494	91,605	79,991	86,186
a) 'Non-Factor' Services	2,48,406	1,69,843	2,17,058	53,916	35,726	47,664
of which :						
Software Services	2,12,242	2,35,161	2,68,538	46,300	49,705	59,001
b) Income	-32,923	-38,000	-67,734	-7,110	-8,040	-14,863
c) Private Transfers	2,03,209	2,47,113	2,43,102	44,567	52,055	53,368
d) Official Transfers	1,129	1,164	68	232	250	17
5 Current Account Balance	**-1,27,631**	**-1,80,626**	**-2,02,532**	**-27,915**	**-38,383**	**-44,281**
B. CAPITAL ACCOUNT						
1 Foreign Investment, Net (a+b)	**22,685**	**2,43,641**	**1,72,154**	**5,785**	**51,167**	**37,434**
a) Direct Investment	**87,734**	**89,675**	**32,776**	**19,816**	**18,771**	**7,142**
of which :						
i) In India	**1,70,819**	**1,57,894**	**1,06,598**	**37,672**	**33,124**	**23,364**
Equity	1,25,621	1,09,349	62,970	27,863	22,907	13,792
Re-invested Earnings	41,541	41,125	42,937	9,032	8,668	9,424
Other Capital	3,657	7,420	691	776	1,549	148
ii) Abroad	**-83,085**	**-68,219**	**-73,822**	**-17,855**	**-14,353**	**-16,222**
Equity	-63,889	-44,331	-34,946	-13,688	-9,314	-7,674
Re-invested Earnings	-4,986	-5,143	-4,939	-1,084	-1,084	-1,084
Other Capital	-14,210	-18,745	-33,937	-3,083	-3,955	-7,464
b) Portfolio Investment	**-65,049**	**1,53,966**	**1,39,378**	**-14,031**	**32,396**	**30,292**
In India	-64,200	1,53,885	1,44,679	-13,854	32,376	31,471
Abroad	-849	81	-5301	-177	20	-1,179
2 External Assistance, Net	**11,558**	**13,612**	**22,480**	**2,441**	**2,893**	**4,941**
Disbursements	24,435	27,863	35,868	5,232	5,898	7,881
Amortisation	12,877	14,251	13,388	2,791	3,005	2,940
3 Commercial Borrowings, Net	**36,530**	**13,183**	**54,336**	**7,862**	**2,808**	**11,927**
Disbursements	70,846	70,371	1,05,152	15,223	14,954	23,089
Amortisation	34,316	57,188	50,816	7,361	12,146	11,162
4 Short Term Credit, Net	-13,288	34,878	50,177	-1,985	7,558	10,991
5 Banking Capital	-19,205	9,844	22,025	-3,246	2,084	4,963
of which :						
NRI Deposits, Net	20,430	14,254	14,822	4,290	2,924	3,239
6 Rupee Debt Service	-471	-452	-313	-100	-97	-69
7 Other Capital, Net @	-11,791	-62,574	-47,726	-3,990	-13,016	-10,440
8 Total Capital Account	**26,018**	**2,52,132**	**2,73,133**	**6,768**	**53,397**	**59,747**
C. Errors & Omissions	**4,498**	**-7,269**	**-11,152**	**1,067**	**-1573**	**-2416**
D. Overall Balance [A(5)+B(8)+C]	**-97,115**	**64,237**	**59,449**	**-20,080**	**13,441**	**13,050**
E. Monetary Movements (F+G)	**97,115**	**-64,237**	**-59,449**	**20,080**	**-13,441**	**-13,050**
F. IMF, Net	**0**	**0**	**0**	**0**	**0**	**0**
G. Reserves and Monetary Gold (Increase -, Decrease +)	**97,115**	**-64,237**	**-59,449**	**20,080**	**-13,441**	**-13,050**
of which : SDR allocation	–	-24,983	–	–	-5,160	–

P : Provisional. PR : Partially 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	2006-07	2007-08	2008-09	2009-10 P	2010-11 P
1	2	3	4	5	6
Total FDI	9,307	19,425	22,697	22,461	14,939
Country-wise Inflows					
Mauritius	3,780	9,518	10,165	9,801	5,616
Singapore	582	2,827	3,360	2,218	1,540
U.S.A	706	950	1,236	2,212	1,071
Cyprus	58	570	1,211	1,623	571
Japan	80	457	266	971	1,256
Netherlands	559	601	682	804	1,417
United Kingdom	1,809	508	690	643	538
Germany	116	486	611	602	163
UAE	215	226	234	373	188
France	100	136	437	283	486
Switzerland	57	192	135	96	133
Hong Kong	60	106	155	137	209
Spain	62	48	363	125	183
South Korea	68	86	95	159	136
Luxembourg	–	15	23	40	248
Others	1,055	2,699	3,035	2,376	1,184
Sector-wise Inflows					
Manufacture	1,641	3,726	4,777	5,143	4,793
Construction	967	2,551	2,237	3,516	1,599
Financial Services	1,330	3,850	4,430	2,206	1,353
Real Estate Activities	431	1,336	1,886	2,191	444
Electricity and other Energy Generation, Distribution & Transmission	174	829	669	1,877	1,338
Communication Services	423	66	2,067	1,852	1,228
Business Services	2,425	1,158	643	1,554	569
Miscellaneous Services	298	1,901	1,458	888	509
Computer Services	824	1,035	1,647	866	843
Restaurants & Hotels	153	280	343	671	218
Retail & Wholesale Trade	47	200	294	536	391
Mining	42	461	105	268	592
Transport	165	816	401	220	344
Trading	82	176	400	198	156
Education, Research & Development	43	156	243	91	56
Others	262	884	1,097	384	506

Note : Includes FDI through SIA/FIPB and RBI routes only.

APPENDIX TABLE 20: INDIA'S FOREIGN EXCHANGE RESERVES

End of Month	Foreign Exchange Reserves (₹crore)					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	339	12,794	47,287	938	61,358	108	4,078	15,068	299	19,553	13,841	6,595
Mar-95	23	13,752	66,005	1,050	80,830	7	4,370	20,809	331	25,517	16,352	2,511
Mar-96	280	15,658	58,446	1,063	75,447	82	4,561	17,044	310	21,997	15,054	-1,298
Mar-97	7	14,557	80,368	1,046	95,978	2	4,054	22,367	291	26,714	19,272	4,218
Mar-98	4	13,394	1,02,507	1,117	1,17,022	1	3,391	25,975	283	29,650	22,200	2,929
Mar-99	34	12,559	1,25,412	2,816	1,40,821	8	2,960	29,522	663	33,153	24,413	2,213
Mar-00	16	12,973	1,52,924	2,870	1,68,783	4	2,974	35,058	658	38,694	28,728	4,315
Mar-01	11	12,711	1,84,482	2,873	2,00,077	2	2,725	39,554	616	42,897	34,034	5,306
Mar-02	50	14,868	2,49,118	2,977	2,67,013	10	3,047	51,049	610	54,716	43,876	9,842
Mar-03	19	16,785	3,41,476	3,190	3,61,470	4	3,534	71,890	672	76,100	55,394	11,518
Mar-04	10	18,216	4,66,215	5,688	4,90,129	2	4,198	107,448	1,311	112,959	76,298	20,904
Mar-05	20	19,686	5,93,121	6,289	6,19,116	5	4,500	135,571	1,438	141,514	93,666	17,368
Mar-06	12	25,674	6,47,327	3,374	6,76,387	3	5,755	145,108	756	151,622	105,231	11,565
Jun-06	2	28,479	7,18,701	3,518	7,50,700	-	6,180	155,968	764	162,912	110,123	4,892
Sep-06	6	28,506	7,27,733	3,502	7,59,747	1	6,202	158,340	762	165,305	111,967	6,736
Dec-06	4	28,824	7,52,738	2,416	7,83,982	1	6,517	170,187	546	177,251	117,822	12,591
Mar-07	8	29,573	8,36,597	2,044	8,68,222	2	6,784	191,924	469	199,179	131,890	26,659
Jun-07	6	27,655	8,39,913	1,875	8,69,449	1	6,787	206,114	460	213,362	140,780	8,890
Sep-07	8	29,275	9,53,581	1,740	9,84,604	2	7,367	239,955	438	247,762	159,164	27,274
Dec-07	13	32,819	10,50,485	1,703	10,85,020	3	8,328	266,553	432	275,316	174,223	42,333
Mar-08	74	40,124	11,96,023	1,744	12,37,965	18	10,039	299,230	436	309,723	188,339	56,449
Jun-08	48	39,548	12,98,552	2,269	13,40,417	11	9,208	302,340	528	312,087	191,040	2,701
Sep-08	17	40,205	13,01,645	2,194	13,44,061	4	8,565	277,300	467	286,336	183,876	-4,463
Dec-08	13	41,110	11,94,790	4,248	12,40,161	3	8,485	246,603	877	255,968	166,184	-22,155
Mar-09	6	48,793	12,30,066	5,000	12,83,865	1	9,577	241,426	981	251,985	168,544	-19,795
Jun-09	2	46,914	12,16,345	5,974	12,69,235	1	9,800	254,093	1,248	265,142	170,814	2,270
Sep-09	25,096	49,556	12,70,049	6,557	13,51,258	5,224	10,316	264,373	1,365	281,278	177,533	8,989
Dec-09	24,128	85,387	12,07,065	6,655	13,23,235	5,169	18,292	258,583	1,426	283,470	180,820	12,276
Mar-10	22,596	81,188	11,49,650	6,231	12,59,665	5,006	17,986	254,685	1,380	279,057	183,803	15,259
Jun-10	22,719	92,704	11,63,266	6,118	12,84,807	4,875	19,894	249,628	1,313	275,710	186,429	2,626
Sep-10	23,046	92,157	11,91,418	8,953	13,15,574	5,130	20,516	265,231	1,993	292,870	188,197	4,394
Dec-10	22,753	1,00,686	12,00,077	8,838	13,32,353	5,078	22,470	267,814	1,972	297,334	193,070	9,267
Mar-11	20,401	1,02,572	12,24,883	13,158	13,61,013	4,569	22,972	274,330	2,947	304,818	192,254	8,451

: Gold has been valued close to international market price.

* : Variations over the previous March.

Note : 1. Gold holdings include acquisition of gold worth US $ 191million 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 Rs. 43.55 crore (US $11.97 million), 38.9 tonnes of gold amounting to Rs. 1,485.22 crore (US $ 376.0 million) and 0.06 tonnes of gold amounting to Rs. 2.13 crore (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.

APPENDIX TABLE 21: INDIA'S EXTERNAL DEBT

(As at end-March)

Item	₹ crore			US $ million		
	2009 R	2010 PR	2011 P	2009 R	2010 PR	2011 P
1	2	3	4	5	6	7
I. Multilateral	**2,01,425**	**1,93,442**	**2,16,628**	**39,538**	**42,859**	**48,464**
A. Government borrowing	1,81,997	1,70,722	1,90,325	35,724	37,825	42,578
i) Concessional	1,27,771	1,16,046	1,20,651	25,080	25,711	26,991
ii) Non-concessional	54,226	54,676	69,674	10,644	12,114	15,587
B. Non-Government borrowing	19,428	22,720	26,303	3,814	5,034	5,886
i) Concessional	0	0	0	0	0	0
ii) Non-concessional	19,428	22,720	26,303	3,814	5,034	5,886
II. Bilateral	**104,997**	**1,01,974**	**1,15,983**	**20,610**	**22,593**	**25,953**
A. Government borrowing	74,662	71,584	80,794	14,655	15,860	18,075
i) Concessional	74,662	71,584	80,794	14,655	15,860	18,075
ii) Non-concessional	0	0	0	0	0	0
B. Non-Government borrowing	30,335	30,390	35,189	5,955	6,733	7,878
i) Concessional	3,262	3,169	4,101	641	702	917
ii) Non-concessional	27,073	27,221	31,088	5,314	6,031	6,961
III. International Monetary Fund	**5,188**	**27,264**	**28,163**	**1,018**	**6,041**	**6,308**
IV. Trade Credit	**73,772**	**76,128**	**83,167**	**14,481**	**16,867**	**18,627**
i) Buyers' credit	64,046	66,965	73,328	12,572	14,837	16,425
ii) Suppliers' credit	3,234	2,938	2,814	635	651	630
iii) Export credit component of bilateral credit	6,492	6,225	7,026	1,274	1,379	1,572
iv) Export credit for defence purposes	0	0	0	0		0
V. Commercial Borrowings	**3,18,209**	**3,19,556**	**3,94,070**	**62,461**	**70,800**	**88,267**
i) Commercial bank loans	2,19,925	2,02,618	2,59,095	43,169	44,891	58,034
ii) Securitized borrowings (including FCCBs) $	91,286	113,245	1,31,708	17,918	25,090	29,501
iii) Loans/securitised borrowings, *etc.*	6,998	3,693	3,267	1,374	818	731
iv) Self Liquidating Loans	0	0	0	0	0	0
VI. NRI & FC(B&O) Deposits (above one-year maturity)	**2,10,118**	**2,17,062**	**2,30,813**	**41,554**	**47,890**	**51,682**
i) FCNR(B)	66,803	64,625	69,658	13,211	14,258	15,597
ii) NR(E)RA	1,19,181	1,18,984	1,17,802	23,570	26,251	26,378
iii) NRO	24,134	33,453	43,352	4,773	7,381	9,707
VII. Rupee Debt *	**7,760**	**7,481**	**7,147**	**1,523**	**1,657**	**1,601**
i) Defence	6,935	6,710	6,416	1,361	1,486	1,437
ii) Civilian +	825	771	731	162	171	164
VIII. Total Long-term Debt (I to VII)	**9,21,469**	**9,42,908**	**10,75,970**	**181,185**	**208,707**	**240,902**
IX. Short-term Debt	**2,20,656**	**2,36,188**	**2,90,147**	**43,313**	**52,329**	**64,990**
i) Trade Related Credits	2,03,345	2,14,267	2,61,006	39,915	47,473	58,462
ii) FII Investment in Govt. T-Bills & other instruments	10,522	15,153	24,214	2,065	3,357	5,424
iii) Investment in Treasury Bills by foreign central banks and international institutions *etc.*	534	467	225	105	103	50
iv) External Debt Liabilities of Central Bank and Commercial Banks	6,255	6,301	4,703	1,228	1,396	1,053
X. GROSS TOTAL	**11,42,125**	**11,79,096**	**13,66,117**	**224,498**	**261,036**	**305,892**
Concessional Debt	2,13,577	1,98,280	2,12,693	41,981	43,930	47,585
As percentage of Total Debt	18.7	16.8	15.6	18.7	16.8	15.6
Short Term Debt						
As percentage of Total Debt	19.3	20.0	21.2	19.3	20.0	21.2
Memo Items:						
Debt Indicators :						
1. Debt Stock - GDP Ratio (in per cent)	20.5	18.0	17.3	20.5	18.0	17.3
2. Debt Service Ratio (per cent) (for fiscal year) (including debt-servicing on non-civilian credits)	4.4	5.5	4.2	4.4	5.5	4.2

P : Provisional. R : Revised. PR : Partially Revised.

$: 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.