REPORT ON CURRENCY AND FINANCE 2006-08

VOLUME I

THE BANKING SECTOR IN INDIA: EMERGING ISSUES AND CHALLENGES

RESERVE BANK OF INDIA

"The findings, views, and conclusions expressed in this Report are entirely those of the contributing staff of the Department of Economic Analysis and Policy (DEAP) and should not necessarily be interpreted as the official views of the Reserve Bank of India".

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FOREWORD

Comprehensive economic reforms have been in process in India for a little over a decade and a half. The main objective of reforms has been to realise the full growth potential of the economy. The efficient functioning of the banking sector is crucial for attaining overall efficiency in the economy through better intermediation of financial resources. Accordingly, wide ranging reforms have been introduced in the banking sector on a continuing basis with a view to creating an efficient, strong, competitive and dynamic banking sector. The focus of the reforms has been deregulating interest rates, removing external constraints, adopting international best practices in regulation and supervision, introducing competition through new private sector banks and foreign banks and providing operational flexibility and functional autonomy to public sector banks. By all accounts, the performance of the banking sector has improved significantly but it is now faced with several newer challenges. The Indian economy is on a high growth path and the banking sector has a crucial role to play in sustaining the growth process. Basel II, which would become fully operational from end-March 2009, poses several challenges not only in terms of implementation but also in terms of raising capital. India is progressively moving towards fuller capital account convertibility which raises several regulatory and supervisory challenges. The operating environment for banks has changed as a result of which banks are increasingly diversifying. Several financial conglomerates have also emerged, necessitating appropriate regulatory arrangements. Technology has led to innovations of complex financial products posing challenges for the regulators. It is, therefore, apposite to have an in-depth analysis of various aspects of banking operations in India with a view to assessing their strengths and weaknesses, various challenges faced by the banking sector and what needs to be done to deal with them.

With a view to critically analysing the issues of contemporary relevance in the area of central banking, the Department of Economic Analysis and Policy of the Reserve Bank introduced theme based **Report on Currency and Finance** from 1998-99. So far, eight Reports have been released encompassing several important issues concerning central banking. Special mention may be made of the Reports brought out in the last three years which analysed in detail **The Evolution of Monetary Policy** in the 2003-04 Report, **The Evolution of Central Banking in India** in the 2004-05 Report and **Development of Financial Markets and Role of the Central Bank** in 2005-06. Along with these three Reports, this Report covers most of the functions of the Reserve Bank. The theme of this year's Report is **"The Banking Sector in India : Emerging Issues and Challenges**". The thrust of the Report is on delineating the various existing and emerging challenges faced by the banking sector and to suggest measures to address them. The Report, wherever possible, has benchmarked the performance/practices of the Indian banking sector against the international best practices. The focus of the Report is on scheduled commercial banks, although other segments of the banking sector such as urban co-operative banks, regional rural banks have also been dealt with, wherever appropriate and where relevant data are available. Keeping in view the magnitude and coverage of this Report, this edition of the Report on Currency and Finance is for the period 2006-08 and is being issued as two volumes, *i.e.,* Volume I (Chapter I to V) and Volume II (Chapter VI to XI).

The Report has been prepared in the Department of Economic Analysis and Policy with the active involvement of operational departments. Dr. Janak Raj, Adviser, supervised and coordinated the entire work of the Report, under the overall supervision of Dr. G.S. Bhati, the then Principal Adviser.

The core team involved in the drafting of the Report comprised Asha P Kannan, Nishita Raje, Rajan Goyal, Muneesh Kapur, Dhritidyuti Bose, Kumudini Hajra, J K Khundrakpam, Rekha Misra, Anupam Prakash, P K Panda, Anupam Sonal, A Karunagaran, Abhiman Das, Bhupal Singh, Sunil Kumar, J B Singh, PSS Vidyasagar, Rajeev Jain, Rajmal, Jai Chander, Pankaj Setiya, G. Jeyakumar, Prabhat Gupta, R. Shukla, J Bernard, R. Sudeep, Ashish Kumar Verma, Kumarjit Mandal, Dipankar Mitra, Snehal Herwadkar, Binod B Bhoi, S. Chinngaihlian, Arun Vishnu Kumar, Samir R. Behra, A. N. Yadav, Avdhesh Shukla, Asish Thomas George, Rakhe P. B., Thangzason Sonna, Rakesh Kumar, Indrani Manna, Subhajit Roy and Abhilasha.

The team benefited from the significant suggestions from V. Leeladhar, Shyamala Gopinath, Usha Thorat and K. Kanagasabapathy.

Contributions by operational departments, *viz*., Department of Banking Operations and Development, Department of Banking Supervision, Department of Statistics and Information Management, Monetary Policy Department, Rural Planning and Credit Department, Urban Banks Department, Department of Information Technology and Deposit Insurance and Credit Guarantee Corporation are highly appreciated.

I place on record my deep appreciation of the professional skills and utmost dedication of the officials of the Department of Economic Analysis and Policy, without which it would not have been possible to bring out this Report.

Rakesh Mohan
Deputy Governor

August 28, 2008

CONTENTS

VOLUME I

(Contd...)

VOLUME II

(Contd...)

LIST OF BOX ITEMS

(Contd...)

(Contd...)

LIST OF CHARTS

(Contd...)

(Contd...)

(Contd...)

LIST OF TABLES

(Contd...)

(Contd...)

(Contd...)

(Contd...)

(Contd...)

(Contd...)

(Contd...)

(Contd...)

(Contd...)

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ABBREVIATIONS

ABA	–	Australian Bankers' Association
ABS	–	Asset-Backed Securities
ACF	–	Autocorrelation Function
ADB	–	Asian Development Bank
ADI	–	Authorised Deposit-Taking Institution
ADRs	–	American Depository Receipts
AE	–	Allocative Efficiency
AFI	–	Annual Financial Inspection
AFS	–	Available for Sale
AHCs	–	Asset Holding Companies
AIDIS	–	All India Debt and Investment Survey
AIFI	–	All India Financial Institution
AIG	–	Accord Implementation Group
A-IRB	–	Advanced-Internal Ratings Based Approach
AIRCS	–	All India Rural Credit Survey
AIs	–	Authorised Institutions
ALCO	–	Asset Liability Management Committee
ALM	–	Asset-Liability Management
AMA	–	Advanced Measurement Approach
ANBC	–	Adjusted Net Bank Credit
APMAS	–	Andhra Pradesh Mahila Abhivrudhi Society
APRA	–	Australian Prudential Regulation Authority
ARC	–	Agricultural Refinance Corporation
ARCs	–	Asset Reconstruction Companies
ARDC	–	Agricultural Refinance and Development Corporation
ARIMA	–	Auto Regressive Integrated Moving Average
ASA	–	Alternative Standardised Approach
AS	–	Accounting Standards
ATF	–	Aviation Turbine Fuel
ATM	–	Automated Teller Machine
BAAC	–	Bank for Agriculture and Agricultural Cooperatives
BaFin	–	German Federal Financial Supervisory Authority
BCBS	–	Basel Committee on Banking Supervision
BCP	–	Business Continuity Planning
BCPs	–	Basel Core Principles
BCs	–	Business Correspondents
BCSBI	–	Banking Codes and Standards Board of India
BE	–	Budget Estimates
BEEPS	–	Business Environment and Enterprises Performance Surveys
BF	–	Business Facilitator
BFS	–	Board for Financial Supervision
BGFRS	–	Board of Governors of the Federal Reserve System
BHC	–	Bank Holding Company
BIA	–	Basic Indicator Approach
BIS	–	Bank for International Settlements
BoE	–	Bank of England
BoJ	–	Bank of Japan
BoP	–	Balance of Payments
BoT	–	Bank of Thailand
BPLR	–	Benchmark Prime Lending Rate
BPO	–	Business Process Outsourcing
BR Act	–	Banking Regulation Act
BRAC	–	Building Resources Across Community

BRI	–	Bank Rakyat Indonesia
BSE	–	Bombay Stock Exchange
BSP	–	Bangko Sentral ng Pilipinas
BSR	–	Basic Statistical Returns
CALCS	–	Capital Adequacy, Asset Quality, Liquidity, Compliance and Systems
CAMELS	–	Capital Adequacy, Asset Quality, Management, Earnings, Liquidity, Systems and Control
CAR	–	Capital to Assets Ratio
CARE	–	Credit Analysis and Research Limited
CAS	–	Credit Authorisation Scheme
CBFA	–	Commission Bancaire, Financiere et des Assurances
CBLO	–	Collateralised Borrowing and Lending Obligation
CBRA	–	Conduct of Business Regulatory Agency
CBS	–	Core Banking Systems
CBSR	–	Committee on Banking Sector Reforms
CDIC	–	Canada Deposit Insurance Corporation
CDMA	–	Code Division Multiple Access
CDOs	–	Collateralised Debt Obligations
CDR	–	Corporate Debt Restructuring
CD	–	Certificates of Deposit
CDS	–	Credit Default Swap
CE	–	Cost Efficiency
CEO	–	Chief Executive Officer
CEPS	–	Centre for European Policy Studies
CFES	–	Centralised Funds Enquiry System
CFL	–	Compact Fluorescent Lamp
CFMS	–	Centralised Funds Management System
CFS	–	Committee on Financial System
CFS	–	Consolidated Financial Statement
CFTS	–	Centralised Funds Transfer System
CG	–	Capital Goods
CIBIL	–	Credit Information Bureau (India) Limited
CLN	–	Credit Linked Notes
CMD	–	Chairman-cum-Managing Director
CoR	–	Certificate of Registration
CP	–	Commercial Paper
CPI-AL	–	Consumer Price Index (Agriculture Labourers)
CPI-IW	–	Consumer Price Index (Industrial Workers)
CPI-RL	–	Consumer Price Index (Rural Labourers)
CPI-UNME	–	Consumer Price Index (Urban Non-Manual Employees)
CPSB	–	Corp Pragathi Savings Bank
CPSMS	–	Central Plan Scheme Monitoring System
CRA	–	Community Reinvestment Act
CRAR	–	Capital to Risk-Weighted Assets Ratio
CRCS	–	Central Registrar of Cooperative Societies
CRD	–	Capital Requirements Directive
CRISIL	–	Credit Rating Information Services of India Limited
CRM	–	Credit Risk Mitigation
CRR	–	Cash Reserve Ratio
CSO	–	Central Statistical Organisation
CSOs	–	Civil Society Organisations
DCC	–	District Consultative Committee
DCCBs	–	District Central Cooperative Banks
DEA	–	Data Envelopment Approach
DEs	–	Designated Entities

DFIs	–	Development Finance Institutions
DFSA	–	Danish Financial Supervisory Authority
DGCI&S	–	Directorate General of Commercial Intelligence and Statistics
DICGC	–	Deposit Insurance and Credit Guarantee Corporation
DIS	–	Deposit Insurance Systems
DMU	–	Decision Making Unit
DoT	–	Department of Treasury
DRI	–	Differential Rate of Interest
DRT	–	Debt Recovery Tribunal
EAD	–	Exposure at Default
EBG	–	Electronic Banking Group
EC	–	Economic Capital
ECA	–	Export Credit Agency
ECAAs	–	External Credit Assessment Agencies
ECB	–	European Central Bank
ECBs	–	External Commercial Borrowings
EEE	–	Exempt-Exempt-Exempt
EET	–	Exempt-Exempt-Taxed
EFT	–	Electronic Funds Transfer
EL	–	Expected Losses
EMEs	–	Emerging Market Economies
EMI	–	Equated Monthly Installment
EMU	–	European Monetary Union
ENSR	–	European Network for Social and Economic Research
EPOS	–	Electronic Point of Sale
ERM	–	Enterprise-wide Risk Management
EU	–	European Union
EXIM Bank	–	Export-Import Bank
FCAC	–	Fuller Capital Account Convertibility
FCAC	–	Financial Customer Agency of Canada
FCNR(A)	–	Foreign Currency Non-Resident (Account)
FCNR(B)	–	Foreign Currency Non-Resident Accounts (Banks)
FDI	–	Foreign Direct Investment
FDIC	–	Federal Deposit Insurance Corporation
FHC	–	Financial Holding Company
FI	–	Financial Institutions
FII	–	Foreign Institutional Investor
FIRBA	–	Foundation Internal Ratings Based Approach
FIs	–	Financial Intermediaries
FMCG	–	Fast Moving Consumer Goods
FoF	–	Flow of Funds
FOMC	–	Federal Open Market Committee
FRA	–	Forward Rate Agreement
FRB	–	Federal Reserve Bank
FRBM	–	Fiscal Responsibility and Budget Management
FRBSF	–	Federal Reserve Bank of San Francisco
FRL	–	Fiscal Responsibility Legislation
FRL	–	Full Reservoir Level
FSA	–	Financial Services Authority
FSF	–	Financial Stability Forum
FSI	–	Financial Stability Institute
GATS	–	General Agreement on Trade in Services
GB	–	Grameen Bank
GCCs	–	General Credit Cards
GDCF	–	Gross Domestic Capital Formation
GDP	–	Gross Domestic Product
GDRs	–	Global Depository Receipts
GDS	–	Gross Domestic Saving

GFD	–	Gross Fiscal Deficit
GLB Act	–	Gramm-Leach-Bliley Act
Gnie	–	Government not included elsewhere
GoI	–	Government of India
GOLD	–	Global Operational Loss Database
GPRS	–	General Packet Radio Service
GV	–	Grama Vidiyal
HDFC	–	Housing Development Finance Corporation
HFCs	–	Housing Finance Companies
HFT	–	Held-for-Trading
HHI	–	Herfindahl-Hirschman Index
HKMA	–	Hong Kong Monetary Authority
HSBC	–	Hong Kong and Shanghai Banking Corporation
HTM	–	Held-to-Maturity
IADI	–	International Association of Deposit Insurers
IAIS	–	International Association of Insurance Supervisors
IAY	–	Indira Awas Yojana
IBA	–	Indian Banks' Association
IBL	–	Inter-Bank Liabilities
ICAAP	–	Internal Capital Adequacy Assessment Process
ICAI	–	Institute of Chartered Accountants of India
ICRA	–	Investment Information and Credit Rating Agency
ICS	–	Investment Climate Survey
IDA	–	Individual Development Account
IDBI	–	Industrial Development Bank of India Ltd.
IDRBT	–	Institute for Development and Research in Banking Technology
IFCI	–	Industrial Finance Corporation of India Ltd.
IFR	–	Investment Fluctuation Reserve
IIBI	–	Industrial Investment Bank of India Ltd.
IIMS	–	India Invest Market Solutions
IIP	–	Index of Industrial Production
IMA	–	Internal Measurement Approach
IMD	–	India Meteorological Department
IMDs	–	India Millennium Deposits
IMF	–	International Monetary Fund
INFINET	–	Indian Financial Network
IOSCO	–	International Organisation of Securities Commissions
IPDI	–	Innovative Perpetual Debt Instruments
IPO	–	Initial Public Offer
IRBA	–	Internal Ratings Based Approach
IRDA	–	Insurance Regulatory and Development Authority
IRR	–	Interest Rate Risk
IRS	–	Interest Rate Swap
ISO	–	International Organisation for Standardisation
IT	–	Information Technology
ITB	–	Intermediate Treasury Bill
ITES	–	Information Technology Enabled Services
ITEs	–	Intra-Group Transactions and Exposures
JNNURM	–	Jawaharlal Nehru National Urban Renewal Mission
KCC	–	Kisan Credit Card
KUMQRP	–	Keio University Market Quality Research Project
KYC	–	Know Your Customer
LAF	–	Liquidity Adjustment Facility
LBS	–	Lead Bank Scheme
LDA	–	Loss Distribution Approach
LDCs	–	Least Developed Countries

LGD	–	Loss Given Default
LIC	–	Life Insurance Corporation of India
LIHTC	–	Low-Income Housing Tax Credit
LoLR	–	Lender of Last Resort
LPA	–	Long Period Average
LPG	–	Liquefied Petroleum Gas
LTO	–	Long Term Operations
M&As	–	Mergers and Acquisitions
M_3	–	Broad Money
MAS	–	Monetary Authority of Singapore
MBS	–	Mortgage-Backed Securities
M-CRIL	–	Micro-Credit Ratings International Limited
MFIs	–	Micro-Finance Institutions
MICR	–	Magnetic Ink Character Recognition
MIS	–	Management Information System
MLR	–	Minimum Lending Rate
MoU	–	Memorandum of Understanding
MPBF	–	Maximum Permissible Bank Finance
MPC	–	Monetary Policy Committee
MPI	–	Malmquist Productivity Index
MSME	–	Micro, Small and Medium Enterprise
MSMED	–	Micro, Small and Medium Enterprises Development
MSS	–	Market Stabilisation Scheme
NABARD	–	National Bank for Agriculture and Rural Development
NASSCOM	–	National Association of Software and Services Companies
NBC	–	Net Bank Credit
NBFC-ND-SI	–	Systemically Important Non-Deposit Taking Non-Banking Financial Company
NBFCs	–	Non-Banking Financial Companies
NCAER	–	National Council of Applied Economic Research
NCAF	–	New Capital Adequacy Framework
NCC	–	National Credit Council
NCDC	–	National Cooperative Development Council
NCDs	–	Non-Convertible Debentures
NDS	–	Negotiated Dealing System
NDS-OM	–	Negotiated Dealing System-Order Matching
NDTL	–	Net Demand and Time Liabilities
NEER	–	Nominal Effective Exchange Rate
NEFT	–	National Electronic Funds Transfer
NFC	–	Near Field Communication
NGOs	–	Non-Governmental Organisations
NHB	–	National Housing Bank
NIM	–	Net Interest Margin
NMFI	–	National Mission for Financial Inclusion
NNPAs	–	Net Non-Performing Assets
NPAs	–	Non-Performing Assets
NPL	–	Non-Performing Loan
NR(E)RA	–	Non-Resident (External) Rupee Account
NR(NR)RD	–	Non Resident (Non-Repatriable) Rupee Deposit
NREGS	–	National Rural Employment Guarantee Scheme
NRFIP	–	National Rural Financial Inclusion Plan
NRIs	–	Non-Resident Indians
NRO	–	Non-Resident Ordinary
NSC	–	National Savings Certificates
NSE	–	National Stock Exchange
NSKFDC	–	National Safai Karmacharis Finance and Development Corporation
NSSF	–	National Small Savings Fund

NSSO	–	National Sample Survey Organisation
NTR	–	Non-Tax Revenue
OBC	–	Oriental Bank of Commerce
OBE	–	Off-Balance Sheet Exposures
OD	–	Overdraft
OECD	–	Organisation for Economic Cooperation and Development
OFIs	–	Other Financial Institutions
OFSA	–	Oracle Financial Services Application
OMOs	–	Open Market Operations
OMS	–	Open Market Sales
ONGC	–	Oil and Natural Gas Corporation
OPEC	–	Organisation of Petroleum Exporting Countries
OSMOS	–	Off-Site Surveillance and Monitoring System
OSS	–	Off-Site Surveillance System
OTS	–	One Time Settlement
OWS	–	Other Welfare Schemes
P/E	–	Price to Earnings
PA	–	Passport Account
PACF	–	Partial Autocorrelation Function
PACS	–	Primary Agricultural Credit Society
PAT	–	Profit After Tax
PBC	–	People's Bank of China
PBT	–	Profit Before Tax
PCA	–	Prompt Corrective Action
PCFC/EBR	–	Pre-Shipment Credit in Foreign Currency / Export Bills Rediscounting
PCPS	–	Perpetual Cumulative Preference Shares
PD	–	Probability of Default
PDs	–	Primary Dealers
PDCF	–	Primary Dealer Credit Facility
PDS	–	Public Distribution System
PFRA	–	Prudential Financial Regulatory Agency
PFRDA	–	Pension Fund Regulatory and Development Authority
PIN	–	Personal Identification Number
PIO	–	Principal Inspecting Officer
PLR	–	Prime Lending Rate
PNCPS	–	Perpetual Non-Cumulative Preference Shares
PoS	–	Points of Sale
PPP	–	Public Private Partnership
P-R	–	Panzar-Rosse
PSBs	–	Public Sector Banks
PSU	–	Public Sector Undertaking
QIS-5	–	Fifth Quantitative Impact Study
RBAP MABS	–	Rural Bankers' Association of the Philippines Microenterprise Access to Banking Services
RBI	–	Reserve Bank of India
RBS	–	Risk-Based Supervision
RCPS	–	Redeemable Cumulative Preference Shares
RCs	–	Reconstruction Companies
RCS	–	Registrar of Cooperative Society
RD	–	Revenue Deficit
RE	–	Revised Estimates
REER	–	Real Effective Exchange Rate
RFID	–	Radio Frequency Identification Device
RIBs	–	Resurgent India Bonds
RIDF	–	Rural Infrastructure Development Fund
RNBC	–	Residuary Non-Banking Company
RNCPS	–	Redeemable Non-Cumulative Preference Shares
RoA	–	Return on Assets

RoE	–	Return on Equity
RPO	–	Recovery Point Objective
RPT	–	Risk Profile Template
RRBs	–	Regional Rural Banks
RTCP	–	Rural Transformation Centre Programme
RTGS	–	Real Time Gross Settlement
RTO	–	Recovery Time Objective
RTP	–	Reserve Tranche Position
RWA	–	Risk-Weighted Assets
SA	–	Standardised Approach
SARFAESI	–	Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest
SBI	–	State Bank of India
SBITCA	–	SBI Tiny Card Accounts
SBP	–	State Bank of Pakistan
SC	–	Scheduled Caste
SCB	–	State Co-Operative Bank
SCBs	–	Scheduled Commercial Banks
SCILL	–	Standard Chartered Investment and Loans Limited
SCs	–	Securitisation Companies
SDA	–	Standardised Duration Approach
SDRs	–	Special Drawing Rights
SEBI	–	Securities and Exchange Board of India
SEDF	–	Small Enterprises Development Fund
SEU	–	Social Exclusion Unit
SFC	–	Securities and Futures Commission
SHGs	–	Self-Help Groups
SHPIs	–	Self-Help Promoting Institutions
SIDBI	–	Small Industries Development Bank of India
SIFIs	–	Systemically Important Financial Intermediaries
SIM	–	Subscriber Identity Module
SIV	–	Special Investment Vehicle
SLBC	–	State Level Bankers' Committee
SLR	–	Statutory Liquidity Ratio
SMA	–	Seasonal Moving Average
SME	–	Small and Medium Enterprise
SMERA	–	Small and Medium Enterprises Rating Agency
SMO	–	Special Market Operation
SMS	–	Short Message Service
SNB	–	Swiss National Bank
SNDs	–	Subordinated Notes and Debentures
SPV	–	Special Purpose Vehicle
SREP	–	Supervisory Reviews and Evaluation Process
SRP	–	Supervisory Review Process
SSA	–	Simplified Standardised Approach
SSI	–	Small Scale Industry
SSP	–	Social Security Pensions
ST	–	Scheduled Tribe
STCCS	–	Short-Term Co-operative Credit Structure
TAF	–	Term Auction Facility
TAFCUBs	–	Task Force for Urban Co-operative Banks
TAP	–	Text-A-Payment
TB	–	Thrift Banks
TBA	–	Total Branch Automation
TE	–	Technical Efficiency
TFC	–	Twelfth Finance Commission
TFCI	–	Tourism Finance Corporation of India Ltd.
TFP	–	Total Factor Productivity
TPDS	–	Targeted Public Distribution System
TRM	–	Trading Risk Management
TRS	–	Total Return Swap

UASL	–	Unified Access Service License
UCBs	–	Urban Co-operative Banks
UCCs	–	Urban Credit Co-operatives
UD	–	Unit Desai
UI	–	User Interface
UK	–	United Kingdom
UL	–	Unexpected Losses
USA	–	United States of America
UT	–	Union Territory
UTI	–	Unit Trust of India
VaR	–	Value at Risk
VAT	–	Value Added Tax
VCF	–	Venture Capital Fund
VRS	–	Voluntary Retirement Scheme
VSAT	–	Very Small Aperture Terminal
WADR	–	Weighted Average Discount Rate
WBES	–	World Business Environment Survey
WCTL	–	Working Capital Term Loans
WDI	–	World Development Indicators
WMAs	–	Ways and Means Advances
WOS	–	Wholly Owned Subsidiary
WPI	–	Wholesale Price Index
WTI	–	West Texas Intermediate
WTO	–	World Trade Organisation
Y-o-Y	–	Year-on-Year

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I THE THEME

1.1 A well-functioning financial system, by facilitating efficient allocation of resources from savers to investors, promotes economic growth. Within the financial system, the banking system has important ramifications for the level and growth rate of national income through the identification and funding of productive investments. This, in turn, is expected to induce a more efficient allocation of capital and foster growth. One of the most influential theories which recognised the role of financial development in economic growth through improvements in productivity was propounded by Joseph Schumpeter (1911). For a long time, however, this view did not get due attention. A contrary view also prevailed till the early 1970s, according to which economic growth creates demand for financial services and the financial system responds automatically to these demands (Robinson, 1952). This meant that financial development would follow growth more or less automatically and it was a by-product of economic development. Policymakers and academics also believed that 'management' of the financial system was a better tool of achieving social objectives rather than letting the market forces take their own course. However, the limitations of the planning process as reflected in 'financial repression', underlined the central role played by the free and efficient financial system.

1.2 The importance of financial development in the economic growth process gained prominence again in the early 1970s, when it was recognised that financial development has a two-pronged effect, *viz*., enhancing the efficiency of investments and increasing savings and hence, the scale of investments. The discussion was led by McKinnon (1973) and Shaw (1973), who argued that policies of administered low interest rates for containing the burden of public debt led to financial repression. Controls that resulted in artificially low or negative real interest rates, for instance, reduced the incentive to save, resulting in lower investment and growth. Liberalisation of the repressed credit markets could foster development since raising interest rates to their 'equilibrium' levels would lead not only to higher savings but also to a more efficient use of investible resources.

1.3 Although the McKinnon-Shaw hypothesis enjoyed overwhelming support, it also had to face some criticism. For instance, Robert Lucas asserted in 1988 that economists badly over-stress the role of financial factors in economic growth. In recent years, however, theories of endogenous growth have led to a better understanding of the criticality of efficient financial systems in economic development. The consensus now is that there is a positive two-way causal relationship between economic growth and financial development (Greenwood and Jovanovic, 1990). Financial intermediation enhances economic growth by channeling savings into productive areas of investment, while allowing individuals to reduce the risks associated with their liquidity needs (Bencivenga and Smith, 1991). According to Levine (1997), financial services affect economic growth through five main channels, *viz*., saving mobilisation, resource allocation, risk management, management monitoring and trade facilitation. Each of the five main channels contributes to both capital accumulation and the process of technological innovation. These, in turn, feed directly to economic growth through the Solow growth model.

1.4 The role of finance in growth has also been validated by empirical work (Gelb, 1989; Greene and Villanueva, 1991; Gertler and Rose, 1991; De Gregorio and Guidotti, 1995; Levine and Zervos, 1998). Most of these studies are based on cross-country analysis, which find that a measure of financial development, such as credit or market capitalisation, has a positive and significant effect on growth. There is evidence that financially developed economies seem to allocate their resources more efficiently (Carlin and Mayer, 1998; Beck *et al.*, 2001). Developed domestic financial markets, proxied by the size of the domestic stock and credit markets relative to GDP, are found to be associated with a better allocation of capital (Wurgler, 2000). Measures of allocative efficiency of stock markets (such as stock price synchronicity) are associated as much with market size, volatility, country size, diversification of economies and the co-movement of firm-level fundamentals, as with the measures of institutional development (Morck *et al.*, 2000).

1.5 King and Levine (1993), using data for 80 countries for 1960-1989, found a significantly positive relationship between several measures of financial development, including total credit extended

to the private sector by banks, and economic growth. Their finding that the initial level of financial development in 1960 was a significant predictor of the subsequent average rate of growth over the next 29 years suggested a causal relationship between financial sector development and overall economic development. Levine, Loayza and Beck (2000), using data for 74 countries, found that the exogenous component of financial intermediation was positively associated with economic growth. Also addressing the issue of causation, Rajan and Zingales (1998), using industry-level data for 41 countries, concluded that industries more dependent on external financing tended to grow faster. Similarly, Demirguc-Kunt and Maksimovic (2002) also using firm-level data across 40 countries found that in more financially developed economies, a larger proportion of firms grew above the maximum rate of growth achievable by similar firms when they lacked access to external finance.

1.6 The McKinnon-Shaw thesis and the empirical literature, suggesting significance of the financial sector for economic development, encouraged many emerging market economies to introduce reforms in their financial sectors. This was reinforced by the East Asian crisis in the mid-1990s, which suggested that a weak financial system could be a serious threat to the real economy. In recent years, therefore, increased emphasis has been placed on strengthening the financial system.

1.7 While the significance of finance is now widely recognised, it was less clear until recently as to what were the essential features of a successful financial system. This issue related to the debate about the role of financial institutions such as banks *versus* financial markets, which are two generic mechanisms for transferring resources from savers to investors and each one of them has its own distinct advantages/ disadvantages.

1.8 Financial institutions have a distinct advantage in information gathering and processing to distinguish between a good borrower and a bad one. Thus, financial institutions can monitor the efficiency and productivity of projects much more effectively than the markets. In fact, in recent years, the existence of banks is attributed more to their information gathering capacity arising out of the existence of asymmetric information and moral hazard problems than to the classic explanation relating to their ability to mobilise savings and channeling them into investment. Savers usually have incomplete information on the affairs of companies, which makes it more difficult for the latter to obtain direct financing from the market. Intermediation by banks mitigates such agency problems. Recent research suggests that as the cost of acquiring information on a company by the providers of financial resources is high, financing of companies can be done more efficiently if the prospective investors are able to delegate the collection of such information to a specialised organisation (Diamond, 1984).

1.9 Firms in developing countries generally tend to rely more on debt finance, including bank credit. The emphasis on credit rather than equity arises due to various reasons. The cost of equity in developing economies is often much higher than the cost of debt due to the existence of higher perceived risk premia than in developed countries. The existence of artificially repressed interest rates contributes further to the problem. The other reasons for heavy reliance on debt in developing countries include the fragility of the equity markets, lack of suitable accounting practices and absence of adequate corporate governance practices. Given the high dependence on bank credit and lack of substitutes for external finance, banks and other intermediaries become extremely important. Financial intermediaries in developing countries, in particular, play an important role, where apart from industry, agriculture is also an important segment of the economy. Besides, there are also a large number of small and medium enterprises in the industrial and service sectors, which are not able to access the capital market and have to depend on the financial institutions for their funding requirements.

1.10 Capital markets can be used to fund activities whose risk is more easily measurable and classified so that standardised instruments can be issued for raising finance to fund them accordingly. On the other hand, banks and other financial institutions can fund more complex activities taking account of the different kinds of risks embedded in them. This is also enabled by a one to one relationship between the lender and borrower, which is reinforced through continuous supervision. Notwithstanding this debate, in actual practice both the systems co-exist in most countries even as one system may be more dominant than the other. Generally, bank-based systems tend to be stronger in countries where governments have taken a direct role in industrial development such as Germany in the 19th century, and Japan, East Asia, South-East Asia, China and India in the 20th century (Mohan,

2004a). The historical experience suggest that both the mechanisms have worked well. If the market-based system worked well in the UK and the US, the bank-based system was successful in Germany and Japan. The debate about the superiority of one mechanism over the other ended after the East Asian crisis, which led to realisation that the financial systems, in order to function smoothly, need to be well-diversified, where both financial markets and financial intermediaries play important roles.

1.11 While both banks and financial markets are important, banks are special for several reasons. According to the banking theories, banks exist because they perform certain special functions that no other financial services firms can replicate. Keynes identified two major functions of banks, *viz*., financial intermediation and money creation. Apart from financing growth, variations in bank credit are an important channel of monetary policy transmission even for central banks that rely on interest rates to convey their policy stance. Modulations in policy interest rates by the central bank influence credit market conditions which reinforce the effects of the traditional interest rate channel of monetary transmission. Banks are also 'special' as their operations have systemic implications. Banks not only accept and deploy large amounts of uncollateralised public funds in a fiduciary capacity, but also leverage such funds through credit creation. The owners or shareholders of banks have only a minor stake and the considerable leveraging capacity of banks (more than ten to one) puts them in control of very large volume of public funds. Banks are, thus, regarded as special type of financial intermediaries that need a differentiated treatment by regulatory authorities. Calomiris and Kahn (1991), Flannery (1994), and Diamond and Rajan (2001), however, argue that the fragile capital structure in banks and, hence, their vulnerability to deposit runs serve important economic functions. Deposit runs represent a powerful disciplining device that limits banks' incentives for risk-taking and misallocation of resources. This provides some degree of quality assurance in banks' loan portfolio.

1.12 The banking industry all over the world has undergone transformation since the early 1980s under the impact of deregulation, advances in information technology and globalisation (Box I.1).

1.13 The forces of deregulation, technology and globalisation have increased competitive pressures, which have (a) unleashed the strong forces of restructuring and consolidation with the number of banks declining all over the world; and (b) prompted banks to seek new sources of revenue beyond traditional products. These, in turn, have led to the blurring of distinctions among providers of various financial services and emergence of financial conglomerates. Although these developments have made institutions more efficient by lowering transaction costs, they have also challenged the traditional regulatory arrangements based on institutions. Also, heightened competitive pressures, by squeezing profit margins of institutions, could lead them to pursue riskier strategies, raising the possibility of failure. Financial instability can also impinge on a country's ability to pursue a prudent macroeconomic policy. The safety and soundness of financial institutions, therefore, have come to occupy a centre-stage in the policy making.

1.14 Under the forces of liberalisation and globalisation, many banking institutions have expanded beyond their home countries and traditional lines of business leading to emergence of large international banks. Many product innovations and new ways of doing business have also emerged that have led to widespread use of securitisation, derivatives and other financial products linking traditional banking functions to the operations of capital markets, whereas these developments have led to some degree of efficiency in financial intermediation, new issues have emerged over the past year that merit attention. Most, if not all of these large banks have become financial conglomerates operating in all the different segments of the financial sector. This movement has been enabled both by technological developments leading to faster transmission of financial transactions and financial innovations, and by falling national barriers allowing cross border capital flows.

1.15 The recent developments in international financial markets have, however, raised several concerns over the existing risk pricing and management tools and techniques employed in banks and financial institutions, particularly, the business strategies based on the model of 'originate to distribute'; issues relating to securitisation; enhancement of off-balance sheet exposures; liquidity commitments to conduits; and valuations regarding structured credit products. The functioning of the credit rating agencies and excessive reliance of institutional investors on the ratings has also been questioned.

Box I.1
Transformation of the Banking Sector – Major Drivers

Banking, especially in the emerging economies, has traditionally been a highly protected industry with regulated interest rate structure for deposits as well as lending, and restrictions on foreign and domestic entry. However, the regulators were forced to deregulate the banking sector under the influence of global market and technological developments, macroeconomic pressures and banking crises in the 1990s. Some measures, such as removal of ceilings on deposit rates and the lifting of prohibitions on interest payments on current accounts, significantly increased the competitive pressures on banks, thereby leading to changes in the structure of the banking industry. Accompanying deregulation has been greater emphasis on capital adequacy, which has encouraged banks to securitise some assets, generate more fee-based income, and improve efficiency. In some emerging economies, higher requirement of regulatory capital also became an important stimulus for mergers (or sales to foreign banks) of poorly performing banks.

Deregulation has also increased the competition between banks and non-banks, especially for lending to large companies. The despecialisation of financial institutions has been an important force in changing the structure of the financial services industry. Banks are emerging as a one-stop shopping centre for all financial services, offering insurance products, mutual funds and other financial services. Securitisation has allowed unbundling of the traditional lending process into various parts - originating loans, packaging them for sale to others, servicing loans, and funding loans. This, in turn, intensified the competition between banks and non-banking firms.

In the recent past, the technological developments have also impacted the banking business in a variety of ways, both directly, through Information Technology (IT) applications in risk management and marketing of financial products, and indirectly, through its impact on corporate behaviour and the development of financial markets, especially in the area of financing new capital investments. Technological innovations have led to development of new financial instruments and sharp reduction in the cost of gathering, processing and disseminating information. This has led to the creation of new markets. On the commercial banking front, several services like ATMs, debit cards, telephone, internet and electronic banking have become an integral part of banking.

With the reduction in barriers to trade and commerce, driven by a combination of government policy and improved communication facilities, the market for financial services has been becoming increasingly global. Growth of non-financial companies across the border has resulted in greater demand for institutions that can provide financial services across borders. In recent years, there has also been a drastic reduction in global barriers to competition in the financial services industry. Deregulation all over the world has encouraged consolidation of banks across the border and among different types of financial institutions. Advances in IT have facilitated greater geographic reach by allowing institutions to manage larger information flows from distinct locations.

Reference:

Hawkins, J. and D. Mihaljek. 2001. “The Banking Industry in the Emerging Market Economies: Competition, Consolidation and Systemic Stability: An Overview”, BIS Paper No. 4.

EVOLUTION OF BANKING IN INDIA

1.16 As in several other emerging market economies, the financial system in India has traditionally been dominated by financial intermediaries, especially banking institutions. Banking in India has a long history and it has evolved over the years passing through various phases. At the time of independence, the Indian banking system was weak. The entire banking sector was in the private sector and the credit requirements of agriculture and other needy sectors were ignored. With a view to better aligning the banking system to the needs of planning and economic policy, the policy of social control over the banking sector began in 1967. The nationalisation of private sector banks in 1969 was a major turning point in the history of the banking sector in India. With the nationalisation of banks (fourteen in 1969 and again six in 1980), the major segment of the banking sector came under the control of the Government. Massive expansion of the branch network that followed the nationalisation of banks resulted in large deposit mobilisation by banks, which helped in stepping up the overall savings rate of the economy. However, during this period, a major portion of banks’ resources were pre-empted at below market rates by way of directed credit and directed investments. Profitability of the banking sector was, therefore, affected. Banks were also saddled with large non-performing assets. Their capital base also became weak.

1.17 With a view to overcoming several weaknesses that had crept into the system over the years and with a view to creating a strong, competitive and vibrant banking system, several measures were initiated beginning the early 1990s. First, the banking system was strengthened by introducing prudential norms, which were subsequently tightened in line with

international best practices. Second, competition in the banking sector was enhanced by allowing entry of new private sector banks and enhanced presence of foreign banks. Foreign direct investment in private sector banks was also allowed up to 74 per cent. Third, public sector banks were allowed to access the capital market and also provided with operational flexibility and functional autonomy. Fourth, the system of administered interest rates was almost dismantled and pre-emptions in the form of reserve requirements were reduced. Fifth, the supervisory system was revamped in view of its crucial role in the creation of a sound banking system. Sixth, corporate governance practices and disclosure standards were strengthened. Seventh, regional rural banks, urban co-operative banks and rural co-operatives were also strengthened.

1.18 As a result of constant evolution, the size and structure of the banking sector have undergone a significant change. The present banking structure in India consists of commercial banks, urban co-operative banks, regional rural banks (RRBs) and rural co-operative banks, which, in turn, comprise short-term co-operative credit structure (State co-operative banks and district central co-operative banks) and long-term credit structure (state co-operative agriculture and rural development banks and primary co-operative agriculture and rural development banks). Commercial banks form the bedrock of the Indian financial system accounting for around three-fourths of the total assets of all financial institutions at end-March 2007 (Table I.1). The 96 RRBs, although small in size, play a critical role in extending credit in the rural areas. The co-operative banking system, with two broad segments of urban and rural co-operatives, forms an integral and sizable part of the Indian banking system. Primary co-operative banks, also referred to as urban co-operative banks (UCBs), play an important role in meeting the growing credit needs of urban and semi-urban areas of the country. The rural co-operative credit institutions, with a wide network and extensive coverage, play an important developmental role in enlarging the ambit of institutional credit by inculcating banking habits among the poor and in remote areas.

1.19 The banking sector in India plays a crucial role in the economy not only by mobilising savings and channeling them into investments, but also contributing directly to GDP and generating employment. Bank deposits constituted 56.5 per cent of the financial assets of the household sector during 2006-07. Financial assets of the household sector are a major form of saving. By mobilising household sector savings, the banking sector plays a significant role in promoting investment and growth. Banking and insurance together constitute 6.7 per cent of GDP as at end-March 2007. Although separate data on the banking sector's contribution to GDP are not available, an idea of its contribution to GDP can be had from its share (83.1 per cent) in the combined assets of the banking and insurance sectors at end-March 2007. The employment generated in the banking sector constituted 3.2 per cent of the organised sector employment at end-March 2005.

Table 1.1: Financial Intermediaries in India*
(End-March 2007)

Type of Institution	No.of Institutions	Share in Total Assets (per cent)
A. Commercial Banks	**182**	**75.2**
a) Scheduled Commercial Banks (Excluding RRBs)	82	72.9
i) Public Sector Banks	28	51.4
ii) Private Sector Banks	25	15.7
iii) Foreign Banks	29	5.9
b) Regional Rural Banks	96	2.2
c) Local Area Banks	4	0.0
B. Co-operative Banks	**1,09,310**	**12.8**
a) Urban Co-operative Banks	1,813	3.4
b) Rural Co-operative Banks	1,07,497	9.5
i) Short-term	1,06,781	8.5
• State Co-operative Banks	31	1.8
• District Central Co-operative Banks	369	3.3
• Primary Agricultural Co-operative Societies	97,224	3.3
ii) Long -term	716	1.0
• State Co-operative Agriculture and Rural Development Banks	20	0.5
• Primary Co-operative Agriculture and Rural Development Banks	696	0.5
C. Non-Banking Financial Institutions	**591**	**12.0**
a) Financial Institutions**	6	3.5
b) Non-Banking Financial Companies#	577	8.2
c) Primary Dealers	8	0.3

* : Excludes insurance companies regulated by Insurance Regulatory and Development Authority (IRDA) and mutual funds regulated by Securities and Exchange Board of India (SEBI).

**: Data pertain to six FIs, *viz.* IFCI Ltd., TFCI Ltd., NABARD, NHB, SIDBI and Exim Bank. IIBI Ltd. was under voluntary winding-up as on March 31, 2007.

: Data pertain to Residuary Non-banking Companies, Deposit taking NBFCs (NBFC-D) and non-deposit taking systemically important NBFCs (NBFC-ND-SI).

1.20 The banking system in India has undergone significant transformation following financial sector reforms since the early 1990s. The thrust of the

banking sector reforms was on increasing operational efficiency, strengthening the prudential and supervisory norms, removing external constraints, creating competitive conditions and developing the technological and institutional infrastructure. The impact of the reform measures is reflected in an improvement in profitability, financial health, soundness and overall efficiency of the banking sector. Banks have been able to maintain or increase their capital adequacy ratio, despite the sharp increase in their risk-weighted assets. Banks' loan portfolio, which had decelerated during 1998-2003 due to some risk aversion on the part of banks along with the overall slowdown in the economy accelerated sharply in recent years. A significant feature has been increased credit flow to the agriculture and the SME sectors. Banks' retail credit portfolio has also expanded rapidly. Significant progress has also been made on the financial inclusion front. Credit by banks to households during 1991-2002 continued to expand broadly at the same pace as during 1981-1991. However, deposit and credit penetration improved significantly after 2002 as a result of several measures initiated by the Reserve Bank.

1.21 With the entry of new private sector banks and increased presence of foreign banks, the Indian banking sector has become more competitive. Public sector banks have also been raising capital from the market and are subject to market discipline. Efficiency, productivity and soundness of the banking sector improved significantly in the post reform phase. Banks have increasingly diversified into non-traditional activities, as a result of which several financial conglomerates have emerged. This has posed several regulatory and supervisory challenges. Thus, while deregulation has opened up new avenues for banks to augment incomes, it has also entailed greater risks. The banking sector has witnessed the emergence of new banks, new instruments, new windows, new opportunities and, along with all this, there have been new challenges.

ISSUES IN BANKING DEVELOPMENT IN INDIA

1.22 The Indian banking system is currently passing through a crucial phase. Although the banking sector has become strong, competitive, dynamic and resilient, it is faced with several newer challenges as a result of macroeconomic and financial sector developments, both domestic and global. The major issues/challenges faced by the Indian banking sector could be identified as: (i) mobilising resources to sustain and even accelerate the current economic growth momentum; (ii) implementation of Basel II norms by foreign banks in India and Indian banks having operational presence abroad with effect from March 31, 2008 and by other Scheduled Commercial Banks not later than March 31, 2009; (iii) issues involved in allowing increased presence of foreign banks in India as the roadmap for foreign banks is due for review in April 2009; (iv) progressive move towards fuller capital account convertibility, which will expose the banking system to greater risks and would require addressing certain issues in banking, including some regulatory and supervisory aspects; (v) the emergence of financial conglomerates, which has raised the issue of appropriate regulatory structure/ arrangement; (vi) the emergence of complex financial products, which pose several supervisory challenges; and (vii) the need to extend financial services to the large number of people, who continue to remain outside the banking system.

Banking and Economic Growth

1.23 The main function of the banking system in any economy is to mobilise the resources and channel them into productive purposes. The more developed the banking system is, the better it is in a position to perform this role. The Indian economy has moved on to a high growth trajectory with the average growth rate during the last five years (2003-04 to 2007-08) being at 8.8 per cent. This was facilitated by a significant increase in the investment rate from 22.8 per cent in 2001-02 to 35.9 per cent in 2006-07. The saving rate in India also improved from 23.5 per cent in 2001-02 to 34.8 per cent in 2006-07 to support the investment needs of high growth. Loans and advances extended by SCBs registered a threefold rise during the same period. In order to sustain the growth momentum, it would be necessary to sustain and even accelerate the savings rate, which in turn, would, critically depend on efficient intermediation between savers and investors. In this context, the Approach Paper to the Eleventh Five Year Plan observed, "a key feature which affects feasibility is the financial system and its ability to intermediate savings to potential users. Accelerated growth involves expansion in investment, economic restructuring of existing enterprises as they gear themselves for competition, and encouraging new entrepreneurs to respond to opportunities. All this is possible only if the financial systems can finance the structural changes taking place".

1.24 In order to achieve the desired savings and investment rates, there would be need to generate large resources domestically. India has a reasonably

high and growing savings rate. However, for meeting the financing requirements of a growing economy what is important is the financial savings. Although financial savings have increased over the years, physical savings have also grown in tandem with financial savings. The substitution of unproductive physical savings in favour of financial savings can generate large resources for investment. Also, there is an enormous untapped saving potential in rural and semi-urban areas. However, conversion of unproductive physical savings into financial savings and mobilisation of the hitherto untapped savings of rural and semi-urban areas requires innovative and cost effective products. Given their outreach as also special features of deposits, *viz.*, safety and liquidity, banks indeed are in a better position to perform this role than other constituents of the financial system.

Basel II

1.25 India has been adopting international best practices in the area of regulation and supervision with a view to strengthening the banking sector. Following the Basel Accord of 1988, the capital to risk-weighted assets ratio (CRAR), which took into account the element of risk involved in both balance sheet as well as off-balance sheet business, emerged as a well recognised and universally accepted measure of soundness of the banking system. Accordingly, as a part of banking sector reforms, India adopted the Basel norms in a phased manner. In fact, India went a step further and stipulated CRAR at nine per cent as against the international norm of eight per cent. Furthermore, India also prescribed the capital charge for market risk in June 2004, broadly in line with the 1996 amendment to Basel norms.

1.26 Over the years, however, several limitations of Basel I norms surfaced. In view of emergence of large and complex banking institutions, and with increasing sophistication of institutions in risk management, the straight jacket system of risk weights under Basel I became less meaningful. Furthermore, improvements in credit risk measurement facilitated increased use of securitisation and credit derivatives to arbitrage those capital rules. Therefore, the Basel Committee on Banking supervision (BCBS) introduced the new capital framework (Basel II Framework), which provides a more risk sensitive capital requirement for banks not only for credit and market risks but also for operational risk. The capital requirements are complemented by supervisory review and market discipline. The Basel II framework in India would become fully operational from end-March 2009, while a part of domestic banks and foreign banks are already Basel II compliant. The implementation of Basel II poses several challenges for the banks as well as the Reserve Bank. At the banks' level, the implementation would require, *inter alia,* upgradation of branch inter-connectivity, which entails cost and also raises some safety issues. The implementation of Basel II also raises several issues relating to development of human resource skills and database management. Banks would also need to explore the various capital raising options. Each national superviser is expected to consider carefully the benefits of the revised framework in the context of its domestic banking system when developing a timetable and approach for implementation. The Reserve Bank has indicated the timetable for implementation of Basel II framework for commercial banks. The Basel II framework also offers multiple options available for computing capital requirements for the three major risks. While for the present, banks would be following simple approaches, it is likely that subsequently some banks move to advanced approaches under the Reserve Bank's supervision. Consequently, a progressive improvement in quality of human resources equipped with quantitative techniques would be required in future. Under Pillar II of the framework, the Reserve Bank would be required to review and revise its supervisory processes as banks indulge in more sophisticated products. Besides commercial banks, several other types of banking institutions such as urban co-operative banks and regional rural banks also operate in the country. There is a need to carefully look into what kind of regulatory treatment, insofar as capital adequacy norms are concerned, needs to be applied to such institutions.

Role of Foreign Banks

1.27 It is now widely believed that for financial institutions to operate efficiently, there is a need to maintain competitive conditions. The empirical and theoretical literature in banking also suggests that a competitive banking system is more efficient. It has therefore, been the endeavour of the Government and the Reserve Bank to enhance competition through entry of new private sector banks, increased presence of foreign banks and provision of operational flexibility to public sector banks. To diversify ownership, public sector banks were allowed to raise funds from the capital markets, subject to the Government shareholding being retained at 51 per cent. Various other restrictions hindering the competitive process have also been, by and large, phased out.

1.28 In recognition of the emergence of foreign banks as key vehicles in the international integration of the financial systems, a liberalised policy towards foreign banks' entry has become a high priority in policymakers' agenda in various countries in recent years. Liberalisation of financial services by allowing foreign financial institutions to participate in the domestic market improves competition, thereby facilitating better and cheaper financial intermediation. Apart from increasing competition and efficiency through infusion of technology and skill management, some of the other benefits of foreign banks' entry are said to include introduction of superior risk management practices and stronger capital base, which is also less sensitive to host country's business cycle. Cross-country evidence, however, reveals that the benefits and costs of foreign banks are not unambiguous, and have been contextual, depending upon the sequencing of financial sector reforms and the level of development of the concerned country. A number of empirical studies suggest that foreign banks play a stabilising role during periods of banking stress (Levine 1996; Martinez Peria *et al.,* 2002; Detragiache and Gupta, 2004; and Goldberg *et al.*, 2000). Furthermore, the costs and benefits of foreign banks' entry are guided to a large extent by the mode of entry of foreign banks. Liberalisation of financial services industry also raises some concerns. For instance, the potential of increased foreign bank presence can expose a country to external shocks. Opening the domestic financial system to foreign financial services providers without any restrictions also raises the possibility of domestic financial institutions being taken over by foreign banks.

1.29 India also liberalised the entry of foreign banks in the post-reform period. In the roadmap by the Reserve Bank released in February 2005, the opening up of the domestic banking sector to foreign banks was envisioned in two phases. The first phase envisaged that foreign banks wishing to establish presence in India for the first time could either choose to operate through branch presence or set up a 100 per cent wholly owned subsidiary (WOS) following the one-mode presence criterion. In the second phase (April 2009 onwards), the policy on foreign banks is to be taken up for a review. At that stage, various issues associated with the increased presence of foreign banks such as impact on the domestic banks, supervisory and regulatory challenges in view of their sophisticated operations and their involvement in complex and sophisticated products, financial inclusion, credit to agriculture and SMEs, and public policy on credit delivery, cost and allocation would need to be weighed. The issues relating to co-ordination between home and host countries regulators would also pose a challenge.

Capital Account Convertibility

1.30 As the economy gets increasingly integrated with the global economy, the Indian banking system would also get progressively integrated with the rest of the world. The Committee on Fuller Capital Account Convertibility (Chairman: Shri S.S. Tarapore), which submitted its report in July 2006 had, *inter alia,* recommended a broad timeframe of a five-year period to be implemented in three phases for fuller capital account liberalisation, *viz.*, 2006-07 (Phase I), 2007-08 and 2008-09 (Phase II) and 2009-10 and 2010-11 (Phase III).

1.31 Further liberalisation of capital account transactions is expected to result in a larger two-way flows of capital in and out of the country. In a regime of fuller capital account convertibility, banks will be expected to undertake transactions in multiple currencies acting as channels for the flow of funds in and out of the country when they are enabled to receive deposits and raise borrowing from both residents and non-residents and lend and invest in both domestic and foreign jurisdictions. Likewise, non-resident banks and financial institutions are expected to undertake similar transactions. The non-financial entities having links with the banking system would also conduct transactions in multiple currencies when they borrow, lend and invest overseas. All these types of transactions add to the risks of the banking system that are not so evident in a less open domestic banking system. Thus, the banking system in a freer capital account regime would be exposed to enhanced risks in terms of currency risk, counterparty credit risk, transfer risk, legal risk, risk of regulatory arbitrage, risk in derivatives transactions and reputation risk. This underscores the need for risk management capabilities in the banking system. Freer capital regime would also require improvement in the liquidity management and disclosure practices by financial institutions as they would be encouraged to diversify funding sources to contain maturity mismatches and improve debt-equity mix. In a liberalised environment, banks' own exposures to exchange rate risk, coupled with their exposures to corporates which are exposed to similar risks, spanning across national jurisdictions add to the multiplicity of risks which also raise the issue of close monitoring and prudential management. A strong banking sector in a fuller capital account

regime is also important for implementing appropriate monetary policy.

1.32 Thus, increased integration of the domestic economy with the rest of the world requires the banking sector to develop appropriate capabilities to manage the varied and enhanced risks. In particular, exchange rate risks and spill-over effects across markets are specific challenges to be dealt with in a globalised scenario. Inability to meet these challenges might translate into instability in the financial system. In a freer capital transactions regime, the magnitude of money laundering might also scale up along with the overall increase in financial flows, requiring appropriate policy responses.

Financial Conglomerates and the Regulatory Structure

1.33 Traditionally, the regulation of financial intermediaries all over the world has been on institutional lines, whereby regulation is directed at financial institutions, irrespective of the mix of business undertaken. In recent years, distinctions between banks and non-banks financial intermediaries have become blurred. A number of financial conglomerates have also emerged that undertake various financial activities under the same corporate structure. These have challenged institution-based regulation as it fails to take into account the gaps and overlaps in regulation. Moreover, the risk assumed by the financial conglomerates as a group may be higher than the sum total of risks assumed by its affiliates/subsidiaries undertaking a number of activities. Therefore, the regulatory structure based on institutions has become a major issue of policy and public debate in several countries.

1.34 In order to overcome the issues raised by operations of financial conglomerates, some countries have followed a system of super/single regulator, which oversees all segments of the financial system. Some other countries have followed objectives-based regulation under which regulation is directed based on the objective (prudential regulation or market conduct). However, each of the structures has its own advantages and disadvantages and the regulators are grappling with the issue as to which is the most appropriate structure. The recent financial market developments and the failure of Northern Rock in the UK, which had a supervisory structure outside the central bank, have added more uncertainty to this issue.

1.35 In India also, there has been some blurring of activities among providers of various financial services. Some financial conglomerates have also emerged. A monitoring mechanism for financial conglomerates has been devised in collaboration with other regulators, *viz.*, SEBI and IRDA. In this regard a very closely related issue is that of appropriate structure of financial conglomerates. Financial conglomerates in India have been patterned on the parent-subsidiary structure. In some countries such as the US, Japan and Canada, financial conglomerates are organised in a holding company structure. In this context, the Reserve Bank released a 'Discussion Paper' in September 2007, wherein it was indicated that it will be useful to explore the possibility of adopting a bank holding/financial holding model.

Complex Products

1.36 In recent years, complex financial products such as asset-backed securities, derivatives, credit-default swaps (CDSs) and collateralised debt obligations (CDOs) proliferated in developed countries. These products became highly popular with banks and financial institutions as they allowed them to hedge their risks and manage their regulatory and economic capital more efficiently.

1.37 Although various structured products have enabled the transfer of risks and enhanced the liquidity of instruments, the recent turmoil in the US sub-prime mortgage market and related developments connected with complex derivatives have also brought to the fore the risks posed by these instruments. The lack of long historical data on the performance of these instruments, and their correlations with other assets and instruments, made it difficult to assess their overall risk-return profile. Moreover, in the sub-prime residential mortgage-backed securities market, many market participants were willing to proceed without conducting robust due diligence and without establishing appropriate risk-management structures and processes. The aggressive risk-taking was amplified by the great opacity of new instruments such as structured credits. While the practices of increased use of innovative credit instruments and complex layering of risk diffusion reduced information costs, it also enabled the investor or risk taker to become progressively remote from the ultimate borrowers where the actual risks resided. With a host of intermediaries in the form of mortgage brokers, mortgage companies and societies, packaging their mortgage assets including

non-conforming loans and selling down to different categories of investors, including special investment vehicles (SIVs), and hedge funds, the identification and location of risks in the whole chain became increasingly challenging.

1.38 In India also financial products such as mortgage-backed securities (MBS) and asset-backed securities (ABS) are in existence. Besides the securitised products, the Indian forex and rupee derivative markets have also developed significantly over the years. In respect of forex derivatives involving rupee, residents have access to foreign exchange forward contracts, foreign currency-rupee swap instruments and currency options – both cross currency and foreign currency-rupee. As stated in the Annual Policy Statement for the year 2008-09, the Reserve Bank announced the introduction of currency futures in the eligible exchanges for which the broad framework has been announced in August 2008. In future, some more innovative and complex products might emerge. These products may pose several regulatory and supervisory challenges.

Financial Inclusion

1.39 Notwithstanding the rapid spread of banking over the years, a significant segment of the population, predominantly in the rural areas, is excluded from the formal financial system. There is currently a clear perception that there are a large number of people, potential entrepreneurs, small enterprises and others, who are excluded from the financial sector, which leads to their marginalisation and denial of opportunity for them to grow and prosper (Mohan, 2006). Therefore, access to a greater proportion of the population to the organised financial system has been high on the agenda of the Reserve Bank. The key issue, however, is how to mainstream the institutional sources so as to achieve wider coverage in terms of extending credit. There are also a large number of households with low income and small savings, which need to be mobilised. Apart from the rural areas, there is significant degree of financial exclusion in urban areas as well. The cost of financial exclusion is recognised to be enormous for the society as well as for individuals, particularly in terms of inability to realise full potential due to financial constraints. There are, however, several challenges that require concerted efforts from banks, the Reserve Bank and the Government to ensure convenient and cost effective delivery of financial services to the public at large. In particular, the challenge is to introduce innovations in risk assessment, reduce transaction costs, devise new credit delivery channels, and use information technology to make financial inclusion a viable model.

STRUCTURE OF THE REPORT

1.40 In order to strengthen the understanding of the various issues/challenges faced by the banking sector and identify the substantive issues that need to be addressed to ensure the growth of the banking sector along sound lines, the theme of this Report for 2006-08 has been selected as "**The Banking Sector in India: Emerging Issues and Challenges**". The Report undertakes an in-depth analysis of various aspects of banking in India such as managing resource mobilisation, capital and risk; lending and investment operations of banks; financial inclusion; efficiency, profitability and soundness; competition and consolidation; and regulatory and supervisory challenges. These aspects are analysed using inter-temporal and cross-country data/information, highlighting the current major issues and challenges. An attempt is also made to outline the way forward for each of the aforementioned aspects of banking. The thrust of the Report is to critically examine the various issues and, going forward, what further needs to be done to ensure the growth of the banking sector in a way that supports/accelerates India's current growth momentum and enhances the stability of the financial system. Various measures suggested in this Report set out only the broad direction in which reforms in the banking sector could move in future. The pace and sequencing of measures would need to be calibrated keeping in view the degree of comfort in moving forward in a credible way.

1.41 The theme of this Report complements the themes of the previous three years' reports, *viz.,* 'The Evolution of Monetary Policy in India and Challenges Facing It' (2003-04), 'The Evolution of Central Banking in India' (2004-05), and 'Development of Financial Markets and Role of the Central Bank' (2005-06). Keeping in view the significance of developing financial markets, the 2005-06 Report undertook an in-depth analysis of their various segments with a view to identifying the key issues that needed to be addressed to develop them fully. The theme of the present Report is, thus, in keeping with the objective of developing a financial system that is well-diversified and well-equipped to effectively meet the challenges that lie ahead. Taken together, these four reports would have covered the evolution of thinking and the way forward for the major areas of responsibility of the Reserve Bank.

1.42 The Report, including this chapter, is organised into eleven chapters. As a prelude to the substantive theme based discussion, Chapter II of the Report titled "Recent Economic Developments" presents an analytical account of macroeconomic developments in the Indian Economy during 2007-08. Besides, latest macroeconomic developments for 2008-09, wherever data are available, are also covered. The chapter covers six broad sections, *viz*., the real sector, fiscal situation, monetary and credit situation, financial markets, banks and financial institutions and the external sector.

1.43 Chapter III titled 'Evolution of Banking in India' traces the history of the banking sector in India. Although the focus is on the post-independence history, it starts with a broad brush sketch of the early years of banking. The chapter narrates the story as it unfolded historically and discusses the major developments in the banking sector broadly under the three periods, *viz*., from 1947 to 1967; 1967 to 1991; and from 1991 onwards.

1.44 Chapter IV, 'Managing Resource Mobilisation', looks into various aspects of resource mobilisation by the commercial banks in India, and identifies the challenges faced by them to sustain the resource mobilisation. Besides providing the theoretical underpinnings on the intermediation role of banks, the chapter examines the role of financial intermediaries in mobilising resources as reflected in the flow of funds of the Indian economy. The thrust of the chapter is on various aspects of the deposit mobilisation process with a view to understanding the underlying changes. The significance of deposits in the overall liability structure of banks is also discussed. In the light of cross-country experiences, the chapter identifies the emerging issues and challenges faced by banks in resource mobilisation and makes suggestions to meet them effectively.

1.45 Chapter V on 'Managing Capital and Risk' discusses the evolving issues in risk and capital management faced by banks in India, especially in the context of implementation of Basel II framework. The chapter begins with the international convergence of capital measurement and capital standards and delineates several issues relating to implementation of Basel II framework, including its benefits, limitations, its likely impact and the progress of its implementation in major countries. The policy developments in the area of managing capital and risk together with progress made in implementation of Basel II in the Indian context are dealt with in detail. Risk management practices, asset-liability management and corporate governance in the Indian context are also discussed. After analysing the management of capital by banks in the post-reform period, the chapter assesses the capital requirements in each of the next five years (2007-08 to 2011-12), with a special focus on public sector banks. The chapter also details the challenges and issues of relevance for the future.

1.46 Chapter VI titled 'Lending and Investment Operations of Banks' deals primarily with the various lending and investment operations of commercial banks in India. After a brief outline of the theoretical underpinnings of bank lending, the chapter analyses in detail the trends in lending operations of banks with a special focus on the period beginning with the early 1990s. Against the backdrop of cross-country experiences, the chapter spells out the issues and constraints in lending by banks to certain critical sectors, *viz*., agriculture, small and medium enterprises and infrastructure. Investment operations of banks have also been detailed. Based on the analysis of the domestic and international pattern in lending by banks, the chapter makes certain suggestions with a view to improving the flow of credit to the various sectors of the economy.

1.47 Chapter VII on 'Financial Inclusion', drawing upon the theoretical developments, country experiences and empirical analysis, examines key issues in financial inclusion/exclusion in India. After discussing the conceptual framework, measurement related issues and the nature, causes and consequences of financial exclusion, the chapter delineates the policy initiatives undertaken for financial inclusion in India. The focus of the chapter is on assessing the nature and extent of financial inclusion/exclusion in India. Issues relating to the operating cost of financial inclusion and the role of technology are also touched upon. Drawing from country experiences and empirical analysis in the Indian context, the chapter, as a way forward, makes several suggestions to promote financial inclusion in India.

1.48 Chapter VIII on 'Competition and Consolidation' discusses the theoretical perspectives and country experiences on consolidation and competition along with various facets of consolidation and competition in the Indian banking sector. The focus of the chapter is to examine the extent and nature of the process of consolidation and its impact on competition in the banking sector and the efficiency of the merged entities in the Indian context. The chapter also examines the impact of consolidation on the market structure. Issues relating to the future course of the consolidation process, role of public sector banks, increased presence of

foreign banks and the combining of banking and commerce are also analysed. The chapter also makes several suggestions with a view to ensuring that the competitive conditions are maintained in the banking sector in India even as the consolidation process is strengthened.

1.49 Chapter IX on 'Productivity, Efficiency and Soundness of the Banking Sector in India' after discussing the conceptual issues relating to the measurement of efficiency and productivity, assesses productivity and efficiency of the banking sector as a whole as well as various bank groups based on accounting measures or financial ratios. A comparison has also been made with other countries, wherever possible. The factors affecting the net interest margin (NIM), the main source of income for banks, have been analysed. The chapter also measures productivity and efficiency of the banking sector in India in terms of economic measures. The relationship of efficiency on the one hand and ownership, size and diversification on the other is also assessed. The chapter also establishes the relationship between efficiency and soundness before assessing the soundness of the banking sector in terms of capital-to-risk-weighted asset ratio (CRAR) in India. As a way forward, the chapter makes several suggestions for further improving the efficiency, productivity and soundness of the banking sector.

1.50 Chapter X on 'Regulatory and Supervisory Challenges in Banking', after presenting the theory behind regulation of banks, deals with the recent thinking on various regulatory and supervisory issues relating to banks in the global context. After setting out the extant regulatory and supervisory framework in India, the chapter focusses on the regulatory and supervisory issues/challenges that have arisen in the Indian context. In the light of global and domestic developments, suggestions have been made with a view to further strengthening the regulation and supervision in India.

1.51 Chapter XI titled 'Overall Assessment' sums up the main findings and suggestions made in the various chapters of the Report and presents some final reflections with a view to enabling the banks and the Reserve Bank to meet the emerging challenges effectively.

II RECENT ECONOMIC DEVELOPMENTS

2.1 The Indian economy continued to exhibit strong performance in 2007-08, although the pace of growth moderated from 2006-07. Despite moderation, the performance of the Indian economy was in line with the average growth of the previous four years. The growth of the industrial sector was also lower in 2007-08 relative to that in 2006-07. The subdued growth of the manufacturing sector, which accounts for more than four-fifths of Index of Industrial Production (IIP), primarily contributed to the slowdown in the industrial growth. On the other hand, the services sector maintained its record of double digit growth, primarily aided by high growth in telecommunications, software exports and IT-enabled services. In 2007, the South-West monsoon was above normal. This, combined with an improvement in water storage levels, resulted in the record foodgrains production in 2007-08.

2.2 Headline inflation, based on year-on-year variations in the wholesale price index (WPI), showed a sustained decline in the first two quarters of 2007-08. However, beginning from December 2007**,** headline inflation began to pick up on account of hardening of prices of primary non-food articles and manufactured products items such as edible oils/ oilcakes and metals. Year-on-year consumer price inflation, which had eased by January 2008, hardened in the subsequent months.

2.3 Global commodity prices firmed up during 2007-08 led by sharp increases in food and crude oil prices. International crude oil prices rose sharply during the year, reflecting tight supply-demand balance, geo-political tensions, weakening of the US dollar against major currencies and increased market activities of investors and financial market players. Food prices also firmed up during 2007-08, especially in the second half, led by wheat, rice, and oilseeds/edible oils on account of surge in demand (both consumption demand and demand for non-food uses such as bio-fuels production), low stocks of major crops and weather related disturbances in some major food-producing regions. In recognition of global demand and supply side pressures on food items, the Government reduced the import duty on wheat and edible oil, followed by export ban on a number commodities, *viz.,* non-*basmati* rice and pulses, and administrative measures related to stock limit on select products. The Reserve Bank also undertook monetary measures in the form of increase in the CRR. The CRR was raised by 150 basis points in four stages during 2007-08. However, inflation hardened further in the first quarter of 2008-09. In response, the Reserve Bank increased the CRR by 150 basis points in six stages and repo rate by 125 basis points in three stages during April-August 2008.

2.4 The Indian financial markets remained largely orderly in 2007-08, barring the equity market which witnessed some bouts of volatility in line with the trends in international markets. Swings in cash balances of the Government and capital flows were the main drivers of liquidity conditions in the financial markets. Interest rates in the collateralised segment of the money market, which at present comprises about 80 per cent of the total volume of the money market, moved in line with but remained below the call rate during the year. In the foreign exchange market, the Indian rupee generally exhibited two-way movements. Yield in the Government securities market softened during the major part of the year.

2.5 The profitability of scheduled commercial banks improved during 2006-07, primarily on account of robust macroeconomic performance of the economy. Bank credit continued to expand at a robust pace, *albeit* with some moderation. The asset quality of banks improved further during the year.

2.6 Central and State Government finances showed further consolidation; the revised estimates of key deficit indicators of the Central Government for 2007-08 were placed lower than their budgeted levels. In the provisional accounts, the key deficit indicators declined further**.** The State Governments continued to show commitment to pursue fiscal correction and consolidation under the Fiscal Responsibility Legislation (FRL).

2.7 The external sector continued to witness impressive performance during 2007-08. The exports of goods and services registered strong growth in 2007-08. However, significantly higher growth of imports, especially non-oil imports led to the widening of the trade deficit. The impact of widening of trade deficit on the current account was contained due to surplus in the invisibles account led by higher private remittances and software services exports. Net capital flows to the country were significantly larger than the current account deficit, resulting in overall balance of payments surplus.

2.8 This chapter presents a detailed account of the macroeconomic developments during 2007-08 and 2008-09 (up to the period for which latest data are available). While Section II presents developments in the real sector, Section III sets out a detailed account of Central and State Government finances. Section IV dwells on monetary and credit developments along with the trends in inflation. Section V outlines the major developments in financial markets. Business operations of financial institutions during 2006-07 are covered in Section VI. Section VII sets out developments in the external sector. Overall assessment is presented in Section VIII.

II. REAL SECTOR

National Income

2.9 According to the revised estimates released by the Central Statistical Organisation (CSO) on May 30, 2008, the Indian economy is estimated to have grown by 9.0 per cent in 2007-08 as against 9.6 per cent in 2006-07. Notwithstanding the moderation, the real GDP growth in 2007-08 was above the average growth of 8.7 per cent during the previous four years (2003-04 to 2006-07) (Chart II.1).

Chart II.1: Annual Growth of Real GDP at Factor Cost (At 1999-00 prices)

2.10 The moderation in real GDP growth during 2007-08 was due to slowdown in the two major sectors, *viz.*, industry and services sector (Table 2.1 and Table 2.2). The share of agriculture & allied

Table 2.1: Real GDP Growth Rate

(Base : 1999-2000)

(Per cent)

Sector	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07*	2007-08#
1	2	3	4	5	6	7	8	9
I. Agriculture & Allied Activities	**-0.2**	**6.3**	**-7.2**	**10.0**	**0.0**	**5.9**	**3.8**	**4.5**
a) Agriculture	-0.6	6.5	-8.1	10.8	0.0	6.1	3.8	..
II. Industry	**6.4**	**2.4**	**6.8**	**6.0**	**8.5**	**8.0**	**10.6**	**8.1**
a) Mining & Quarrying	2.4	1.8	8.8	3.1	8.2	4.9	5.7	4.7
b) Manufacturing	7.7	2.5	6.8	6.6	8.7	9.0	12.0	8.8
c) Electricity, Gas & Water Supply	2.1	1.7	4.7	4.8	7.9	4.7	6.0	6.3
III. Services	**5.7**	**6.9**	**7.5**	**8.8**	**9.9**	**11.0**	**11.2**	**10.7**
a) Construction	6.2	4.0	7.9	12.0	16.1	16.5	12.0	9.8
b) Trade, Hotels & Restaurant	5.2	9.6	6.9	10.1	7.7	9.4	8.5	12.0^
c) Transport, Storage & Communication	11.2	8.4	14.1	15.3	15.6	14.6	16.6	..
d) Financing, Insurance, Real Estate & Business Services	4.1	7.3	8.0	5.6	8.7	11.4	13.9	11.8
e) Community, Social & Personal Services	4.7	4.1	3.9	5.4	6.9	7.2	6.9	7.3
IV. GDP at Factor Cost	**4.4**	**5.8**	**3.8**	**8.5**	**7.5**	**9.4**	**9.6**	**9.0**
	Sectoral Composition							
Agriculture & Allied Activities	23.9	24.0	21.4	21.7	20.2	19.6	18.5	17.8
Industry	20.0	19.3	19.9	19.4	19.6	19.4	19.5	19.4
Services	56.1	56.7	58.7	58.9	60.2	61.1	61.9	62.9
GDP at Factor Cost	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Memo								
GDP at Factor Cost at 1999-2000 Prices (Rupees crore)	18,64,300	19,72,606	20,48,287	22,22,758	23,88,384	26,12,847	28,64,310	31,22,862

* : Quick Estimates. # : Revised Estimates. .. : Not Available.
^ : Figures are combined with 'transport, storage and communication'.
Source: Central Statistical Organisation.

Table 2.2: Annual & Quarterly Growth Rates of Gross Domestic Product

(Per cent)

Sector	2000-01 to 2007-08 (Average)	2005-06	2006-07*	2007-08#	2006-07				2007-08			
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Agriculture and Allied Activities	**2.9**	**5.9 (19.6)**	**3.8 (18.5)**	**4.5 (17.8)**	**2.7**	**3.2**	**4.0**	**4.9**	**4.4**	**4.7**	**6.0**	**2.9**
1.1 Agriculture	..	6.1	3.8	..	..	..	..	..	..	..	..	..
2. Industry	**7.1**	**8.0 (19.4)**	**10.6 (19.5)**	**8.1 (19.4)**	**10.0**	**10.7**	**10.3**	**11.5**	**9.6**	**8.6**	**8.6**	**5.8**
2.1 Mining and Quarrying	4.9	4.9	5.7	4.7	4.1	3.9	6.0	8.2	**1.7**	**5.5**	**5.7**	**5.9**
2.2 Manufacturing	7.8	9.0	12.0	8.8	11.7	12.2	11.3	12.8	10.9	9.2	9.6	5.8
2.3 Electricity, Gas and Water Supply	4.8	4.7	6.0	6.3	4.3	6.6	7.6	5.4	7.9	6.9	4.8	5.6
3. Services	**9.0**	**11.0 (61.1)**	**11.2 (61.9)**	**10.7 (62.9)**	**11.7**	**11.6**	**11.1**	**10.5**	**10.6**	**10.7**	**10.0**	**11.4**
3.1 Trade, Hotels, Restaurants, Transport, Storage and Communication	10.3	11.5	11.8	12.0	10.9	12.7	12.1	11.6	13.1	11.0	11.5	12.4
3.2 Financing, Insurance, Real Estate and Business Services	8.8	11.4	13.9	11.8	13.6	13.9	14.7	13.4	12.6	12.4	11.9	10.5
3.3 Community, Social and Personal services	5.8	7.2	6.9	7.3	10.3	7.2	5.6	5.1	5.2	7.7	6.2	9.5
3.4 Construction	10.6	16.5	12.0	9.8	13.1	12.0	10.8	12.2	7.7	11.8	7.1	12.6
4. Real GDP at Factor Cost	**7.3**	**9.4 (100)**	**9.6 (100)**	**9.0 (100)**	**9.6**	**10.1**	**9.3**	**9.7**	**9.2**	**9.3**	**8.8**	**8.8**

* : Quick Estimates. # : Revised Estimates. .. : Not Available.
Note : Figures in parentheses are percentage shares in GDP.
Source : Central Statistical Organisation.

activities GDP declined to 17.8 per cent in 2007-08 from 18.5 per cent in the last year. The share of services sector increased, while that of the industrial sector declined somewhat.

Savings and Investment

2.11 The rate of gross domestic saving (GDS), as percentage of GDP at current market prices, increased to 34.8 per cent in 2006-07 from 34.3 per cent in 2005-06. The private corporate saving rate improved for the fifth consecutive year from 3.4 per cent in 2001-02 to 7.8 per cent of GDP in 2006-07, reflecting improvement in the performance of the corporate sector leading to higher retained earnings. Savings of the household sector, as percentage of GDP, increased to 23.8 per cent in 2006-07 from 22.1 per cent in 2001-02. Public sector savings, which witnessed a turnaround in 2003-04, continued to improve, largely reflecting the higher savings of non-departmental as well as departmental enterprises (Chart II.2 and Table 2.3).

2.12 As in the past, bulk of investment was financed by domestic saving. The rate of gross domestic capital formation (GDCF) was estimated to be higher at 35.9 per cent in 2006-07 as compared with 35.5 per cent in 2005-06 (Table 2.3 and Chart II.3). Investment activity continued to be driven by the private corporate sector, the rate of which increased to 14.5 per cent of

Chart II.2: Gross Domestic Savings - By Sector

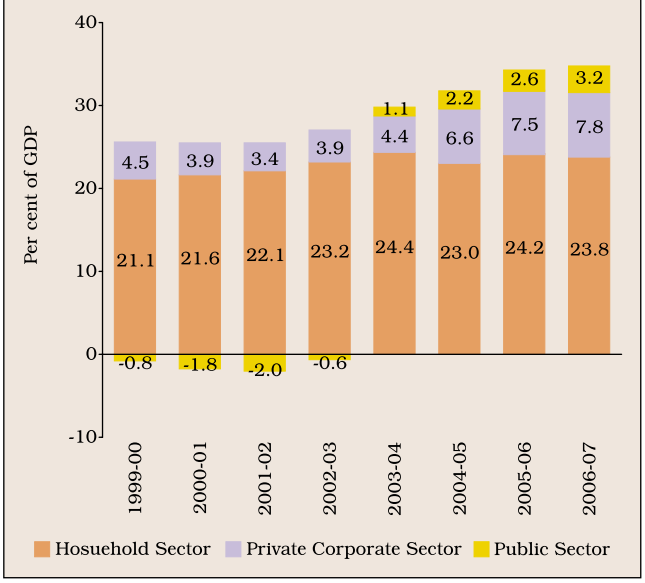


Table 2.3: Rate of Gross Domestic Savings and Investment

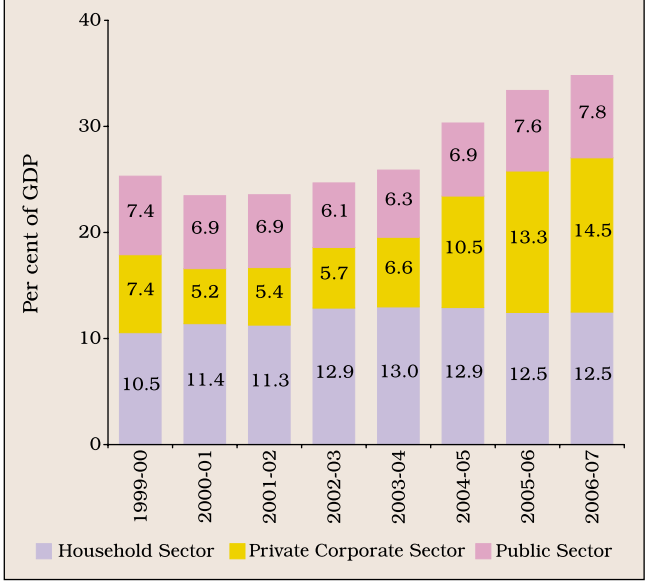
(Per cent of GDP at current market prices)

Item	2001-02	2002-03	2003-04	2004-05	2005-06 QE	2006-07 PE	10th Plan (Average)
1	2	3	4	5	6	7	8
1 Gross Domestic Saving	**23.5**	**26.4**	**29.8**	**31.8**	**34.3**	**34.8**	**31.4**
i) Household Sector	22.1	23.2	24.4	23.0	24.2	23.8	23.7
a) Financial Saving	10.9	10.3	11.4	10.1	11.8	11.3	11.0
b) Physical Saving	11.3	12.9	13.0	12.9	12.5	12.5	12.7
ii) Private Corporate Sector	3.4	3.9	4.4	6.6	7.5	7.8	6.0
iii) Public Sector	-2.0	-0.6	1.1	2.2	2.6	3.2	1.7
2 Gross Capital Formation	**24.2**	**25.2**	**26.8**	**31.6**	**34.5**	**36.0**	**30.8**
i) Household Sector	11.3	12.9	13.0	12.9	12.5	12.5	12.8
ii) Private Corporate Sector	5.4	5.7	6.6	10.5	13.3	14.5	10.1
iii) Public Sector	6.9	6.1	6.3	6.9	7.6	7.8	6.9
iv) Valuables	0.6	0.6	0.9	1.3	1.2	1.2	1.0
3 Gross Domestic Capital Formation (GDCF)#	**22.8**	**25.2**	**28.2**	**32.2**	**35.5**	**35.9**	**31.4**
4 Saving Investment Balance	**0.7**	**1.2**	**1.6**	**-0.4**	**-1.2**	**-1.1**	**0.0**
i) Household Sector	10.9	10.3	11.4	10.1	11.8	11.3	10.9
ii) Private Corporate Sector	-2.1	-1.9	-2.2	-4.0	-5.8	-6.8	-4.1
iii) Public Sector	-8.9	-6.7	-5.3	-4.7	-5.0	-4.5	-5.3

PE : Provisional Estimates. QE : Quick Estimates. # : Adjusted for errors and omissions.
Source: Central Statistical Organisation.

GDP in 2006-07 from 5.4 per cent of GDP in 2001-02. The saving and investment rates for the Tenth Five Year Plan, on an average, were at 31.4 per cent each per annum. The positive saving-investment balance in the first two years of the Plan period was offset by the negative saving-investment balance in the next three years of the Plan period.

Chart II.3: Gross Domestic Investment - By Sector



Agriculture

2.13 Agriculture continues to be important to the Indian economy as a large segment of population is dependent on it. According to the Fourth Advance Estimates released by the Ministry of Agriculture, Government of India, the total foodgrains production during 2007-08 was estimated at 230.7 million tonnes (an all-time record), indicating an increase of 6.2 per cent over the previous year (217.3 million tonnes). Accordingly, the growth in agriculture and allied activities was estimated higher at 4.5 per cent for 2007-08 as compared with 3.8 per cent during 2006-07, in the revised estimates of the CSO.

South-West Monsoon 2007

2.14 During the year 2007, the South-West monsoon arrived over Kerala on May 28, four days ahead of the normal date. After a brief spell of hiatus during early June in the advancement of monsoon due to the formation of a Super Cyclone “Gonu” over the East-Central Arabian Sea, the South-West monsoon covered the entire country by July 4, nearly 11 days ahead of the normal schedule. The Long Range Forecast issued by the India Meteorological Department (IMD) on June 29, 2007, placed the South-West monsoon season rainfall at 93 per cent of the long period average (LPA) with a model error

Table 2.4: Cumulative Rainfall

Category	Number of Sub-Divisions						
	South-West Monsoon				North-East Monsoon		
	2005	2006	2007	2008*	2005	2006	2007
	(Jun. 1 to Sep. 30)				(Oct. 1 to Dec. 31)		
1	2	3	4	5	6	7	8
Excess	9	6	13	10	11	3	2
Normal	23	20	17	22	6	6	7
Deficient	4	10	6	4	5	14	9
Scanty/No Rain	0	0	0	0	14	13	18

* : from June 1 up to August 13.
Source: India Meteorological Department.

of +/- 4 per cent. Actual precipitation during the South-West monsoon at 105 per cent of the LPA turned out to be better than the IMD's forecast. Of the 36 meteorological sub-divisions, cumulative rainfall was excess/normal in 30 sub-divisions (26 sub-divisions during last year) and deficient/scanty/no rain in 6 sub-divisions (10 sub-divisions during last year) (Table 2.4 and Chart II.4A).

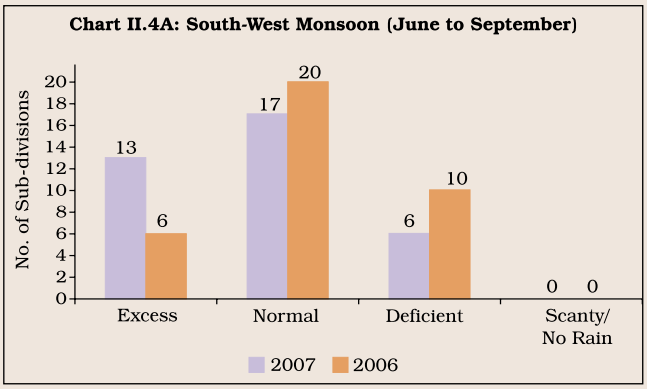
2.15 Among the four broad homogeneous regions[1], while the South-West monsoon season rainfall was below normal in the North-West India (85 per cent of LPA), it was above normal in the South Peninsula (126 per cent of LPA), Central India (108 per cent of LPA) and North-East India (104 per cent of LPA). In view of the normal performance of the South-West monsoon and improvement in the water storage levels, the Ministry of Agriculture set the target for the total foodgrains production during 2007-08 at around 221.5 million tonnes, marginally higher than the target of 220 million tonnes during the previous year (Table 2.5).

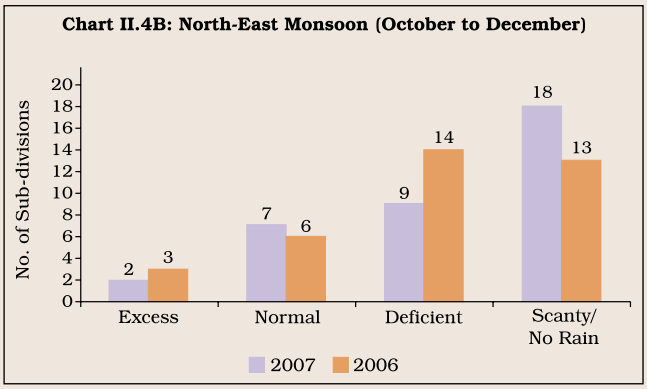
2.16 Five sub-divisions (West Uttar Pradesh, Haryana, Chandigarh and Delhi, Punjab, Himachal Pradesh and East Madhya Pradesh) experienced moderate drought conditions (rainfall deficiency of 26 to 50 per cent) at the end of the season. Monsoon activity was subdued at the beginning of the season. Large rainfall deficiency was observed during the first week of June, third and fourth weeks of July and third week of August. During the rest of the season, rainfall was well-distributed in time. Cumulative rainfall over the country, on the whole, remained always above normal beginning the last week of June. The month-wise distribution showed that rainfall was above normal in June (19 per cent) and September (18 per cent), while it was only marginally below normal during July (3 per cent) and August (1 per cent).

Reservoir Status

2.17 Water stock in the 81 major reservoirs, accounting for around 72 per cent of the total reservoir capacity of the country, was 79 per cent of the full reservoir level (FRL) at the end of the South-West monsoon season (September 27, 2007), lower than 87 per cent during the corresponding period of the previous year, but higher than the average of 67 per cent during the last 10 years.

Chart II.4: Cumulative Rainfall





[1] The four broad homogeneous regions are: 1) North-West India (Uttar Pradesh, Rajasthan, Haryana, Chandigarh and Delhi, Punjab, Uttaranchal, Himachal Pradesh and Jammu and Kashmir); 2) Central India (Madhya Pradesh, Chhattisgarh, Maharashtra, Orissa, Gujarat and Goa); 3) South Peninsula (Andhra Pradesh, Karnataka, Tamil Nadu and Puducherry, Kerala, Lakshadweep and Andaman and Nicobar Islands); and 4) North-East India (Bihar, Jharkhand, West Bengal, Sikkim, Assam, Arunachal Pradesh, Meghalaya, Nagaland, Manipur, Mizoram, Tripura).

Table 2.5: Crop-wise Targets/Achievements

(Million tonnes)

Crops	2005-06		2006-07		2007-08	
	T	A	T	A	T	A.E#
1	2	3	4	5	6	7
Rice	87.8	91.8	92.8	39.4	93.0	96.4
Wheat	75.5	69.4	75.5	75.8	75.5	78.4
Coarse Cereals	36.5	34.1	36.5	33.9	37.5	40.7
Pulses	15.2	13.4	15.2	14.2	15.5	15.1
Total Foodgrains	**215.0**	**208.6**	**220.0**	**217.3**	**221.5**	**230.7**
Oilseeds	26.6	28.0	29.4	24.3	30.0	28.8
Sugarcane	237.5	281.2	270.0	355.5	310.0	340.6
Cotton*	16.5	18.5	18.5	22.6	22.0	25.8
Jute & Mesta**	11.3	10.8	11.3	11.3	11.0	11.2

T : Target A : Achievement.
: Fourth Advance Estimates.
A.E. : Advance Estimate.
* : In million bales of 170 kilograms each.
** : In million bales of 180 kilograms each.
Source : Ministry of Agriculture, Government of India.

North-East Monsoon 2007

2.18 The rainfall during North-East monsoon commenced over Tamil Nadu and adjoining States of Southern Peninsula on October 22, 2007. The progress of North-East monsoon (October 1 to December 31, 2007) was deficient with cumulative rainfall 32 per cent below normal as compared with 21 per cent below normal during the corresponding period of the previous year. Of the 36 meteorological sub-divisions, cumulative rainfall was excess/normal in 9 sub-divisions (same as previous year) and deficient/scanty/no rains in 27 sub-divisions (same as previous year) (Chart II.4B). At the end of the season, the total reservoir storage as on January 3, 2008 was 61 per cent of the FRL (65 per cent during the previous year and an average of 51 per cent during the last 10 years).

Kharif 2007

2.19 The Fourth Advance Estimates placed foodgrains production during 2007-08 at an all-time high of 230.7 million tonnes, indicating an increase of 6.2 per cent over the previous year (217.3 million tonnes). Total *kharif* foodgrains production was placed at 121.0 million tonnes, an increase of 9.4 per cent over the previous year (110.6 million tonnes). Among foodgrains, while the production of *kharif* rice (3.3 per cent) witnessed a modest increase, that of coarse cereals (23.8 per cent) and pulses (34.4 per cent) increased significantly. Further, the production of *kharif* oilseeds recovered strongly with an increase of 41.6 per cent over the previous year.

Rabi 2007-08

2.20 *Rabi* foodgrains production for 2007-08 was placed at 109.7 million tonnes, a increase of about 2.8 per cent over the previous year. While a decline was observed for pulses (7.9 per cent), crops such as wheat (3.4 per cent), coarse cereals (8.7 per cent) and rice (3.3 per cent) registered an increase. The production of *rabi* oilseeds declined by 12.6 per cent.

2.21 On the whole, the record foodgrains production during 2007-08 was mainly led by the strong performance of the *kharif* season production. Among foodgrains, the overall production of pulses for 2007-08 was estimated at 15.1 million tonnes (14.2 million tonnes in 2006-07), rice at 96.4 million tonnes (93.4 million tonnes) and coarse cereals at 40.7 million tonnes (33.9 million tonnes) (Table 2.6).

Table 2.6: Season-wise Agricultural Production

(Million tonnes)

	Kharif			*Rabi*		
Crop	2005-06	2006-07	2007-08 A.E.	2005-06	2006-07	2007-08 A.E.
1	2	3	4	5	6	7
Rice	78.3	80.2	82.8	13.5	13.2	13.6
Wheat	–	–	–	69.4	75.8	78.4
Coarse Cereals	26.7	25.6	31.7	7.3	8.3	9.0
Pulses	4.9	4.8	6.5	8.5	9.4	8.7
Total Foodgrains	109.9	110.6	121.0	98.7	106.7	109.7
Oilseeds	16.8	14.0	19.8	11.2	10.3	9.0
Sugarcane	281.2	355.5	340.6	–	–	–
Cotton*	18.5	22.6	25.8	–	–	–
Jute & Mesta**	10.8	11.3	11.2	–	–	–

–: Not Applicable. AE: Fourth Advance Estimates (2007-08) as on July 9, 2008.
*: In million bales of 170 kilograms each. **: In million bales of 180 kilograms each.
Source: Ministry of Agriculture, Government of India.

Progress of Sowing in 2007-08

2.22 During 2007-08, *kharif* sowing showed improvement over the previous year. For all crops, the area sown increased by 2.8 per cent over the previous year, which was also 4 per cent above the normal sown area during the *kharif* season. The area sown in the case of rice, maize, pulses, oilseeds, cotton and sugarcane was higher, while that under *jowar* and *bajra* was lower than that in the previous year.

2.23 The area sown under *rabi* crops was lower by 2.8 per cent compared with the previous year. The sowing under *rabi* was lower in the case of coarse cereals, pulses and oilseeds, while it was marginally higher in the case of rice and wheat.

Procurement, Offtake and Stocks of Foodgrains

2.24 The procurement of foodgrains (rice and wheat) during 2008-09 (up to August 18, 2008) at 27.5 million tonnes was higher by around 76.0 per cent over the corresponding period of the preceding year (Table 2.7). This was mainly on account of higher procurement of wheat at 22.6 million tonnes during

Table 2.7: Management of Foodstocks

(Million Tonnes)

Year/ Month	Opening Stock of Foodgrains	Foodgrains Procurement	Foodgrains offtake				Closing Stock	Buffer Stock Norms $
			PDS	OWS	OMS - Domestic	Exports		
1	2	3	4	5	6	7	8	9
2006								
April	16.6	10.3	2.5	0.3	0.0	0.0	22.8	16.2
May	22.8	2.2	2.9	0.4	0.0	0.0	22.3	
June	22.3	1.5	2.6	0.6	0.0	0.0	20.5	
July	20.5	0.8	2.7	0.4	0.0	0.0	17.1	26.9
August	17.1	0.5	2.7	0.4	0.0	0.0	15.5	
September	15.5	0.2	2.6	0.5	0.0	0.0	12.6	
October	12.6	8.0	2.5	0.3	0.0	0.0	18.6	16.2
November	18.6	2.0	2.5	0.4	0.0	0.0	17.8	
December	17.8	2.6	2.6	0.3	0.0	0.0	17.5	
2007								
January	17.5	4.3	2.7	0.4	0.0	0.0	18.1	20.0
February	18.1	2.4	2.7	0.5	0.0	0.0	19.1	
March	19.1	1.2	2.7	0.5	0.0	0.0	17.9	
April	17.9	8.7	2.6	0.2	0.0	0.0	25.1	16.2
May	25.1	4.0	2.8	0.2	0.0	0.0	25.9	
June	25.9	2.0	2.7	0.4	0.0	0.0	23.9	
July	23.9	0.8	2.9	0.4	0.0	0.0	21.2	26.9
August	21.2	0.1	2.8	0.3	0.0	0.0	17.9	
September	17.9	0.1	2.7	0.3	0.0	0.0	15.6	
October	15.6	7.4	2.7	0.3	0.0	0.0	19.7	16.2
November	19.7	1.8	2.7	0.3	0.0	0.0	18.5	
December	18.5	3.5	2.7	0.3	0.0	0.0	19.2	
2008								
January	19.2	4.5	2.9	0.3	0.0	0.0	21.4	20.0
February	21.4	3.0	2.9	0.4	0.0	0.0	21.4	
March	21.4	1.6	3.1	0.5	0.0	0.0	19.8	
April	19.8	13.7	2.7	0.0	0.0	0.0	30.7	16.2
May	30.7	10.9	3.0	0.2	0.0	0.0	36.4	
June	36.4	2.2	..	..	..	..	..	
July	..	0.3	..	..	..	..	..	26.9
August*	..	0.4	..	..	..	..	..	
Memo:								
2006-07	16.6	35.5	31.6	5.1	0.0	0.0	17.9	
2007-08	17.9	37.4	33.5	3.9	0.0	0.0	19.8	
2007-08@	17.9	15.6	5.5	0.4	0.0	0.0	..	
2008-09@	19.8	27.5	5.7	0.2	0.0	0.0	..	

$: Minimum Buffer Stock norms to be maintained, as on April, July, October and January, revised under New Buffer Stocking Policy with effect from March 29, 2005.

.. : Not available. @: Procurement up to August 18 and offtake up to May 31. * : Procurement up to August 18.

PDS : Public Distribution System; OWS : Other Welfare Schemes; OMS : Open Market Sales.

Note : Closing Stock figures may differ from those arrived at by adding the opening stocks and procurement and deducting, off-take, as stocks include coarse grains also.

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

2008-09 so far (up to August 18, 2008) as against 11.1 million tonnes during the corresponding period of the previous year. Total offtake of rice and wheat during 2008-09 (April 1 to May 31, 2008) at 5.9 million tonnes was marginally higher by 0.1 per cent over the corresponding period of the previous year. While the offtake under the welfare schemes declined significantly by around 55.0 per cent, this was offset by increase in the offtake under Targeted Public Distribution System (TPDS) by around 4.6 per cent. The total stocks of foodgrains with Food Corporation of India and other Government agencies as on June 1, 2008 at 36.4 million tonnes were 40.3 per cent higher as compared with 25.9 million tonnes in the corresponding period of last year. This was mainly due to the increase in the stocks of wheat from 13.3 million tonnes, as on June 1, 2007 to 24.1 million tonnes, as on June 1, 2008.

Industry

2.25 The growth in terms of Index of Industrial Production (IIP) moderated to 8.5 per cent during 2007-08 from 11.5 per cent recorded during 2006-07. The moderation in the growth of the industrial sector was largely on account of subdued performance of the manufacturing sector, which contributes approximately 90 per cent to the IIP growth (weight in IIP 79.36 per cent) (Table 2.8). The growth of the mining and the electricity sectors witnessed some moderation. Slower growth in thermal and hydro-power generation resulted in lower growth in the electricity sector.

2.26 During 2007-08, six manufacturing industry groups (as per 2-digit level classification) recorded accelerated growth, while eleven recorded decelerated or negative growth (Table 2.9).

2.27 Three industries constituting around 5.9 per cent weight in IIP, *viz.,* 'wood and wood products', 'other manufacturing industries' and 'jute and other vegetable fibre textiles' recorded growth above 15 per cent and contributed 14.3 per cent to manufacturing sector growth during 2007-08. 'Jute and other vegetable fibre textiles' made a turnaround, while 'metal products and parts' recorded negative growth during the period. The industry groups with relatively higher weight in the IIP, *viz*., 'chemicals and chemical products (except products of petroleum and coal)', 'machinery and equipment' and 'basic metal and alloy industries' recorded growth in the range of 10-15 per cent during 2007-08.

2.28 In terms of the use-based classification, all the key groups decelerated during 2007-08 (Table 2.10). Decline in production in both nitrogenous and phosphatic fertiliser segments, and some steel products such as carbon steel, steel wires, coil and H.R. sheets led to lower growth of the basic goods sector. The decline in production of some chemical dyes, tin metal containers, ball and roller bearings, naptha, polished granite, *etc.,* resulted in deceleration in the intermediate goods sector.

Table 2.8: Monthly Growth of IIP

(Per cent)

Month	General (100)		Electricity (10.17)		Mining & Quarrying (10.47)		Manufacturing (79.36)	
	2006-07	2007-08#	2006-07	2007-08#	2006-07	2007-08#	2006-07	2007-08#
1	2	3	4	5	6	7	8	9
April	9.9	11.3	5.9	8.7	3.4	2.6	11.0	12.4
May	11.7	10.6	5.0	9.4	2.9	3.8	13.3	11.3
June	9.7	8.9	4.9	6.8	4.7	1.5	10.7	9.7
July	13.2	8.3	8.9	7.5	5.1	3.2	14.3	8.8
August	10.3	10.9	4.1	9.2	-1.7	14.7	11.9	10.7
September	12.0	7.0	11.3	4.5	4.3	4.9	12.7	7.4
October	4.5	12.2	9.7	4.2	5.9	5.1	3.8	13.8
November	15.8	4.9	8.7	5.8	8.8	6.3	17.2	4.7
December	13.4	8.0	9.1	3.8	6.1	5.0	14.5	8.6
January	11.6	6.2	8.3	3.7	7.7	2.9	12.3	6.7
February	11.0	9.5	3.3	9.8	7.5	7.9	12.0	9.6
March	14.8	5.5	7.9	3.7	8.0	4.9	16.0	5.7
April-March	**11.5**	**8.5**	**7.3**	**6.3**	**5.3**	**5.1**	**12.5**	**9.0**

: Provisional.
Note : Figures in parentheses indicate weight in IIP.
Source : Central Statistical Organisation.

Table 2.9: Growth of Manufacturing Industries (2-digit level Classification)

(2007-08)

Above 15 per cent	10-15 per cent	0-10 per cent	Negative
1	2	3	4
1. Wood and wood products, furniture and fixtures (40.5) (*29.1*)	1. Basic metal and alloy (12.1) *(22.8)*	1. Rubber, plastic, petroleum and coal products (8.9) *(12.9)*	1. Metal products and parts (-5.6) *(11.4)*
2. Jute and other vegetable fibre textiles (33.0) (*-15.8*)	2. Beverages, tobacco and related products (12.0) *(11.1)*	2. Food products (7.0) *(8.5)*	
3. Other manufacturing industries (19.8) (*7.7*)	3. Leather and leather and fur products (11.7) *(0.6)*	3. Non-metallic mineral products (5.7) *(12.8)*	
	4. Chemicals and chemical products except products of petroleum and coal (10.6) *(9.6)*	4. Wool, silk and man- made fibre textiles (4.8) *(7.8)*	
	5. Machinery and equipment other than transport equipment (10.5) *(14.2)*	5. Cotton textiles (4.3) *(14.8)*	
		6. Textiles products (including apparels) (3.7) *(11.5)*	
		7. Transport equipment and parts (2.9) *(15.0)*	
		8. Paper and paper products (2.7) *(8.7)*	

Note : 1. Figures in brackets are growth rates.
2. Figures in italics pertain to the year 2006-07.
Source : Central Statistical Organisation.

2.29 The capital goods sector, however, continued to exhibit robust growth performance. During 2007-08, the capital goods sector recorded growth of 18.0 per cent as compared with 18.2 per cent during 2006-07. The consumer goods sector recorded lower growth of 6.1 per cent. As a result, its contribution to IIP growth declined to 22.9 per cent during 2007-08 from 28.5 per cent during 2006-07. This was on account of lower growth in consumer non-durables and decline in production of consumer durables. Consumer durables recorded negative growth of 1.0 per cent (9.2 per cent in 2006-07) due to decline in the production of metal utensils, type writers, telephone instruments, tape recorders, motor cycles, alarm time pieces and wrist watches, among others. Further, slowdown in the consumer durables sector appears to be overstated since the product obsolescence in the segment due to changing consumer preferences and availability of technologically superior products in recent years is not adequately captured by the present IIP basket based on 1993-94 series (see RBI Annual Report 2007-08, Box II.6, p.60).

Infrastructure

2.30 The growth of the infrastructure sector decelerated to 5.6 per cent during 2007-08 from 9.3

Table 2.10: Sectoral Growth and Contribution to IIP Growth

(Per cent)

Industry Group	Weight in IIP	Growth			Relative Contribution		
		2005-06	2006-07	2007-08#	2005-06	2006-07	2007-08#
1	2	3	4	5	6	7	8
Basic Goods	**35.57**	6.7	10.3	7.0	25.4	27.2	24.7
Capital Goods	**9.26**	15.7	18.2	18.0	20.0	17.6	25.0
Intermediate Goods	**26.51**	2.5	12.0	8.9	8.4	27.0	27.4
Consumer Goods (a+b)	**28.66**	12.0	10.1	6.1	46.3	28.5	22.9
a) Consumer Durables	**5.36**	15.3	9.2	-1.0	14.9	6.7	-1.0
b) Consumer Non-durables	**23.30**	10.9	10.4	8.5	31.4	21.8	24.0
IIP	**100**	**8.2**	**11.5**	**8.5**	**100**	**100**	**100**

: Provisional.
Source : Central Statistical Organisation.

Table 2.11: Growth Rate of Infrastructure Industries

(Per cent)

Sector	Weight in IIP	2003-04	2004-05	2005-06	2006-07	2007-08
1	2	3	4	5	6	7
1. Electricity	10.2	5.0	5.2	5.2	7.3	6.3
2. Coal	3.2	5.1	6.2	6.6	5.9	6.0
3. Finished Steel	5.1	9.8	8.4	10.8	13.1	5.1
4. Cement	2.0	6.1	6.6	12.4	9.1	8.1
5. Crude Petroleum	4.2	0.7	1.8	-5.2	5.5	0.4
6. Petroleum Refinery Products	2.0	8.2	4.3	2.1	12.9	6.5
Composite Index	**26.7**	**6.1**	**5.8**	**6.1**	**9.3**	**5.6**

per cent during 2006-07 (Table 2.11). The lower growth was contributed by all the core infrastructure sectors, barring coal. The electricity sector recorded lower growth of 6.3 per cent and contributed 39.3 per cent to the core sector growth during 2007-08. The cement sector recorded the highest growth of 8.1 per cent during 2007-08.

2.31 The slowdown in steel exports from the country contributed to decelerated growth of steel output, even as the domestic demand continued to be strong. The crude oil sector decelerated sharply to 0.4 per cent on account of decline in production in the Mumbai High unit of ONGC. The growth in the cement sector fluctuated during 2007-08 mainly due to base effect. Moderation in growth of the petroleum refinery sector was attributable to base effect, lower capacity utilisation and decline in production in some public sector refineries.

Services Sector

2.32 The services sector grew by 10.7 per cent during 2007-08 over and above 11.2 per cent growth in 2006-07 (Table 2.12). The year 2007-08 was the third year in succession when the services sector posted double digit growth. The sector accounts for 62.9 per cent of domestic output. The 'trade, hotels, transport and communication' sector has recorded double digit growth for the last five years and presently accounts for almost half of the services sector growth. The rise in international trade has been remarkable in the last six years with exports and imports averaging annual growth of 24.0 per cent and 29.5 per cent, respectively, during the period 2002-03 to 2007-08. In addition to strong growth in international trade, the domestic retail boom, rapid growth in mobile network connections and aviation uptrend has driven the growth of this sub-sector.

2.33 The 'community, social and personal services' recorded improvement in growth during 2007-08 mainly on account higher expenditure on these services by the Central Government. Rise in exports of business process outsourcing and information technology enabled services in conjunction with spread of banking and insurance services sustained the double digit growth of 'financing, insurance, real estate and business services' *albeit* with some moderation due to base effect.

Table 2.12: Quarterly Growth Performance of Service Sub-Sectors

(Base: 1999-2000)

(Per cent)

Sub-sector	2006-07					2007-08				
	Q1	Q2	Q3	Q4	Annual	Q1	Q2	Q3	Q4	Annual
1	2	3	4	5	6	7	8	9	10	11
1. Construction	13.1	12.0	10.8	**12.2**	12.0	7.7	11.8	7.1	12.6	9.8
2. Trade, Hotels, Transport & Communication	10.9	12.7	12.1	11.6	11.8	13.1	11.0	11.5	12.4	12.0
3. Financing, Insurance, Real Estate & Business Services	13.6	13.9	14.7	13.4	13.9	12.6	12.4	11.9	10.5	11.8
4. Community, Social & Personal Services	10.3	7.2	5.6	5.1	6.9	5.2	7.7	6.2	9.5	7.3
5. Services	**11.7**	**11.6**	**11.1**	**10.5**	**11.2**	**10.6**	**10.7**	**10.0**	**11.4**	**10.7**
GDP at factor cost	**9.6**	**10.1**	**9.3**	**9.7**	**9.6**	**9.2**	**9.3**	**8.8**	**8.8**	**9.0**

Information Technology Enabled Services and Business Process Outsourcing

2.34 The Indian software and services industry continued its strong performance during 2007-08, with outsourcing remaining the prime growth driver of ITES-BPO industry in India. However, some shift in outsourcing markets was observed with a growing traction in Europe and Asia Pacific offsetting a marginal decline in the share of America. The Indian IT industry has increased its exposure to other geographical regions in the recent times. According to the annual NASSCOM survey, the Indian IT-ITES industry (including domestic market) grew by 33.3 per cent during 2007-08. The software and services exports segment grew by 28.8 per cent to register revenues of US$ 40.3 billion in 2007-08, up from US$ 31.3 billion in 2006-07. While India continues to be the most preferred destination for global IT sourcing due to its talent pool. Nevertheless, in respect of quality management and security, there are certain short to medium term challenges that need to be addressed. These include skill upgradation of the available talent, infrastructure development and sustenance of a positive policy/regulatory environment. These require timely, consistent and continued efforts from all stakeholders including industry and the Government to maintain the competitive edge in this field.

Industrial Outlook

2.35 Despite some moderation in IIP growth, industry, continued to record firm performance during 2007-08, with strong investment demand, reflecting capacity expansions. However, the growth of the consumer goods sector decelerated significantly, primarily on account of decline in the production of consumer durables. The mining sector, which did not perform well in 2005-06, registered improvement in 2006-07 and put up a modest growth in 2007-08. The incentives in terms of excise duty concessions and adjustments in personal income tax slabs in the Union Budget 2008-09 along with the implementation of the award of the Sixth Pay revision of salaries of the Central Government employees are likely to give a fillip to the consumer goods sector in 2008-09. However, there are certain downside risks such as steep rise in industrial input prices, elevated prices of crude oil, turbulence in global financial markets, weakening of growth momentum in advanced economies and domestic inflationary conditions.

2.36 Forecasts of economic growth for 2008-09 by various agencies are set out in Table 2.13.

III. FISCAL SITUATION

Central Government Finances

2.37 The revised estimates (RE) of the finances of the Central Government during 2007-08 placed the key deficit indicators, *viz.* revenue deficit (RD) and fiscal deficit (GFD) in relation to GDP lower than the budget estimates (BE). In the provisional accounts, these ratios, *i.e.,* RD and GFD as percentage of GDP declined further. Primary surplus

Table 2.13: Agencies' Forecast for Real GDP Growth in 2008-09

Agency	Overall Growth	Agriculture	Industry	Services	Month of Projection
1	2	3	4	5	6
ASSOCHAM	7.6	4.0	7.2	9.0	July 2008
Merrill Lynch	7.9	2.5	7.4	9.6	June 2008
JP Morgan	7.0	..	..	..	March 2008
CMIE	9.4	3.2	11.1	10.6	August 2008
CRISIL	7.8	3.0	8.3	10.3	June 2008
Goldman Sachs	7.8	..	..	..	July 2008
World Economic Situation and Prospects, UN 2008	8.2	..	..	..	January 2008
Economic Advisory Council to PM	7.7	2.0	7.5	9.6	August 2008
ADB	8.0	..	..	..	April 2008
International Monetary Fund	8.0 *	..	..	..	July 2008
CII	8.0-8.5	..	..	..	March 2008
RBI	Around 8.0	..	..	..	July 2008
NCAER	7.8	..	..	..	August 2008

.. : Not Available. * : Calendar Year.

in relation to GDP in provisional accounts was also higher than that of RE which, in turn, was higher than the BE. The improvement in revenue receipts mainly accounted for the reduction in the key deficit indicators. The RD and GFD in relation to GDP in the 2008-09 budget estimates were expected to decline further from the revised estimates and provisional accounts for 2007-08. While the FRBM target relating to GFD is set to be achieved as per the mandate, the stipulated target of zero RD by 2008-09 has been rescheduled by one more year to 2009-10 primarily on account of a shift in plan priorities in favour of revenue expenditure-intensive programmes and schemes. The Budget proposed that the ongoing reforms and fiscal correction initiatives would continue to be supportive of raising domestic demand and investment, both of which are main drivers of growth of GDP. Towards this end, the Budget sought to rationalise personal income tax and central excise, broaden the tax base by extending service tax to more services and improve expenditure management with focus on outcome and provision of adequate investment for the social sector. The major thrust of the Budget was to accord priority for sustained, rapid and more inclusive growth with a sharp focus on development of physical and social infrastructure.

2.38 A major proposal in the Budget was the introduction of a scheme of Debt Waiver and Debt Relief for extending help to the distressed farmers, estimated cost of which to the Central Government has been placed at Rs.71,680 crore. This expenditure would be disbursed in phases over four fiscal years *albeit* with some front loading.

2.39 The focus of the Union Budget 2008-09, the second year of the Eleventh Five Year Plan, was on consolidation, securing the ongoing programmes on a firm financial foundation, close monitoring of implementation and enforcing accountability, and measuring the outcomes in terms of the targets achieved as well as their quality. The Government, therefore, proposed to strengthen evaluation by authorising independent evaluations of the major schemes. A Central Plan Scheme Monitoring System (CPSMS) was also proposed to be put in place to monitor scheme-wise and State-wise releases for the Central Plan and Centrally Sponsored Schemes. The Budget laid special emphasis on schemes for upliftment of women and children.

2.40 The tax policy in recent years has been governed by the overarching objective of increasing the tax-GDP ratio for achieving fiscal consolidation. This is sought to be achieved both through appropriate policy interventions and a steadfast improvement in the quality and effectiveness of tax administration. On the direct taxes front, the main strategy is to further consolidate the achievements made in recent years in terms of (i) minimisation of distortions within the tax structure by expanding the tax base and maintaining the moderate tax rates; (ii) to promote voluntary compliance through tax payer services coupled with enhanced deterrence levels; and (iii) extensive use of information technology to enhance the functional efficiency of Income Tax Department. On the indirect taxes front, the strategy is to integrate the taxes on goods (central excise) and services and finally move on to a goods and services tax. Towards this end, the general CENVAT rate was reduced from 16 per cent to 14 per cent, which is very close to the tax rate on services at 12 per cent. In the case of service tax, the strategy is to expand the tax base, simplification of law and procedure, improved tax administration and increase in tax compliance. In order to broaden the tax base, the scope and coverage of services leviable are further widened by adding more services and expanding the scope of some of the existing services.

Revised Estimates 2007-08[2]

2.41 The revised estimates for 2007-08 carried forward the process of fiscal correction and consolidation under the FRBM framework. Reflecting this, the revenue deficit and fiscal deficit relating to GDP were placed lower than their budgeted levels. Notwithstanding an increase in revenue expenditure on account of higher provision for interest payments and subsidies, the significant increase in tax and non-tax revenue (mainly on account of communication services) resulted in lower revenue deficit. The improvement in revenue deficit coupled with the decline in capital expenditure resulted in lower level of GFD. The primary surplus in the revised estimates improved significantly. Plan expenditure did not diverge much from the budget estimates, though Central assistance for the State and UT plans increased markedly in the revised estimates.

2.42 The revenue deficit in the revised estimates was lower by 11.2 per cent and constituted 1.4 per cent of the GDP in 2007-08 as against the budgeted

[2] All comparisons of 2007-08 in this Section are with budget estimates, unless stated otherwise.

level of 1.5 per cent. The decline in revenue deficit was on account of a marked improvement in revenue receipts by Rs.38,676 crore (8.0 per cent), which offset the increase in revenue expenditure by Rs.30,686 crore (5.5 per cent). The GFD was lower by Rs.7,295 crore (4.8 per cent). In terms of GDP, it was lower at 3.1 per cent than the budget estimates (3.3 per cent) (Table 2.14). Primary surplus at 0.6 per cent of GDP in the revised estimates for 2007-08 was about 3.5 times higher than the budget estimates.

2.43 The gross tax revenue in the revised estimates for 2007-08 was higher by Rs.37,288 crore than the budget estimates. The increase in gross tax revenue in the revised estimates was mainly on account of higher collection in corporation and personal income tax than the budgeted level. The increase in corporation tax by Rs.17,724 crore or 10.5 per cent was on account of higher profits backed by sound balance sheet of the corporates. The personal income tax collection increased by Rs.16,641 crore or 17.8 per cent mainly due to improved tax compliance. Among the recently introduced taxes, fringe benefit tax was estimated to yield Rs.6,800 crore in 2007-08, securities transactions tax Rs.7,500 crore and banking cash transaction tax Rs.550 crore. Non-tax revenue was also 13.1 per cent higher than the budget estimates on account of higher receipts from communication services by way of one-time entry fee from dual technology users and new Unified Access Service Licence (UASL) operators (Table 2.15).

2.44 Under non-debt capital receipts, recoveries of loans and advances are budgeted to increase significantly in the revised estimates for 2007-08 over budget estimates. The proceeds from disinvestment of central public sector undertakings are estimated to increase considerably.

2.45 Revenue expenditure in the revised estimates for 2007-08 was higher by 5.5 per cent than the budget estimates, while capital expenditure showed an increase of 3.2 per cent over the budget estimates (Table 2.16). Revenue expenditure was higher mainly on account of interest payments, fertiliser and interest subsidies, grants to States and pensions. Within capital expenditure, loans and advances and non-defence capital outlay were higher than the budget estimates.

Budget Estimates 2008-09[3]

2.46 After achieving the targets in the preceding year, the Union Budget for 2008-09 proposed to further strengthen the fiscal correction process as stipulated in the Fiscal Responsibility and Budget Management (FRBM) Rules, 2004. The key deficit indicators, *viz*., revenue deficit (RD) and gross fiscal deficit (GFD), as percentage to GDP, in the budget estimates (BE) for 2008-09 were placed lower than those under the revised estimates (RE) for 2007-08. The FRBM roadmap envisages an annual reduction of at least 0.3 percentage point in the fiscal deficit and 0.5 percentage point in the revenue deficit. While the FRBM targets relating to GFD are set to be achieved as per the mandate, the stipulated target of zero revenue deficit by 2008-09 under the FRBM Rules, 2004 was proposed to be rescheduled primarily on account of a shift in plan priorities in favour of revenue expenditure-intensive programmes and schemes. Furthermore, there are systemic rigidities in containing non-plan expenditures in the short-term,

Table 2.14: Key Deficit Indicators of the Central Government

(Rupees crore)

Item	2006-07 (Accounts)	2007-08 (BE)	2007-08 (RE)	2008-09 (BE)	Variation (Per cent)	
					col.4 over 3	col. 5 over 4
1	2	3	4	5	6	7
Gross Fiscal Deficit	1,42,573 (3.5)	1,50,948 (3.3)	1,43,653 (3.1)	1,33,287 (2.5)	-4.8	-7.2
Revenue Deficit	80,222 (1.9)	71,478 (1.5)	63,488 (1.4)	55,184 (1.0)	-11.2	-13.1
Gross Primary Deficit	-7,699 (-0.2)	-8,047 (-0.2)	-28,318 (-0.6)	-57,520 (-1.1)	251.9	103.1

RE : Revised Estimates. BE : Budget Estimates.
Note : Figures in parentheses are percentages to GDP.

[3] All comparisons with 2008-09 in this Section are with revised estimates for 2007-08, unless stated otherwise.

Table 2.15: Receipts of the Centre

(Amount in Rupees crore)

Item	2006-07	2007-08 (BE)	2007-08 (RE)	2008-09 (BE)	Variation (per cent)	
					Col.4 over 3	Col.5 over 4
1	2	3	4	5	6	7
Total Receipts (1+2)	**5,83,387 (14.1)**	**6,80,521 (14.5)**	**7,09,373 (15.1)**	**7,50,884 (14.2)**	**4.2**	**5.9**
1. Revenue Receipts	4,34,387 (10.5)	4,86,422 (10.4)	5,25,098 (11.2)	6,02,935 (11.4)	8.0	14.8
i) Tax Revenue (Net)	3,51,182 (8.5)	4,03,872 (8.6)	4,31,773 (9.2)	5,07,150 (9.6)	6.9	17.5
ii) Non-Tax Revenue	83,205 (2.0)	82,550 (1.8)	93,325 (2.0)	95,785 (1.8)	13.1	2.6
2. Capital Receipts	1,49,000 (3.6)	1,94,099 (4.1)	1,84,275 (3.9)	1,47,949 (2.8)	-5.1	-19.7
of which						
Market Borrowings	1,14,801 (2.8)	1,10,827 (2.4)	1,10,727 (2.4)	99,000 (1.9)	-0.1	-10.6
Recoveries of Loans	5,893 (0.1)	1,500 (0.0)	4,497 (0.1)	4,497 (0.1)	199.8	0.0
Disinvestment of Equity of Public Sector Undertakings	534 (0.0)	1,651* (0.0)	1,817# (0.0)	10,165 (0.2)	10.1	459.4
Memo Items						
Gross Tax Revenue	4,73,512 (11.4)	5,48,122 (11.7)	5,85,410 (12.5)	6,87,715 (13.0)	6.8	17.5
Of which						
i) Corporation Tax	1,44,318 (3.5)	1,68,401 (3.6)	1,86,125 (4.0)	2,26,361 (4.3)	10.5	21.6
ii) Taxes on Income other than Corporation Tax$	80,397 (1.9)	93,629 (2.0)	1,10,270 (2.3)	1,28,764 (2.4)	17.8	16.8
iii) Customs Duty	86,327 (2.1)	98,770 (2.1)	1,00,766 (2.1)	1,18,930 (2.2)	2.0	18.0
iv) Union Excise Duty	1,17,613 (2.8)	1,30,220 (2.8)	1,27,947 (2.7)	1,37,874 (2.6)	-1.7	7.8
v) Service Tax	37,598 (0.9)	50,200 (1.1)	50,603 (1.1)	64,460 (1.2)	0.8	27.4
vi) Securities Transaction Tax	4,646 (0.1)	4,500 (0.1)	7,500 (0.2)	9,000 (0.2)	66.7	20.0
vii) Banking Cash Transaction Tax	507 (0.0)	645 (0.0)	550 (0.0)	550 (0.0)	-14.7	0.0
viii) Taxes of UTs (Net of Assignments to Local Bodies)	1,263 (0.0)	1,442 (0.0)	1,334 (0.0)	1,451 (0.0)	-7.5	8.8
ix) Other Taxes and Duties	843 (0.0)	315 (0.0)	315 (0.0)	325 (0.0)	0.0	3.2

BE: Budget Estimates. RE: Revised Estimates.

* : Adjusted for an amount of Rs.40,000 crore on account of transactions relating to transfer of RBI's stake in SBI to the Government.

$: Includes fringe benefit tax.

: Net of transfer of profit from RBI to the Union Government amounting to Rs.34,308 crore.

Note : 1. Figures in parentheses are percentages to GDP.

2. All comparisons of 2007-08 in this Section are with revised estimates for 2006-07 unless stated otherwise.

particularly arising from committed and obligatory expenditures such as interest payments, pensions and defence. The GFD/GDP ratio, however, would be lower than the FRBM target. Accordingly, the key deficit indicators, *viz.,* revenue deficit, gross fiscal deficit and primary deficit, as per cent of GDP, were budgeted lower at 1.0 per cent, 2.5 per cent and -1.1 per cent, respectively, in 2008-09 as compared with 1.4 per cent, 3.1 per cent and -0.6 per cent, respectively, in the preceding year (Table 2.14). The revenue deficit and GFD are understated to the extent the Government incurs liabilities on account of oil, food

Table 2.16: Expenditure Pattern of the Centre

(Amount in Rupees crore)

Item	2006-07	2007-08 (BE)	2007-08 (RE)	2008-09 (BE)	Variation (per cent)	
					Col.4 over 3	Col.5 over 4
1	2	3	4	5	6	7
Aggregate Expenditure (1+2)	**5,83,387**	**6,80,521**	**7,09,373**	**7,50,884**	**4.2**	**5.9**
1. Revenue Expenditure	**5,14,609**	**5,57,900**	**5,88,586**	**6,58,119**	**5.5**	**11.8**
Interest Payments	1,50,272	1,58,995	1,71,971	1,90,807	8.2	11.0
Subsidies	57,125	54,330	69,742	71,431	28.4	2.4
Grants to States	35,734	38,403	36,432	43,294	-5.1	18.8
Defence Revenue	51,682	54,078	54,795	57,593	1.3	5.1
2. Capital Expenditure	**68,778**	**82,621***	**85,256#**	**92,765**	**3.2**	**8.8**
Loans and Advances	8,524	7,498	10,992	8,243	46.6	-25.0
Defence Capital Outlay	33,828	41,922	37,705	48,007	-10.1	27.3
Non-defence Capital Outlay	26,426	33,201*	36,559#	36,515	10.1	-0.1

BE : Budget Estimates. RE : Revised Estimates.

* : Adjusted for an amount of Rs.40,000 crore on account of transactions relating to transfer of Reserve Bank's stake in SBI to the Government.

: Net of acquisition cost of Reserve Bank's stake in State Bank of India at Rs.35,531 crore.

and fertiliser bonds which are recorded below the line. Therefore, as a step towards bringing about greater transparency in fiscal accounting, the Budget reported in its revised estimates for 2007-08 the issuance of special securities aggregating Rs.18,757 crore.

2.47 The Government continued the process of fiscal consolidation through better expenditure management. The revenue expenditure in 2008-09 was budgeted to show a lower growth of 11.8 per cent than 14.4 per cent in 2007-08 (Table 2.16). Notably, the growth of total subsidies was budgeted to decelerate to 2.4 per cent as against an increase of 22.1 per cent in 2007-08. Adjusting for Rs.35,531 crore incurred on account of transactions relating to the transfer of the Reserve Bank's stake in State Bank of India to the Government, the capital expenditure was budgeted to increase by 8.8 per cent as against 24.0 per cent in 2007-08.

2.48 The revenue receipts in 2008-09 were budgeted to increase by 14.8 per cent as compared with 20.9 per cent increase in 2007-08, primarily because of lower budgeted increase of 17.5 per cent in gross tax collections as against an increase of 23.6 per cent in 2007-08. Among the direct taxes, the growth in corporation tax collections was budgeted to decelerate to 21.6 per cent in 2008-09 from a high of 29.0 per cent in 2007-08. The growth of personal income tax was estimated to decelerate to 16.8 per cent from 37.2 per cent in 2007-08. In the case of indirect taxes, the collections under customs duty were budgeted to increase by 18.0 per cent, higher than 16.7 per cent a year ago. Excise duty collections were, however, budgeted to show a lower growth of 7.8 per cent as compared with 8.8 per cent. Non-tax revenues (NTR) were budgeted to increase to Rs.95,785 crore in 2008-09 from Rs.93,325 crore in 2007-08, reflecting higher revenues from dividends and profits. The interest receipts, on the other hand, continued to decline primarily because lending by the Centre to the States is limited only for loans under externally aided projects as recommended by the Twelfth Finance Commission (refer Table 2.15).

2.49 The financing pattern of the gross fiscal deficit indicates that the net market borrowings (excluding allocations budgeted under the MSS) were budgeted to finance 74.3 per cent of the GFD in 2008-09 as against 77.1 per cent in 2007-08. On the other hand, the share of external assistance was budgeted to increase to 8.2 per cent from 6.9 per cent in 2007-08. Investments by the National Small Savings Fund (NSSF) in special Central Government securities were budgeted to finance 7.4 per cent of GFD. During 2008-09, the Budget proposed to drawdown cash balances to finance 5.4 per cent of GFD, as against the built up of cash balances amounting to 12.7 per cent of GFD in the previous year (Table 2.17).

Outlook

2.50 The Budget 2008-09 continued to pursue the path of fiscal correction with emphasis on quality in expenditure in accordance with the FRBM goals. Although the Budget has met the FRBM target of

Table 2.17: Financing Pattern of Gross Fiscal Deficit

(Amount in Rupees crore)

Item	2007-08 (RE)	2008-09 (BE)
1	2	3
Gross Fiscal Deficit	1,43,653	1,33,287
Financed by:		
Market Borrowings	1,10,727	99,000
	(77.1)	(74.3)
Short Term Borrowings (a + b)	25,497	14,000
	(17.7)	(10.5)
a) 91-day Treasury Bills	26,628	15,000
b) 182- day Treasury Bills	-1,131	-1,000
Securities against Small Savings	-1,802	9,873
	(-1.3)	(7.4)
External Assistance	9,970	10,989
	(6.9)	(8.2)
State Provident Fund	4,800	4,800
	(3.3)	(3.6)
NSSF	11,174	53
	(7.8)	(0.0)
Reserve Funds	3,504	-972
	(2.4)	(-0.7)
Deposit and Advances	7,807	8,629
	(5.4)	(6.5)
Postal Insurance and Life Annuity Funds	3,045	4,123
	(2.1)	(3.1)
Others	-12,885	-24,433
	(-9.0)	(-18.3)
Drawdown of Cash Balances	-18,184	7,225
	(-12.7)	(5.4)

Note: Figures in parentheses are percentage to GFD.

annual reduction of 0.5 per cent of GDP in the revenue deficit, it was still placed at 1.0 per cent of GDP due to increased expenditure on health and education. Finances of the Central Government may come under pressure during 2008-09 on account of implementation of the Sixth Pay Commission (SPC) award, including payment of arrears,higher oil subsidies, increase in fertiliser subsidy due to sharp rise in the price of raw materials and fertiliser in the international market and the expenditure on account of debt waiver of the farmers.

State Finances

2.51 The State Governments have reiterated commitment to carry forward the process of fiscal correction and consolidation in their budgets for 2008-09. As at end-March 2008, all States, barring West Bengal and Sikkim, have enacted Fiscal Responsibility Legislation (FRL). All States have implemented value added tax (VAT) in *lieu* of sales tax, with the last State Uttar Pradesh implementing VAT with effect from January 1, 2008.

2.52 The State Governments in their budgets for 2008-09 proposed various policy initiatives aimed at augmenting their revenues and directing expenditure towards the priority areas. The budgetary allocations for the productive sectors such as agriculture and water conservation, infrastructure, power, urban development and housing sector are proposed to be raised in 2008-09 in a number of States. The State Governments are also undertaking construction of houses for low and middle income group families as also slum dwellers and below poverty line families under various schemes, including *Indira Awas Yojana* and Jawaharlal Nehru National Urban Renewal Mission (JNNURM). The State Governments are undertaking computerisation of the treasuries and tax departments. Maharashtra State has implemented a computerised budget distribution system aimed at improving the cash flow system. A few more States, including Arunachal Pradesh, introduced gender budgeting for the empowerment of women. Kerala has announced the setting up of a Gender Board. Manipur has proposed to set up Guarantee Redemption Fund and Consolidated Sinking Fund. In terms of Article 280 of the Indian Constitution, the Thirteenth Finance Commission was constituted on November 13, 2007, which will have an award period spanning 2010-15. The Sixth Pay Commission constituted by the Government of India for Central Government Employees submitted its Report on March 24, 2008. While a number of States follow the recommendations of Union Pay Commission, some States constitute separate Pay Commissions for reviewing the salaries and other benefits for their employees.

Budget Estimates – 2008-09[4]

2.53 The consolidated revenue surplus of the States is estimated at Rs.28,426 crore (0.54 per cent of GDP) in 2008-09 (BE) as compared with Rs.22,526 crore (0.48 per cent of GDP) in 2007-08 (RE). Although the GFD is budgeted higher at Rs.1,12,653 crore in 2008-09 (BE) than Rs.1,07,958 crore in 2007-08 (RE), as percentage of GDP, it would come down to 2.1 per cent in 2008-09 (BE) from 2.3 per cent in 2007-08 (RE). The consolidated primary deficit is budgeted at 0.1 per cent of GDP in 2008-09 (BE), the same as in the previous year (Table 2.18).

2.54 The improvement in the revenue account during 2008-09 is budgeted to be mainly achieved by

[4] The analysis of State Finances for 2008-09 (Budget Estimates) is based on the budgets of 28 State Governments.

Table 2.18: Major Deficit Indicators of the State Governments

(Amount in Rupees crore)

Item	Average			2005-06	2006-07	2007-08 BE	2007-08 RE	2008-09 BE
	1990-95	1995-00	2000-05					
1	2	3	4	5	6	7	8	9
Gross Fiscal Deficit				90,084	77,509	108,323	107,958	112,653
	(2.8)	(3.4)	(4.0)	(2.5)	(1.9)	(2.3)	(2.3)	(2.1)
Revenue Deficit				7,013	-24,857	-11,973	-22,526	-28,426
	(0.7)	(1.7)	(2.2)	(0.2)	-(0.6)	-(0.3)	-(0.48)	-(0.54)
Primary Deficit				6,060	-15,654	5,648	5,080	4,270
	(1.1)	(1.4)	(1.3)	(0.2)	-(0.4)	(0.1)	(0.1)	(0.1)

BE : Budget Estimates. RE : Revised Estimates.

Note : (1) Negative (-) sign indicates surplus.
(2) Figures in parentheses are percentages to GDP.
(3) Data on GDP for 2006-07 are based on CSO's Quick Estimates, while for 2007-08 are based on its Revised Estimates. Data on GDP for 2008-09 are as per the Union Budget Documents, 2008-09.

Source : Budget Documents of the State Governments.

increase in revenue receipts, which would emanate from increase in shareable taxes, States' own tax revenue and grants from the Centre (Table 2.19). The improvement in the revenue account would also be facilitated by deceleration in revenue expenditure, particularly in interest payments and pension. Capital outlay, as percentage to GDP, would be maintained at 2.7 per cent in 2008-09 (BE) as in the previous year. It is important to note that developmental expenditure is budgeted to decelerate in 2008-09 (BE), while non-developmental expenditure is budgeted to accelerate (Table 2.20).

Table 2.19: Aggregate Receipts of the State Governments

(Amount in Rupees crore)

Item	Average			2005-06	2006-07	2007-08 BE	2007-08 RE	2008-09 BE	Percentage variation		
	1990-95	1995-00	2000-05						Col.8/6	Col.8/7	Col.9/8
1	2	3	4	5	6	7	8	9	10	11	12
Aggregate Receipts (1+2)				595,627	673,358	767,695	763,367	895,307	13.4	-0.6	17.3
	(16.0)	(14.8)	(17.2)	(16.6)	(16.2)	(16.3)	(16.2)	(16.9)			
1. Total Revenue Receipts (a+b)				431,020	530,556	606,733	628,742	719,835	18.5	3.6	14.5
	(12.0)	(10.7)	(11.2)	(12.0)	(12.8)	(12.9)	(13.3)	(13.6)			
(a) States Own Revenue				260,246	315,812	353,229	355,970	403,658	12.7	0.8	13.4
	(7.2)	(6.7)	(7.0)	(7.3)	(7.6)	(7.5)	(7.6)	(7.6)			
States Own Tax				212,307	252,548	294,038	293,392	336,810	16.2	-0.2	14.8
	(5.3)	(5.1)	(5.6)	(5.9)	(6.1)	(6.2)	(6.2)	(6.4)			
States Own non-Tax				47,939	63,263	59,191	62,578	66,848	-1.1	5.7	6.8
	(1.8)	(1.6)	(1.4)	(1.3)	(1.5)	(1.3)	(1.3)	(1.3)			
(b) Central Transfers				170,774	214,744	253,504	272,773	316,177	27.0	7.6	15.9
	(4.8)	(4.0)	(4.2)	(4.8)	(5.2)	(5.4)	(5.8)	(6.0)			
Shareable Taxes				94,024	120,293	136,184	148,134	173,147	23.1	8.8	16.9
	(2.6)	(2.4)	(2.4)	(2.6)	(2.9)	(2.9)	(3.1)	(3.3)			
Central Grants				76,750	94,451	117,320	124,638	143,030	32.0	6.2	14.8
	(2.3)	(1.6)	(1.8)	(2.1)	(2.3)	(2.5)	(2.6)	(2.7)			
2. Capital Receipts (a+b)				164,607	142,802	160,962	134,625	175,472	-5.7	-16.4	30.3
	(4.0)	(4.1)	(6.0)	(4.6)	(3.4)	(3.4)	(2.9)	(3.3)			
(a) Loans from Centre@				8,097	5,529	14,918	11,291	15,349	104.2	-24.3	35.9
	(1.9)	(1.7)	(1.0)	(0.2)	(0.1)	(0.3)	(0.2)	(0.3)			
(b) Others Capital Receipts				156,510	137,273	146,043	123,334	160,123	-10.2	-15.5	29.8
	(2.1)	(2.4)	(5.0)	(4.4)	(3.3)	(3.1)	(2.6)	(3.0)			

BE: Budget Estimates. RE: Revised Estimates.

@: With the change in the system of accounting with effect from 1999-2000, States' share in small savings which was included earlier under loans from Centre is included under internal debt and shown as special securities issued to National Small Savings Fund (NSSF) of the Central Government. The data for the years prior to 1999-2000 as reported in this Table, however, exclude loans against small savings, for the purpose of comparability.

Note : Figures in parentheses are percentages to GDP.

Source : Budget Documents of the State Governments.

Table 2.20: Expenditure Pattern of the State Governments

(Amount in Rupees crore)

Item	Average			2005-06	2006-07	2007-08	2007-08	2008-09	Percentage variation		
	1990-95	1995-00	2000-05			BE	RE	BE	Col.8/6	Col.8/7	Col.9/8
1	2	3	4	5	6	7	8	9	10	11	12
Aggregate Expenditure (1+2 = 3+4+5)	(15.9)	(14.9)	(17.1)	561,682 (15.7)	657,280 (15.9)	766,620 (16.3)	787,489 (16.7)	892,783 (16.8)	19.8	2.7	13.4
1. Revenue Expenditure	(12.7)	(12.4)	(13.4)	438,034 (12.2)	505,699 (12.2)	594,760 (12.6)	606,216 (12.9)	691,409 (13.0)	19.9	1.9	14.1
of which:											
Interest Payments	(1.7)	(2.0)	(2.7)	84,024 (2.3)	93,164 (2.2)	102,675 (2.2)	102,878 (2.2)	108,383 (2.0)	10.4	0.2	5.4
2. Capital Expenditure	(3.2)	(2.5)	(3.6)	123,648 (3.5)	151,582 (3.7)	171,859 (3.6)	181,273 (3.8)	201,374 (3.8)	19.6	5.5	11.1
of which:											
Capital Outlay	(1.5)	(1.4)	(1.6)	77,559 (2.2)	98,063 (2.4)	118,796 (2.5)	128,331 (2.7)	145,159 (2.7)	30.9	8.0	13.1
3. Development Expenditure	(10.7)	(9.4)	(9.4)	330,044 (9.2)	392,165 (9.5)	467,695 (9.9)	493,563 (10.5)	557,116 (10.5)	25.9	5.5	12.9
4. Non-Development Expenditure	(4.3)	(4.8)	(5.9)	190,021 (5.3)	211,872 (5.1)	246,130 (5.2)	241,019 (5.1)	275,609 (5.2)	13.8	-2.1	14.4
5. Others*	(0.9)	(0.7)	(1.7)	41,617 (1.2)	53,243 (1.3)	52,794 (1.1)	52,907 (1.1)	60,058 (1.1)	-0.6	0.2	13.5

BE: Budget Estimates. RE: Revised Estimates.

* : Comprises Compensation and Assignments to local bodies, Grants-in-Aid and Contributions, Discharge of Internal Debt, Repayment of loans to the Centre.

Note : Figures in parentheses are percentages to GDP.

Source : Budget Documents of the State Governments.

2.55 With the budgeted revenue surplus of 0.5 per cent of GDP in 2008-09 (BE), the revenue surplus would finance capital outlay. Market borrowings would finance the major portion of GFD (56.7 per cent) in 2008-09 (BE), followed by special securities issued to NSSF (19.8 per cent) and provident funds (11.5 per cent) (Table 2.21).

Table 2.21: Decomposition and Financing Pattern of Gross Fiscal Deficit of the State Governments

(Per cent)

Item	Average			2005-06	2006-07	2007-08	2007-08	2008-09
	1990-95	1995-00	2000-05			BE	RE	BE
1	2	3	4	5	6	7	8	9
Decomposition (1+2+3-4)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1. Revenue Deficit	25.3	47.1	54.7	7.8	-32.1	-11.1	-20.9	-25.2
2. Capital Outlay	55.4	43.2	40.5	86.1	126.5	109.7	118.9	128.9
3. Net Lending	19.4	10.0	4.9	6.1	8.0	10.7	9.8	9.7
4. Non-debt Capital Receipts*	0.1	0.3	0.0	0.0	2.5	9.3	7.8	13.3
Financing (1 to 11)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1. Market Borrowings	16.1	16.4	26.4	17.0	16.8	24.3	58.9	56.7
2. Loans from Centre	48.8	39.7	4.3	0.0	-12.2	6.0	2.9	5.9
3. Loans against Securities Issued to NSSF	–	28.9#	40.2	81.9	72.9	49.6	9.1	19.8
4. Loans from LIC, NABARD, NCDC, SBI & Other Banks	1.8	2.9	4.0	4.5	1.0	7.3	6.2	6.0
5. Provident Fund, *etc*.	17.6	16.2	10.1	11.6	13.4	11.4	11.3	11.5
6. Reserve Funds	6.8	5.6	5.0	5.8	9.8	3.9	-8.9	1.1
7. Deposits & Advances	9.9	9.9	4.2	8.1	16.5	1.4	4.7	4.3
8. Suspense & Miscellaneous	4.3	2.8	-0.8	8.8	6.1	-1.3	-4.5	-1.6
9. Remittances	-1.4	-3.7	0.7	0.1	-0.4	0.0	-0.3	0.1
10. Others	0.7	1.4	4.7	0.0	-3.3	-1.5	-1.6	-1.4
11. Overall Surplus (-)/Deficit (+)	-4.5	3.0	1.2	-37.7	-20.7	-1.0	22.3	-2.2

BE: Budget Estimates. RE: Revised Estimates. – : Not Applicable.

* : Includes proceeds from disinvestment and sale of land. # : Pertains to only 1999-2000 as it was introduced from that year.

Note : "Others" include Compensation and Other Bonds, Loans from Other Institutions, Appropriation to Contingency Fund, Inter-State Settlement and Contingency Fund.

Source : Budget Documents of the State Governments.

2.56 The provisional net allocation under market borrowing programme of the State Governments for 2008-09 is placed at Rs.47,044 crore. Taking into account repayments of Rs.14,371 crore and additional allocation of Rs.45 crore, the gross market borrowings of State Governments are estimated at Rs.61,460 crore. During the current year so far (up to July 31, 2008), eight State Governments raised Rs.10,812 crore through auctions with a cut-off yield in the range 8.39-9.90 per cent as compared with Rs.8,542 crore by 14 State Governments (cut-off yield ranging from 8.00-8.57 per cent) during the corresponding period of the previous year.

Outlook

2.57 In all, twenty-five State Governments have budgeted revenue surplus during 2008-09, the final year of the TFC target of eliminating revenue deficit. Further, as many as seventeen State Governments have budgeted GFD-GSDP ratio at 3 per cent or less, a year ahead of the TFC target. As the State Governments come closer to meeting the objective of reduction in deficit indicators, the States need to place strong emphasis on sustaining this progress in the post-FRL period. It would be important to generate adequate fiscal space through revenue augmentation that could be utilised for financing developmental expenditure. The generation of revenues through improving efficiency of tax collection and appropriate charges on public services assumes particular significance under the rule-based fiscal framework on account of implicit cap on financing of expenditure by borrowings. States can, however, price the range of services that they provide only by improving the quality of delivery of services.

2.58 The efforts of the States towards reducing fiscal imbalances was aided by larger devolution and transfers from the Centre based on the recommendations. The implementation of VAT by all the States also aided in improving the buoyancy of States' taxes. On the expenditure side, while States have been able to scale up capital outlay, there has been some rationalisation of revenue expenditure during the FRL period. The financing pattern of GFD has undergone a compositional shift with a decline in accruals under the NSSF. As a result, the market borrowings have emerged as the major source of financing of GFD. The State Governments have maintained a high level of cash surplus during 2008-09 so far, as reflected in their investments in intermediate and auction Treasury Bills.

2.59 While the fiscal consolidation efforts have enabled a reduction in key deficit indicators, the level of States' outstanding liabilities continue to remain high as compared with many emerging and developing countries. Although there has been some reduction in the debt-GDP ratio due to debt consolidation and relief measures, the States continue to hold a large chunk of high cost debt. A few States have prepaid high cost debt on account of comfortable cash balance position.

2.60 The States also need to factor in the impact of higher staff remuneration based on the recommendations of the Sixth Pay Commission of the Central Government. The State Governments may incur revenue losses due to lower tax devolution on account of reduction of excise and customs duties on petroleum products by the Centre and reduction of sales tax on these products by some States. In the near future, State finances would be shaped by the recommendations of the Thirteenth Finance Commission that was set up in November 2007 (award period: 2010-15) and the implementation of the Goods and Services Tax (GST) scheduled from April 1, 2010.

Public Debt

2.61 The combined outstanding liabilities of the Central and State Governments, as percentage to GDP, were budgeted to decline from 77.0 per cent at end-March 2008 to 73.4 per cent by end-March 2009 as a result of the fiscal consolidation process that is underway at the Centre and States as well as strong macroeconomic performance (Table 2.22).

Table 2.22: Combined Liabilities and Debt-GDP Ratio

Year	Outstanding Liabilities (Rs. crore)			Debt-GDP Ratio (per cent)		
	Centre	States	Combined	Centre	States	Combined
1	2	3	4	5	6	7
1990-91	3,14,558	1,28,155	3,68,824	55.2	22.5	64.7
1995-96	6,06,232	2,49,535	7,26,854	50.9	20.9	61.0
2004-05	19,94,422	10,29,174	25,62,015	63.3	32.7	81.3
2005-06	22,60,145	11,67,866	28,79,706	63.1	32.6	80.4
2006-07	25,38,596	12,50,819	31,90,698	61.2	30.2	77.0
2007-08 RE	28,97,037	13,37,044	36,27,260	61.5	28.4	77.0
2008-09 BE	30,62,912	14,51,169	38,91,740	57.7	27.4	73.4

RE : Revised estimates. BE : Budget estimates.

Source : Budget documents of the Central Government; and State Finances-A Study of Budgets 2007- 08, Reserve Bank of India.

IV. MONETARY AND CREDIT SITUATION

Monetary Condition

2.62 Against the backdrop of emerging inflationary, pressures, the Reserve Bank in its Annual Policy Statement for 2007-08 (April 2007) reaffirmed its resolve to respond swiftly with all possible measures to developments impinging on inflation expectations and the growth momentum. As the overarching policy challenge was to manage the transition to a higher growth path, while containing inflationary pressures, the policy preference for the period ahead was indicated as strongly in favour of price stability and well-anchored inflation expectations with the endeavour to contain inflation close to 5.0 per cent in 2007-08, while reinforcing the medium term objective to condition the policy and perceptions in the range of 4.0-4.5 per cent. Towards this end, it was indicated that the Reserve Bank will continue with its policy of active demand management of liquidity through appropriate use of all the policy instruments at its disposal flexibly as and when the situation warranted.

2.63 Headline inflation turned benign by the First Quarter of the Annual Statement on Monetary Policy for 2007-08, reflecting the combined impact of lagged and cumulative monetary policy actions and fiscal and administrative measures for supply management. These measures also had a salutary effect on inflation expectations. Nevertheless, the First Quarter Review of July 2007 added that monetary management needed to be watchful of movements in commodity prices, particularly oil prices, the elevated levels of asset prices and the re-emergence of pricing power among producers as potential threats to inflation expectations. The outlook for inflation in 2007-08 was, however, left unchanged in the Review.

2.64 The Mid-Term Review continued with the stance set out in the Annual Policy Statement for 2007-08 and the First Quarter Review reinforcing the emphasis on price stability and well-anchored inflation expectations while ensuring a monetary and interest rate environment that supported export and investment demand in the economy so as to enable continuation of the growth momentum. Credit quality and orderly conditions in financial markets for securing macroeconomic and, in particular, financial stability were re-emphasised while simultaneously pursuing greater credit penetration and financial inclusion. While reiterating a readiness to respond swiftly with all possible measures as appropriate to the evolving global and domestic situation impinging on inflation expectations, financial stability and the growth momentum, the Mid-Term Review resolved to take recourse to all possible options for maintaining stability and the growth momentum in the economy in view of the unusually heightened global uncertainties, and the unconventional policy responses to the developments in financial markets.

2.65 The Third Quarter Review (January 2008) of the Annual Statement on Monetary Policy, while continuing to re-emphasise the policy stance of the Mid-Term Review, took note of the developments in global financial markets in the context of the subprime crisis and highlighted the need of more intensified monitoring and swift responses with all available instruments to preserve and maintain macroeconomic and financial stability. While it maintained that there was no visible or immediate threat to financial stability in India from global developments, it underscored the need for continued but heightened vigilance with an emphasis on readiness to take timely, prompt and appropriate measures to mitigate the risks to the extent possible. Accordingly, it emphasised the need to monitor the evolving heightened global uncertainties and domestic situation impinging on inflation expectations, financial stability and growth momentum in order to respond swiftly with both conventional and unconventional measures, as appropriate.

2.66 The Reserve Bank in the Annual Policy Statement for 2008-09 released in April 2008 placed the real GDP growth for 2008-09 at around 8.0 to 8.5 per cent. In view of the prevailing assessment of the economy including the outlook for growth and inflation, the overall stance of monetary policy in the Annual Policy Statement was broadly stated as (i) to ensure a monetary and interest rate environment that accords high priority to price stability, well-anchored inflation expectations and orderly conditions in financial markets while being conductive to continuation of the growth momentum; (ii) to respond swiftly on a continuing basis to the evolving constellation of adverse international developments and to the domestic situation impinging on inflation expectations, financial stability and growth momentum, with both conventional and unconventional measures, as appropriate; and (iii) to emphasise credit quality as well as credit delivery, in particular, for employment-intensive sectors, while pursuing financial inclusion.

2.67 The First Quarter Review of the Annual Statement on Monetary Policy noted that after the announcement of the Annual Policy Statement in April 2008, global as well as domestic developments, on both supply and demand sides pointed to accentuation of inflationary pressures, especially in terms of inflation expectations and perceptions. In an environment of surging global inflation and with domestic inflation also

rising to a 13-year high, the Review noted with concern that inflation had emerged as the biggest risk to the global outlook, having risen to very high levels across the world, which had not been generally seen for a couple of decades in the past. As such, bringing down inflation from the high levels and stabilising inflation expectations assumed the highest priority in the stance of monetary policy. It noted that looking forward, the global and, more importantly, the domestic factors pose severe challenges to monetary management and warranted reinforced policy actions on several fronts. Accordingly, a realistic policy endeavour would be to bring down inflation from the then prevailing level of about 11.0-12.0 per cent to a level close to 7.0 per cent by March 31, 2009. Taking into account aggregate demand management and supply prospects described above, the projection of real GDP growth of the Indian economy in 2008-09 was placed at around 8.0 per cent, barring domestic or external shocks. Against this backdrop, the stance of monetary policy was retained as stated in the Annual Policy Statement released in April 2008.

2.68 With a view to containing inflation expectations as also the likely impact of prevailing monetary/ liquidity conditions due to large capital inflows, the Reserve Bank announced monetary measures from time to time. Accordingly, beginning March 05, 2007, it was decided to limit the daily reverse repo absorptions to a maximum of Rs.3,000 crore to facilitate the maintenance of appropriate liquidity in the system and active liquidity management through the market stabilisation scheme (MSS). However, in view of the prevailing macroeconomic and overall monetary and liquidity conditions, the ceiling of Rs.3,000 crore on daily reverse repo under the LAF was withdrawn with effect from August 6, 2007. During 2006-07, the cash reserve ratio (CRR) of SCBs was increased by 100 basis points in four stages to 6.00 per cent from 5.00 per cent of NDTL of the scheduled commercial banks. The first round liquidity impact on the banking system due to CRR changes was Rs.27,500 crore in 2006-07. During 2007-08, the CRR was further increased by 150 basis points in four stages to 7.50 per cent and the first round impact on the banking system was Rs.47,000 crore. During 2008-09 so far, the CRR has been increased by another 150 basis points and repo rate by 125 basis points to 9.00 per cent for both. The Government of India, in consultation with the Reserve Bank, revised the ceiling under the MSS for the year 2007-08 from Rs.1,10,000 crore to Rs.1,50,000 crore on August 8, 2007, and further to Rs.2,00,000 crore on October 4, 2007 and Rs.2,50,000 crore from November 7, 2007 to give more manoeuvrability to the Reserve Bank in the conduct of monetary policy.

Reserve Money Survey

2.69 Expansion in reserve money year-on-year (y-o-y) at 30.9 per cent at end-March 2008 was higher than that of 23.7 per cent a year ago. Adjusted for the impact of the hike in the CRR, reserve money expansion was 25.3 per cent as compared with 18.9 per cent a year ago. Movements in reserve money during 2007-08 exhibited large variations mainly reflecting the fluctuations in bankers' deposits with the Reserve Bank in the wake of hikes in the CRR, sizeable expansion in demand and time liabilities and the Reserve Bank's market operations. Bankers' deposits with the Reserve Bank expanded by 66.5 per cent during 2007-08 as compared with 45.6 per cent during 2006-07. On the sources side, expansion in reserve money was mainly driven by foreign currency assets of the Reserve Bank which (adjusted for revaluation) increased by Rs.3,70,550 crore during 2007-08 as compared with an increase of Rs.1,64,601 crore in the previous year. Movements in the Reserve Bank's net credit to the Central Government during 2007-08 largely reflected the liquidity management operations by the Reserve Bank and movements in Government deposits with the Reserve Bank. The sterilisation operations of the Reserve Bank under the MSS led to an increase in Central Government deposits with the Reserve Bank. Surplus cash balances of the Central Government with the Reserve Bank also increased. The Reserve Bank's holdings of Central Government dated securities increased on account of injection of liquidity under the LAF. Reflecting these developments, the Reserve Bank's net credit to the Centre declined by Rs.1,16,772 crore during 2007-08 as compared with the decline of Rs. 3,024 crore during 2006-07 (Table 2.23).

Developments during 2008-09

2.70 The year-on-year (y-o-y) reserve money growth was 31.1 per cent as on August 15, 2008 as compared with 24.1 per cent, a year ago. Adjusted for the first round effect of the hike in CRR, reserve money growth was 24.3 per cent as compared with 14.2 per cent a year ago. The Reserve Bank's foreign currency assets (adjusted for revaluation), on a y-o-y basis, increased by Rs.2,51,201 crore as compared with an increase of Rs.2,40,618 crore a year ago. The Reserve Bank's net credit to the Centre increased, y-o-y, by Rs.6,125 crore as against a decline of Rs.78,935 crore, a year ago.

Monetary Survey

2.71 Broad money (M_3) growth was 20.8 per cent, y-o-y, as at end-March 2008 as compared with 21.5 per cent in the previous year (Table 2.24 and Chart II.5). The growth in aggregate deposits of banks

Table 2.23: Reserve Money – Variations

(Amount in Rupees crore)

Item	Outstanding as on March 31, 2008	Variation During					
		2006-07	2007-08	2007-08			
				Q1	Q2	Q3	Q4
1	2	3	4	5	6	7	8
Reserve Money	9,28,417	1,35,935 (23.7)	2,19,427 (30.9)	11,630	60,688	26,606	1,20,503
Components (1+2+3)							
1. Currency in Circulation	5,90,901	73,523 (17.1)	86,702 (17.2)	16,866	-13,297	46,781	36,352
2. Bankers' Deposits with RBI	3,28,447	61,784 (45.6)	1,31,152 (66.5)	-4,800	75,464	-19,369	79,857
3. 'Other' Deposits with the RBI	9,069	628 (9.1)	1,573 (21.0)	-436	-1,479	-806	4,294
Sources (1+2+3+4-5)							
1. RBI's net credit to Government	-1,13,209	-4,176	-1,15,632	-22,154	-54,695	-65,787	27,004
of which: to Centre (i+ii+iii+iv-v)	-1,14,636	-3,024	-1,16,772	-21,825	-55,588	-65,078	25,719
i. Loans and Advances	0	0	0	0	0	0	0
ii. Treasury Bills held by the RBI	0	0	0	0	0	0	0
iii. RBI's Holdings of Dated Securities	1,14,593	26,763	17,421	-34,284	4,019	20,874	26,812
iv. RBI's Holdings of Rupee Coins	132	-143	121	128	20	3	-31
v. Central Government Deposits	2,29,361	29,644	1,34,314	-12,330	59,627	85,956	1,062
2. RBI's Credit to Banks and Commercial Sector	6,378	1,990	-2,794	-6,450	-1,256	848	4,064
3. NFEA of RBI	12,36,130	1,93,170 (28.7)	3,69,977 (42.7)	-2,745	1,19,430	94,681	1,58,610
of which: FCA, adjusted for revaluation		1,64,601	3,70,550	47,728	1,18,074	1,00,888	1,03,860
4. Government's Currency Liabilities to the Public	9,324	-493	1,064	166	354	312	232
5. Net Non-Monetary Liabilities of RBI	2,10,206	54,556	33,187	-42,812	3,145	3,448	69,406
Memo:							
Net Domestic Assets	-3,07,713	-57,234	-1,50,550	14,375	-58,743	-68,075	-38,107
LAF- Repos (+) / Reverse Repos (-)	50,350	36,435	21,165	-32,182	9,067	16,300	27,980
Net Open Market Sales # *		5,125	-5,923	1,246	1,560	-3,919	-4,810
Centre's Surplus	76,686	1,164	26,594	-34,597	15,376	54,765	-8,950
Mobilisation under MSS	1,68,392	33,912	1,05,419	19,643	48,855	31,192	5,728
Net Purchases(+)/Sales(-) from Authorised Dealers		1,18,994	3,12,054	38,873	1,01,814	87,596	83,771
NFEA/Reserve Money @	133.1	122.2	133.1	119.8	125.8	133.4	133.1
NFEA/Currency @	209.2	171.8	209.2	165.7	193.6	194.3	209.2

NFEA: Net Foreign Exchange Assets. FCA: Foreign Currency Assets. LAF: Liquidity Adjustment Facility.
*: At face value. # : Excludes Treasury Bills @ : Per cent, end of period.
Note: 1. Data are based on March 31 for Q4 and last reporting Friday for all other quarters.
2. Figures in parentheses are percentage variations during the fiscal year.

witnessed some moderation. Demand deposits recorded a growth of 20.8 per cent (y-o-y) during 2007-08 as compared with growth of 17.1 per cent a year ago. Time deposits increased by 21.5 per cent (as compared with 23.5 per cent a year ago). Nonetheless growth in time deposits remained strong, benefiting, *inter alia,* from higher interest rates on bank deposits and tax benefits for deposits with maturity of 5 years and above. During 2007-08, accretion to postal deposits decelerated significantly up to November 2007. Furthermore, in December 2007 there were net outflows from small saving schemes. In order to revive interest in postal deposits, the Government announced in December 2007 some incentives, including tax benefits for certain postal deposits. However, net outflows continued up to June 2008, the latest period for which data are available.

Developments during 2008-09

2.72 On a year-on-year basis, growth in broad money (M_3) was 19.6 per cent as on August 1, 2008 as compared with 21.8 per cent a year ago. Amongst the major components, aggregate deposits expanded by 20.0 per cent as compared with 23.1 per cent a year ago. On the sources side, scheduled commercial banks' non-food credit registered a growth of 26.2 per cent as on August 1, 2008 marginally higher than 23.5 per cent in the previous year, while their investment in Government securities expanded by 15.4 per cent as compared with 12.9 per cent a year ago.

Table 2.24: Monetary Indicators

(Amount in Rupees crore)

Item	Outstanding as on March 31, 2008	Variation During			
		March 31, 2007		March 31, 2008	
		Absolute	Per cent	Absolute	Per cent
1	2	3	4	5	6
I. Reserve Money	9,28,417	1,35,935	23.7	2,19,427	30.9
II. Narrow Money (M_1)	11,50,953	1,39,714	16.9	1,84,864	19.1
III. Broad Money (M_3)	40,06,722	5,86,548	21.5	6,90,629	20.8
a) Currency with the Public	5,67,476	69,786	16.9	84,571	17.5
b) Aggregate Deposits	34,30,177	5,16,134	22.3	6,04,485	21.4
i) Demand Deposits	5,74,408	69,300	17.1	98,721	20.8
ii) Time Deposits	28,55,769	4,46,834	23.5	5,05,765	21.5
of which: Non-Resident Foreign Currency Deposits	56,935	8,185	13.8	-10,525	-15.6
IV. NM_3	40,32,699	5,77,013	21.0	7,08,101	21.3
of which: Call Term Funding from FIs	1,06,504	2,692	3.2	20,668	24.1
V. a) L_1	41,47,550	5,88,644	20.6	7,07,403	20.6
of which: Postal Deposits	1,14,851	11,631	11.2	-698	-0.6
b) L_2	41,50,482	5,88,644	20.6	7,07,403	20.5
c) L_3	41,76,450	5,90,718	20.5	7,08,674	20.4
VI. Major Sources of Broad Money					
a) Net Bank Credit to the Government (i+ii)	9,07,077	69,177	9.0	72,842	8.7
i) Net Reserve Bank Credit to Government	-1,13,209	-4,176		-1,15,632	
of which: to the Centre	-1,14,636	-3,024		-1,16,772	
ii) Other Banks' Credit to Government	10,20,286	73,353	9.7	1,88,474	22.7
b) Bank Credit to Commercial Sector	25,69,912	4,37,074	25.8	4,39,834	20.6
c) Net Foreign Exchange Assets of the Banking Sector	12,95,131	1,86,985	25.7	3,81,952	41.8
d) Government's Currency Liability to Public	9,324	-493	-5.6	1,064	12.9
e) Net Non-Monetary Liabilities of the Banking Sector	7,74,723	1,06,195	22.9	2,05,063	36.0
Memo:					
Aggregate Deposits of SCBs	31,96,939	5,02,885	23.8	5,85,006	22.4
Non-food Credit of SCBs	23,17,515	4,18,282	28.5	4,32,846	23.0

SCBs: Scheduled Commercial Banks. FIs: Financial Institutions. NBFCs: Non-Banking Financial Companies.

NM_3 is the residency-based broad money aggregate and L_1, L_2 and L_3 are liquidity aggregates compiled on the basis of the recommendations of the Working Group on Money Supply (Chairman: Dr. Y.V. Reddy, 1998). Liquidity aggregates are defined as follows.

L_1 = NM_3 + Select deposits with the post office saving banks.

L_2 = L_1 + Term deposits with term lending institutions and refinancing institutions + Term borrowing by FIs + Certificates of deposits issued by FIs.

L_3 = L_2 + Public deposits of NBFCs.

Note: 1. Data are provisional. Wherever data are not available, the estimates for the last available month have been repeated.

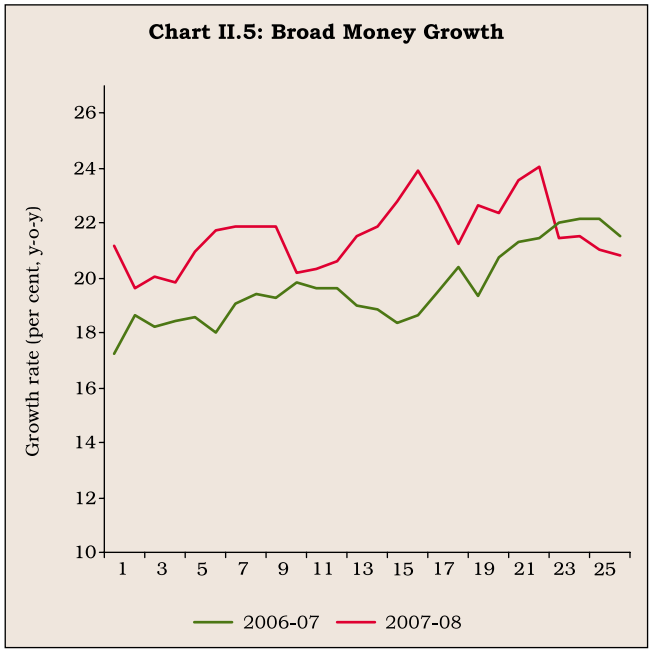
Bank Credit

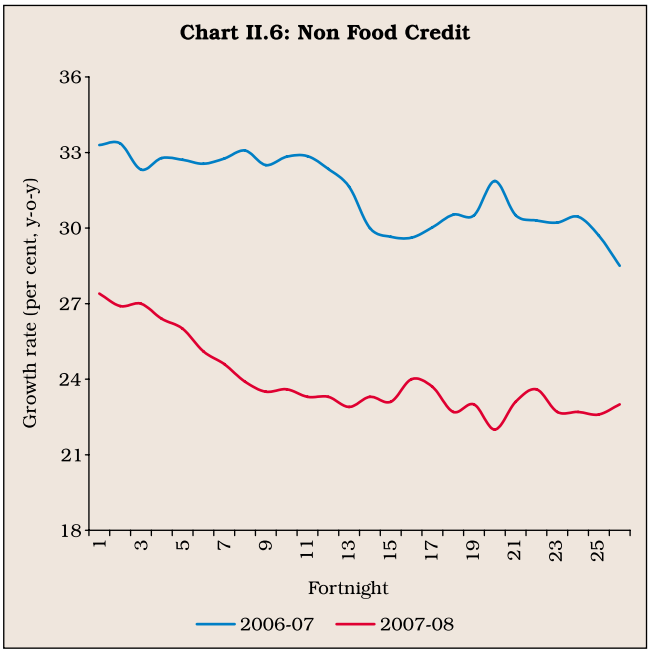
2.73 Demand for bank credit moderated in 2007-08. Non-food credit extended by scheduled commercial banks grew by 23.0 per cent (y-o-y) at end-March 2008, lower than 28.5 per cent a year ago (Table 2.25 and Chart II.6). During 2007-08, commercial banks' investment in SLR securities increased sharply by 22.8 per cent (y-o-y) as compared with an increase of 10.3 per cent a year ago.

Developments during 2008-09

2.74 Non-food credit as at August 1, 2008 (y-o-y) registered higher growth of 26.2 per cent compared with 23.5 per cent a year ago. Investments in SLR securities by commercial banks' witnessed a growth of 15.6 per cent as compared with 12.5 per cent in the previous year.

2.75 Information on the sectoral deployment of gross bank credit indicates that, on a year-on-year basis, bank credit to the services sector recorded the highest growth (31.1 per cent) up to March 2008, followed by the industry (25.0 per cent), agricultural sector (18.8 per cent) and personal loans (10.7 per cent). During 2008-09, the year-on-year growth in non-food gross bank credit (up to May 2008) accelerated to 24.1 per cent. Credit to the services sector recorded the highest growth (31.3 per cent), followed by industry (26.9 per cent), agriculture (19.3) and personal loans (15.9 per cent) at end-May 2008. The increase in industrial credit was mainly on account of infrastructure (power, roads, ports, and telecommunication), petroleum, textiles, iron & steel, food processing, chemicals, engineering, vehicles and construction industries.





Credit to the commercial real estate sector moderated significantly, although it was still higher than the credit growth to many other sectors (Table 2.26).

2.76 Apart from credit from banks, the corporate sector continued to meet its funding requirements from a variety of non-bank sources such as capital markets, external commercial borrowings and internal generation of funds. Resources raised through domestic equity issuances during 2007-08 (Rs.48,153 crore) were 68 per cent higher than a year ago. Net mobilisation through external commercial borrowings (ECBs) during 2007-08 increased by 54 per cent over

Table 2.25: Scheduled Commercial Banks Survey

(Amount in Rupees crore)

Item	Outstanding as on March 28, 2008	Variation (year-on-year)			
		As on March 30, 2007		As on March 28, 2008	
		Amount	Per cent	Amount	Per cent
1	2	3	4	5	6
Sources of Funds					
1. Aggregate Deposits	31,96,939	5,02,885	23.8	5,85,006	22.4
2. Call/Term Funding from Financial Institutions	1,06,504	2,692	3.2	20,668	24.1
3. Overseas Foreign Currency Borrowings	44,451	2,071	6.9	12,546	39.3
4. Capital	43,770	1,461	4.5	9,695	28.5
5. Reserves	2,28,852	23,613	16.3	60,126	35.6
Uses of Funds					
1. Bank Credit	23,61,914	4,24,112	28.1	4,30,724	22.3
of which: Non-food Credit	23,17,515	4,18,282	28.5	4,32,846	23.0
2. Investments in Government and Other Approved Securities	9,71,715	74,062	10.3	1,80,199	22.8
a) Investments in Government Securities	9,58,661	75,316	10.7	1,82,603	23.5
b) Investments in Other Approved Securities	13,053	-1,255	-7.5	-2,405	-15.6
3. Investments in non-SLR Securities	1,70,609	5,114	3.8	30,155	21.5
4. Foreign Currency Assets	31,189	15,260	35.1	-27,564	-46.9
5. Balances with the RBI	2,57,122	53,161	41.8	76,900	42.7

Note: Data are provisional.

Table 2.26: Deployment of Gross Bank Credit by Major Sectors

(Amount in Rupees crore)

Sector	Outstanding as on May 23, 2008	Annual Variation			
		2007-08*		2008-09**	
		Absolute	%	Absolute	%
1	2	3	4	5	6
Non-Food Gross Bank Credit (1 to 4)	**2,174,767**	**365,814**	**26.4**	**422,418**	**24.1**
Agriculture & Allied Activities	**264,787**	**54,038**	**32.2**	**42,745**	**19.3**
Industry (Small,Medium & Large)	**858,515**	**141,280**	**26.4**	**182,075**	**26.9**
SSI	176,282	26,387	29.5	60,398	52.1
Personal Loans	**528,046**	**87,944**	**23.9**	**72,607**	**15.9**
Housing	262,486	41,066	21.6	31,735	13.8
Advances against Fixed Deposits	42,220	6,237	19.0	3,128	8.0
Credit Card Outstandings	26,596	4,411	45.0	12,375	87.0
Education	21,352	4,903	46.5	5,914	38.3
Consumer Durables	8,297	1,661	23.2	-534	-6.0
Services	**523,249**	**82,551**	**26.1**	**124,821**	**31.3**
Transport Operators	35,248	7,922	45.5	9,927	39.2
Professional and Other Services	31,942	8,999	56.8	7,108	28.6
Trade	122,438	23,319	28.4	16,902	16.0
Real Estate Loans	61,045	19,010	69.7	14,750	31.9
Non-Banking Financial Companies	71,974	12,401	38.7	27,549	62.0
Priority Sector	**739,964**	**120,463**	**23.9**	**114,666**	**18.3**
Industry (Small, Medium and Large Scale)	**858,515**	**141,280**	**26.4**	**182,075**	**26.9**
Food Processing	50,493	6,758	22.1	13,126	35.1
Textiles	93,916	19,223	32.9	16,259	20.9
Paper & Paper Products	13,826	2,243	24.5	2,435	21.4
Petroleum, Coal Products and Nuclear Fuels	47,289	9,884	51.6	18,250	62.8
Chemicals and Chemical Products	65,397	6,511	14.2	12,982	24.8
Rubber, Plastic & their Products	11,116	1,938	28.0	2,261	25.5
Iron and Steel.	78,834	13,554	27.2	15,460	24.4
Other Metal and Metal Products	25,112	5,447	36.3	4,658	22.8
All Engineering	52,551	8,553	25.1	9,959	23.4
Vehicles, Vehicle Parts and Transport Equipments	30,015	5,267	28.6	6,324	26.7
Gems & Jewellery	24,826	2,572	12.3	1,403	6.0
Construction	26,082	6,632	49.2	5,959	29.6
Infrastructure	203,331	35,292	32.6	59,811	41.7

* : May 25, 2007 over May 26, 2006.

** : May 23, 2008 over May 25, 2007.

Note : Data are provisional and relate to select banks. Data also includes the figures of Bharat Overseas Bank, which was merged with Indian Overseas Bank on March 31, 2007.

the previous year. Mobilisation through issuances of commercial paper (CPs) during 2007-08 was nearly three times the issuances during the previous year. Internal generation of funds continued to provide support to the funding requirements of the corporate sector, despite the growth in profits after tax of select non-financial non-government companies during 2007-08 witnessing some deceleration as compared with the previous year. Resources raised in the form of equity issuances through American depository receipts (ADRs) and global depository receipts (GDRs) during 2007-08 (Rs.13,023 crore) were 20 per cent lower than a year ago (Table 2.27).

Price Situation

2.77 Headline inflation generally remained firm in major economies during 2007-08, reflecting the combined impact of higher food and fuel prices as well as strong demand conditions, especially in emerging markets. Amongst the major economies, headline inflation in March 2008 was 4.0 per cent in the US, 2.5 per cent in the UK and 3.6 per cent in the euro area as compared with 2.8 per cent, 3.1 per cent and 1.9 per cent, respectively, a year ago. Core inflation also remained firm in major economies. In the US, consumer price inflation (excluding food and energy) was 2.4 per cent in March 2008 as compared

Table 2.27: Select Sources of Funds to Industry

(Rupees crore)

Item	2006-07	2007-08
1	2	3
A. Bank Credit to Industry #	1,46,890	1,74,566
B. Flow from Non-banks to Corporates		
1 Capital Issues (i+ii)	29,178	51,479
i) Non-Government Public Ltd. Companies (a+b)	29,178	48,962
a) Bonds/Debentures	585	809
b) Shares	28,593	48,153
ii) PSUs and Government Companies	0	2,517
2. ADR/GDR Issues	16,184	13,023
3. External Commercial Borrowings (ECBs)	1,04,046	1,60,221
4 Issue of CPs	5,145	14,903
C. Depreciation Provision +	37,095	40,664
D. Profit after Tax +	1,11,107	1,34,291

+ : Data are based on abridged financial results of the select non-financial non-Government public limited companies.

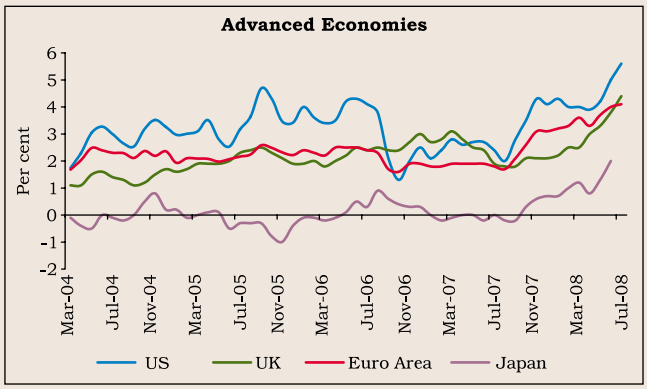
: Data pertain to select scheduled commercial banks.

Note: 1. Data are provisional.
2. Data on capital issues pertain to gross issuances, excluding issues by banks and financial Institutions. Figures are not adjusted for banks' investments in capital issues, which are not expected to be significant.
3. Data on ADR/GDR issues exclude issuances by banks and financial institutions.
4. Data on external commercial borrowings include short-term credit.

with 2.5 per cent a year ago. In the OECD countries, consumer price inflation (excluding food and energy) was 2.1 per cent in March 2008, same as a year ago. Amongst developing economies, headline inflation during March 2008 firmed up to 8.3 per cent in China (3.3 per cent a year ago), 3.9 per cent in Korea (2.2 per cent) and 5.3 per cent in Thailand (2.0 per cent) (Chart II.7). Inflation firmed up further in many developed and developing economies during 2008-09 so far. Among major economies, headline inflation increased to 5.6 per cent in the US, 4.4 per cent in the UK and 4.0 per cent in the euro area in July 2008. Among developing countries, headline inflation was 6.3 per cent in China, 5.9 per cent in Korea and 9.2 per cent in Thailand in July 2008.

2.78 Global commodity prices firmed up during 2007-08 led by sharp increases in food and crude oil prices (Chart II.8). International crude oil prices rose sharply during the year, reflecting tight supply-demand balance, geo-political tensions, weakening of the US dollar against major currencies and increased interest from investors and financial market players. During 2007-08, the US West Texas Intermediate (WTI) crude oil prices touched a peak of US $ 110.2 a barrel level on March 13, 2008 on the back of a sharp fall in US crude inventories. After easing somewhat thereafter on deepening concerns about slowdown in the US, the biggest consumer of oil, prices rose again to reach a historical peak of US $ 145.3 a barrel level on July 3, 2008 but has moderated to US $ 114.4 by August 19, 2008. Food prices firmed up during 2007-08, especially in the second half, led by wheat, rice, and oilseeds/edible oils on account of surge in demand (both consumption demand and demand for non-food uses such as bio-fuels production) and low stocks of major crops, and partly on account of weather related disturbances on production in some major producing regions. Reflecting these factors, international prices of wheat, rice, soybeans, soybean oil and palm oil increased by 121 per cent, 86 per cent, 79 per cent, 106 per cent and 101 per cent, respectively, year-on-year, in March 2008. International sugar prices remained largely range bound during the year, reflecting higher production in traditional importing countries. Metal prices, which had witnessed some moderation during June-December 2007 reflecting lower import demand and some improvement in supply, rose again during January-March 2008.

Chart II.7: Consumer Price Inflation



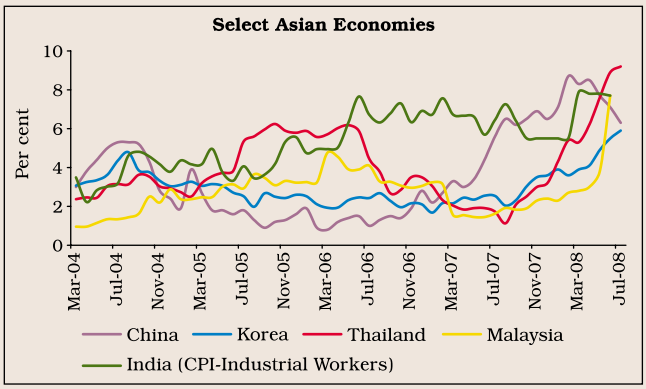
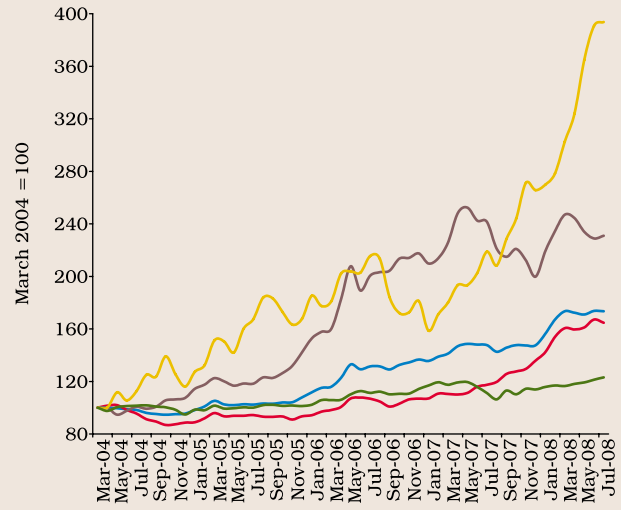
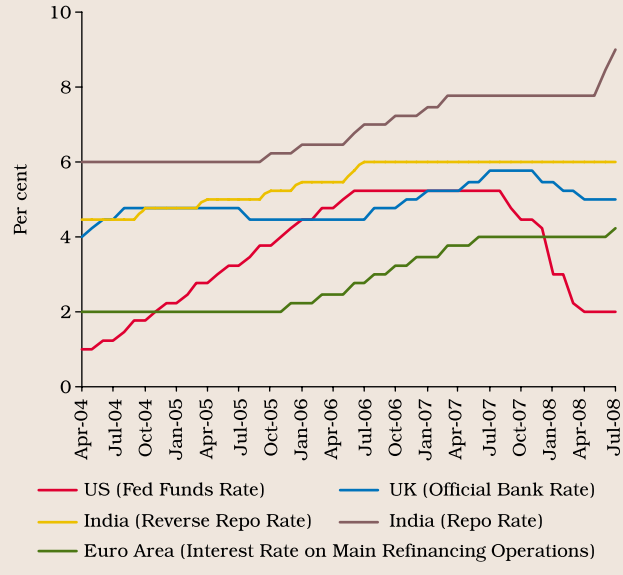


Chart II.8: International Commodity Prices



2.79 Notwithstanding hardening of inflation, many central banks in advanced economies resorted to monetary easing in order to forestall the adverse impact of the tightening of credit conditions on the broader economy arising out of the US sub-prime crisis (Chart II.9). The US kept the policy rate unchanged during the first half of 2007-08. However, after viewing that the tightening of credit conditions and the deepening of housing contraction were likely to weigh on economic growth over the next few quarters, the Federal Open Market Committee (FOMC) cut its target for the federal funds rate by 25 basis points to 2.00 per cent on April 30, 2008, taking cumulative reduction to 325 basis points beginning September 2007 when it began cutting rates. The discount rate was also cut by 400 basis points beginning August 2007 to a level of 2.25 per cent to improve market liquidity. In its latest meeting held on August 5, 2008, the FOMC noted that inflation has been high, spurred by the earlier increases in the prices of energy and some other commodities, and some indicators of inflation expectations have been elevated. According to the committee, although inflation is expected to moderate later this year and next year, the outlook remains highly uncertain. Against this backdrop, the federal funds rate was left unchanged at 2.0 per cent. In the UK, the Bank of England, which had raised the policy rate by 50 basis points during May-July 2007 in view of upside risks to inflation outlook, cut its policy rate by 75 basis points from December 2007 to 5.0 per cent on April 10, 2008 to balance the upside risks of above-target inflation this year raising inflation expectations with the downside risks of the disruption in financial markets leading to a slowdown in the economy that was sufficiently sharp to pull inflation below the target. Noting that the CPI inflation would peak around the end of the year and then begin to fall back towards the target of 2 per cent within a period of two years, the MPC left the policy rate unchanged thereafter. In the euro area, after raising the policy rates by 25 basis points on June 6, 2007, the European Central Bank (ECB) left the policy rate unchanged thereafter during 2007-08 as it viewed that risks to price stability over the medium term were on the upside, in the context of very vigorous money and credit growth. However, with inflation rates continued to rise and expected to remain well above the level consistent with price stability for a more protracted period than previously thought, the ECB raised its key policy rates by 25 basis points effective July 9, 2008 to prevent broadly based second-round effects and to counteract the increasing upside risks to price stability over the medium term.

Chart II.9: Central Bank Policy Rates



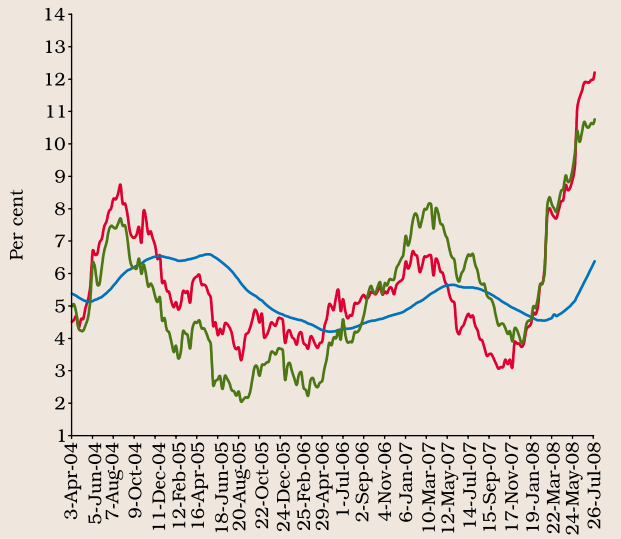
2.80 The Bank of Japan (BoJ) has kept its policy rate unchanged since February 2007, when it raised the uncollateralised overnight call rate (the operating target of monetary policy since March 2006) by 25 basis points to 0.50 per cent. According to the BoJ, inflation is expected to be somewhat higher over the coming months but to moderate gradually thereafter. Economic growth, after remaining sluggish for the time being, is expected to return gradually onto a moderate growth path as commodity prices level out and overseas economies move out of their deceleration phase. Amongst other major advanced economies,

the Bank of Canada, which had initially raised its policy rate by 25 basis points in July 2007, eventually cut it by 150 basis points beginning from December 2007 to 3.0 per cent on April 22, 2008, while the Reserve Bank of Australia continued to raise its policy rate – 175 basis points from May 2006 to 7.25 per cent on March 5, 2008.

2.81 Inflation pressures remained firm in major emerging market economies (EMEs) on the back of strong growth and higher oil, food and other commodity prices. Consumer price inflation in China increased to 8.3 per cent in March 2008 from 3.3 per cent a year earlier, mainly due to higher food prices. Subsequently it eased somewhat to 6.3 per cent in July 2008. In order to address the excess liquidity in the banking system and ease pressures on money and credit expansion, the People's Bank of China (PBC) increased the benchmark 1-year lending rate by 189 basis points beginning April 2006 to 7.47 per cent on December 21, 2007. Apart from continued issuances of its own bills to mop up liquidity, the PBC also raised the cash reserve ratio by 1000 basis points to 17.5 per cent between July 2006 and June 2008 to strengthen liquidity management in the banking system and guide the appropriate growth of money and credit. Amongst other emerging Asian economies, the Bank of Korea, after keeping its policy rate unchanged at 5.0 per cent since August 9, 2007 in view of the uncertainty surrounding future economic developments largely due to the run up in international oil prices, international financial market unrest and the US economic slowdown, raised rate by 25 basis points to 5.25 per cent, on August 7, 2008. According to the latest assessment by the monetary policy committee, consumer price inflation has picked up its pace (it increased to 5.9 per cent in July 2008 from 2.5 per cent a year ago), due to the direct and knock-on effects of high oil prices, and inflation seems likely to remain significantly high for quite some time. In Thailand, the MPC which had kept its policy rate unchanged at 3.25 per cent since July 18, 2007 (when it was last cut by 25 basis points), raised rate by 25 basis points to 3.50 per cent on July 16, 2008. According to the MPC, risks to inflation have risen markedly, which would affect private sector confidence, making it increasingly difficult to ensure economic stability going forward, and impact potential growth as well as the competitiveness of the Thai economy in the long-run.

2.82 In India, headline inflation based on the wholesale price index (WPI) softened from 6.4 per cent at the beginning of the fiscal year to a low of 3.1 per cent by October 13, 2007, partly reflecting moderation

Chart II.10: Wholesale Price Inflation



in the prices of primary food articles and some manufactured products items as well as base effects. After hovering around 3 per cent in November 2007, inflation began to edge up from early December 2007 and touched 7.7 per cent by March 29, 2008, mainly reflecting the hardening of prices of primary articles such as cereals, vegetables, oilseeds, raw cotton and iron ore, fuel group, and manufactured products items such as edible oils/oil cakes and metals. The annual average WPI inflation rate (average of 52 weeks), after rising up to May 2007, eased from the beginning of June 2007 to reach 4.7 per cent during the week ended March 29, 2008 (5.4 per cent a year ago). Headline inflation moved in a range of 3.1-8.0 per cent during 2007-08 (Chart II.10).

2.83 Amongst major groups, primary articles inflation, y-o-y, eased from 12.2 per cent at the beginning of April 2007 to an intra-year low of 3.7 per cent by end-December 2007, reflecting easing of food articles prices, especially of pulses, fruits and vegetables, and eggs, fish and meat as well as base effects. Subsequently, primary articles inflation increased to 9.7 per cent on March 29, 2008 mainly led by fruits, vegetables, oil seeds, raw cotton and iron ore. Wheat prices increased by 5.1 per cent, year-on-year, as on March 29, 2008 as compared with an increase of 7.3 per cent a year ago, reflecting improved production following the normal monsoon and supply side measures undertaken by the Government. Prices of pulses declined by 1.9 per cent as compared with an increase of 12.5 per cent a year ago, reflecting improved production. Rice prices

increased by 9.1 per cent, y-o-y, on top of 5.7 per cent a year ago. Prices of oilseeds, y-o-y, increased by 20.3 per cent on top of an increase of 31.6 per cent a year ago, due to higher demand, lower domestic *rabi* production as well as rising global prices. Raw cotton prices were 14.0 per cent higher, y-o-y, as on March 29, 2008 as compared with an increase of 21.9 per cent a year ago in line with the international price movements (Table 2.28).

2.84 Fuel group inflation, which was negative during June-November 2007, partly reflecting the base effects as well as fuel (petrol and diesel) price cuts last year, turned positive from mid-November 2007 to reach 6.8 per cent on March 29, 2008. The increase beginning November 2007 could be attributed to further increases in the prices of some petroleum products such as naphtha, furnace oil, aviation turbine fuel (ATF) and bitumen as well the upward revision in the domestic prices of petrol and diesel by Rs.2 per litre and by Rs.1 per litre, respectively, effective February 15, 2008 (which came after a gap of almost one year when the prices were cut). International crude oil prices (Indian basket) increased by almost 76 per cent from US $ 56.6 a barrel in February 2007 to US $ 99.3 per barrel level

Table 2.28: Wholesale Price Inflation in India (year-on-year)

(Per cent)

Commodity	Weight	2006-07 (March 31)		2007-08 (March 29)	
		Inflation	WC	Inflation	WC
1	2	3	4	5	6
All Commodities	**100.0**	**5.9**	**100.0**	**7.7**	**100.0**
1. Primary Articles	**22.0**	**10.7**	**39.0**	**9.7**	**28.2**
Food Articles	15.4	8.0	20.8	6.5	13.2
i. Rice	2.4	5.7	2.1	9.1	2.5
ii. Wheat	1.4	7.3	1.8	5.1	1.0
iii. Pulses	0.6	12.5	1.4	-1.9	-0.2
iv. Vegetables	1.5	1.2	0.3	14.2	2.3
v. Fruits	1.5	5.7	1.8	4.1	1.0
vi. Milk	4.4	8.4	5.8	8.7	4.7
vii. Eggs, Fish and Meat	2.2	9.4	3.8	2.4	0.8
Non-Food Articles	6.1	17.2	15.6	11.4	8.8
i. Raw Cotton	1.4	21.9	3.5	14.0	2.0
ii. Oilseeds	2.7	31.6	11.0	20.3	6.7
iii. Sugarcane	1.3	1.1	0.3	-0.4	-0.1
Minerals	0.5	17.5	2.6	49.9	6.2
2. Fuel, Power, Light and Lubricants	**14.2**	**1.0**	**4.0**	**6.8**	**18.9**
i. Mineral Oils	7.0	0.5	1.1	9.3	15.1
ii. Electricity	5.5	2.3	2.8	1.5	1.4
iii. Coal Mining	1.8	0.0	0.0	9.8	2.5
3. Manufactured Products	**63.8**	**6.1**	**57.3**	**7.3**	**52.8**
i. Food Products	11.5	6.1	10.5	9.4	12.4
of which: Sugar	3.6	-12.7	-6.6	1.1	0.4
Edible Oils	2.8	14.1	4.7	20.0	5.5
ii. Cotton Textiles	4.2	-1.0	-0.6	-6.8	-2.8
iii. Man Made Fibres	4.4	3.9	1.3	2.8	0.7
iv. Chemicals and Chemical Products	11.9	3.6	7.1	6.0	8.7
of which : Fertilisers	3.7	1.8	1.0	5.1	2.0
v. Basic Metals, Alloys and Metal Products	8.3	11.3	17.4	20.3	25.2
of which: Iron and Steel	3.6	8.1	6.0	34.2	20.1
vi. Non-Metallic Mineral Products	2.5	9.0	3.6	6.4	2.0
of which: Cement	1.7	11.6	3.2	5.1	1.1
vii. Machinery and Machine Tools	8.4	8.1	8.6	3.5	2.9
of which: Electrical Machinery	5.0	12.9	6.7	4.8	2.0
viii. Transport Equipment and Parts	4.3	2.0	1.2	3.9	1.7
Memo:					
Food Items (Composite)	**26.9**	**7.3**	**31.2**	**7.7**	**25.6**
WPI, Excluding Food	**73.1**	**5.5**	**68.8**	**7.8**	**74.4**
WPI, Excluding Fuel	**85.8**	**7.4**	**96.0**	**8.0**	**81.1**

WC : Weighted Contribution.

in March 2008. While domestic petrol and diesel prices have been adjusted partially, prices of kerosene have not been raised by the Government since April 2002 on grounds of societal concerns while prices of liquefied petroleum gas (LPG), which remained unchanged during 2007-08, have been raised partially in June 2008. In order to contain fuller pass-through of higher international crude prices to domestic prices, the Government, however, has extended the subsidy schemes for these products, available through the public distribution system (PDS) upto March 2010.

2.85 Manufactured products inflation, y-o-y, eased from 6.4 per cent at the beginning of the year to 3.5 per cent by November 24, 2007 (5.3 per cent a year ago) led by decline in the prices of sugar, textiles and non-ferrous metals as well as base effects. Subsequently, manufactured products inflation increased to 7.3 per cent by March 29, 2008, mainly reflecting the continued rise in the prices of edible oils/oil cakes, basic heavy inorganic chemicals, and basic metals and alloys. These commodities together contributed almost 41 per cent to the overall WPI inflation on March 29, 2008. Within the manufactured products group, prices of edible oils (20.0 per cent), oil cakes (27.2 per cent), chemicals and chemical products (6.0 per cent), cement (5.1 per cent), iron and steel (34.2 per cent) and electrical machinery (4.8 per cent) increased, on a year-on-year basis, on March 29, 2008. Domestic non-ferrous metals prices declined during 2007-08, although international prices, which had eased up to December 2007, firmed up during January-March 2008. Iron and steel prices increased in line with the recent hardening of international prices. Domestic cement prices, however, increased largely due to the strong demand from the construction sector and high capacity utilisation rates in the cement industry. The firming up of domestic edible oil and oil cakes prices reflected stagnant domestic production, increased demand and rise in international prices.

2.86 In order to contain inflationary pressures, the Government initiated a number of fiscal and supply augmenting measures during 2007-08. On April 3, 2007, the Government decided to exempt import of portland cement from countervailing duty and special additional customs duty; it was earlier exempted from basic customs duty in January 2007. The Government also took several measures with the aim of containing food price inflation. The Government reduced customs duty on palm oils by 10 percentage points across the board in April 2007 and import duty on various edible oils in a range of 5-10 percentage points in July 2007. It also withdrew the 4 per cent additional countervailing duty on all edible oils. Import of wheat at zero duty, which was available up to end-December 2006, was extended further to end-December 2007. Customs duty on import of pulses was reduced to zero on June 8, 2006 and the period of validity of import of pulses at zero duty, which was initially available up to March 2007, was first extended to August 2007 and further to March 2009. A ban was imposed on export of pulses with effect from June 22, 2006 and the period of validity of prohibition on exports of pulses, which was initially applied up to end-March 2007, was further extended up to end-March 2008. In March 2008, the customs duty on rice was reduced from 70 per cent to zero per cent up to March 2009; customs duties on crude and refined edible oil were reduced from a range of 40-75 per cent to 20.0-27.5 per cent; and export of all edible oils were prohibited with immediate effect from April 1, 2008. These measures were expected to help in containing inflation and inflationary expectations.

2.87 Headline WPI inflation was 12.6 per cent, y-o-y, as on August 9, 2008 as compared with 7.7 per cent at end-March 2008 and 4.2 per cent a year ago. Primary articles group, fuel group, and manufactured products group inflation hardened to 11.8 per cent (9.5 per cent), 18.0 per cent (-2.0 per cent), and 10.9 per cent (4.7 per cent), respectively, on August 9, 2008. The average WPI inflation rate increased to 6.6 per cent as on August 9, 2008 from 5.5 per cent a year ago.

2.88 Inflation, based on year-on-year variation in consumer price indices, eased up to January 2008, mainly reflecting the deceleration in food price inflation. Subsequently, consumer price inflation hardened due to rise in food and fuel prices. However, various measures of consumer price inflation were still placed lower in the range of 6.0-7.9 per cent during March 2008 as compared with 6.7-9.5 per cent in March 2007. Disaggregated data show that food group inflation in various consumer price index measures eased to a range of 7.8-9.3 per cent in March 2008 from 10.9-12.2 per cent in March 2007. The increase in fuel group inflation from a range 3.2-6.9 per cent in March 2007 to a range of 4.6-8.0 per cent in March 2008 also contributed to the rise in consumer price inflation. Services prices, proxied by the “miscellaneous group” generally remained firm during 2007-08 (Table 2.29). CPI inflation ranged between 7.3-8.8 per cent in June 2008.

Table 2.29: Consumer Price Inflation : Major Groups

(Year-on-year variation in per cent)

CPI Measure	Weight	Mar-04	Mar-05	Mar-06	Mar-07	Jun-07	Sep-07	Dec-07	Mar-08	Jun-08
1	2	3	4	5	6	7	8	9	10	11
CPI-IW (Base: 2001=100)#										
General	100.0	3.5	4.2	4.9	6.7	5.7	6.4	5.5	7.9	7.7
Food Group	46.2	3.1	1.6	4.9	12.2	8.1	8.7	6.2	9.3	–
Pan, Supari *etc*.	2.3	4.2	2.1	3.1	4.4	9.6	10.3	10.3	10.9	–
Fuel and Light	6.4	6.5	4.9	-2.9	3.2	1.6	2.3	2.3	4.6	–
Housing	15.3	3.9	20.4	6.6	4.1	4.1	4.0	4.0	4.7	–
Clothing, Bedding *etc.*	6.6	2.1	2.3	3.0	3.7	4.4	5.3	3.5	2.6	–
Miscellaneous	23.3	3.2	3.9	4.6	3.3	4.0	4.0	4.7	6.3	–
CPI-UNME (Base: 1984-85=100)										
General	100.0	3.4	4.0	5.0	7.6	6.1	5.7	5.1	6.0	7.3
Food Group	47.1	3.0	2.2	5.3	10.9	7.7	7.7	6.2	7.8	9.6
Fuel and Light	5.5	3.2	9.6	1.9	6.4	7.2	7.0	5.4	4.6	5.3
Housing	16.4	5.2	7.5	5.5	5.6	5.6	4.9	4.7	4.0	3.8
Clothing, Bedding *etc*.	7.0	2.6	2.0	2.9	3.6	4.3	4.0	4.1	4.3	3.4
Miscellaneous	24.0	2.8	4.4	5.1	4.4	3.7	3.2	3.8	4.8	6.6
CPI-AL (Base: 1986-87=100)										
General	100.0	2.5	2.4	5.3	9.5	7.8	7.9	5.9	7.9	8.8
Food Group	69.2	1.6	2.2	5.5	11.8	8.8	8.8	6.2	8.5	9.6
Pan, Supari *etc*.	3.8	4.7	-1.3	6.6	5.7	9.1	11.1	11.3	10.4	11.2
Fuel and Light	8.4	3.0	3.0	4.3	6.9	7.4	7.2	6.3	8.0	8.9
Clothing, Bedding *etc*.	7.0	4.1	2.5	2.2	3.5	2.7	1.9	1.3	1.8	3.1
Miscellaneous	11.7	2.7	5.5	5.5	6.8	6.7	5.5	5.2	6.1	6.5
CPI-RL (Base: 1986-87=100)										
General	100.0	2.5	2.4	5.3	9.2	7.5	7.6	5.6	7.6	8.7
Food Group	66.8	1.9	1.9	5.8	11.5	8.5	8.8	6.2	8.2	9.6
Pan, Supari *etc*.	3.7	4.7	-1.0	6.3	5.7	9.3	11.6	11.5	10.6	10.9
Fuel and Light	7.9	3.0	2.9	4.0	6.9	7.4	7.2	6.3	8.0	8.9
Clothing, Bedding *etc*.	9.8	3.4	2.8	2.7	3.1	2.6	2.1	2.6	2.8	4.1
Miscellaneous	11.9	3.0	5.5	5.2	6.3	6.2	5.3	5.0	6.2	6.8
Memo:										
WPI Inflation (End of period)		4.6	5.1	4.1	5.9	4.4	3.4	3.8	7.7	11.9

: Data prior to January 2006 are based on the old series (Base: 1982=100).
IW : Industrial Workers. UNME: Urban Non-Manual Employees.
AL : Agricultural Labourers. RL: Rural Labourers.

V. FINANCIAL MARKETS

2.89 Indian financial markets remained largely orderly during the year 2007-08, barring some bouts of volatility in the call money market and the equity market. Swings in the cash balances of the Government and capital flows were the main drivers of liquidity conditions in the financial markets. Interest rates in the collateralised segment of the money market moved in line with but remained below the call rate during the year (Table 2.30).

Liquidity Management - 2007-08

2.90 The Reserve Bank continued with its policy of active management of liquidity during 2007-08 through appropriate use of the CRR and open market operations (OMO), including LAF, MSS, and other policy instruments at its disposal flexibly to maintain appropriate liquidity in the system so that all the legitimate requirements of credit, particularly for productive purposes were met consistent with the objective of price and financial stability. In operational terms, this translated into modulating liquidity conditions such that the overnight rates in the money market remained more or less within the informal LAF corridor set by the policy rates.

2.91 Liquidity management operations during 2007-08 had to contend with greater variations in market liquidity not only due to variations in the cash

Table 2.30: Domestic Financial Markets at a Glance

Year/ Month	Call Money		Govt. Securities		Foreign Exchange				Liquidity Management		Equity			
	Average Daily Turn-over (Rs. crore)	Average Call Rates* (Per cent)	Average 10-year Yield @ (Per cent)	Average Daily Turn-over in Govt. Securities (Rs. crore)	Average Daily Inter-bank Turnover (US $ million)	Average Ex-change Rate (Rs. per US $)	RBI's net Foreign Currency Sales (-) / Purchases (+) (US $ million	Average Forward Premia 3 month (Per cent)	Average MSS# (Rs. crore)	Average Daily (LAF) Outsta-nding (Rs. crore)	Average Daily BSE Turnover (Rs. crore)	Average Daily NSE Turnover (Rs. crore)	Average BSE Sensex**	Average S&P CNX Nifty**
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2006-07														
April	16,909	5.62	7.45	3,685	17,712	44.95	4,305	1.31	25,709	46,088	4,860	9,854	11742	3494
May	18,074	5.54	7.58	3,550	18,420	45.41	504	0.87	26,457	59,505	4,355	9,155	11599	3437
June	17,425	5.73	7.86	2,258	15,310	46.06	0	0.73	31,845	48,610	3,131	6,567	9935	2915
July	18,254	5.86	8.26	2,243	14,325	46.46	0	0.83	36,936	48,027	2,605	5,652	10557	3092
August	21,294	6.06	8.09	5,788	15,934	46.54	0	1.22	40,305	36,326	2,867	5,945	11305	3306
September	23,665	6.33	7.76	8,306	18,107	46.12	0	1.31	40,018	25,862	3,411	6,873	12036	3492
October	26,429	6.75	7.65	4,313	16,924	45.47	0	1.67	41,537	12,983	3,481	6,919	12637	3649
November	25,649	6.69	7.52	10,654	20,475	44.85	3,198	2.07	38,099	9,937	4,629	8,630	13416	3869
December	24,168	8.63	7.55	5,362	19,932	44.64	1,818	3.20	38,148	-1,713	4,276	8,505	13628	3910
January	22,360	8.18	7.71	4,822	21,171	44.33	2,830	4.22	39,553	-10,738	4,380	8,757	13984	4037
February	23,254	7.16	7.90	4,386	20,298	44.16	11,862	3.71	40,827	648	4,676	9,483	14147	4084
March	23,217	14.07	8.00	2,991	25,992	44.03	2,307	4.51	52,944	-11,858	3,716	7,998	12858	3731
2007-08														
April	29,689	8.33	8.10	4,636	29,311	42.15	2,055	6.91	71,468	-8,937	3,935	8,428	13478	3947
May	20,476	6.96	8.15	4,442	25,569	40.78	4,426	4.58	83,779	-6,397	4,706	9,885	14156	4184
June	16,826	2.42	8.20	6,250	30,538	40.77	3,192	2.59	83,049	1,689	4,537	9,221	14334	4222
July	16,581	0.73	7.94	13,273	32,586	40.41	11,428	1.12	82,996	2,230	5,684	12,147	15253	4474
August	23,603	6.31	7.95	6,882	31,994	40.82	1,815	1.59	1,00,454	21,729	4,820	10,511	14779	4301
September	21,991	6.41	7.92	5,859	36,768	40.34	11,867	1.45	1,17,674	16,558	6,156	13,302	16046	4660
October	18,549	6.03	7.92	5,890	39,452P	39.51	12,544	1.12	1,58,907	36,665	9,049	20,709	18500	5457
November	20,146	6.98	7.94	4,560	30,677P	39.44	7,827	1.40	1,75,952	-2,742	7,756	18,837	19260	5749
December	16,249	7.50	7.91	7,704	31,547P	39.44	2,731	1.64	1,64,606	-10,804	8,606	19,283	19827	5964
January	27,531	6.69	7.61	19,182	38,008P	39.37	13,625	2.07	1,59,866	15,692	8,071	19,441	19326	5756
February	22,716	7.06	7.57	12,693	40,441P	39.73	3,884	0.24	1,75,166	-1,294	5,808	13,342	17728	5202
March	22,364	7.37	7.69	5,881	38,617P	40.36	2,809	1.25	1,70,285	-8,271	6,166	14,056	15838	4769
2008-09														
April	19,516	6.11	8.10	6,657	36,710P	40.02	4,325	2.68	1,70,726	26,359	5,773	13,561	16291	4902
May	19,481	6.62	8.04	8,780	31,868P	42.13	148	2.45	1,75,565	11,841	6,084	13,896	16946	5029
June	21,707	7.75	8.42	6,835	38,108P	42.82	-5,229	3.78	1,74,433	-8,622	5,410	12,592	14997	4464
July	24,736	8.76	9.18	5,474	..	42.84	..	6.04	1,72,169	-27,961	5,388	12,862	13717	4125

: Average of weekly outstanding MSS. .. : Not available. * : Average of daily weighted call money borrowing rates.
** : Average of daily closing indices. @ : Average daily closing rates. P : Provisional.
Note : In column 11, (-) indicates injection of liquidity, while (+) indicates absorbtion of liquidity.

balances of the Central Government but also on account of large and volatile capital inflows during the greater part of the year. The upsurge in capital flows reflected, *inter-alia*, the strong fundamentals of the Indian economy, the accommodative monetary policy followed by central banks in recent years as well as the large injection of liquidity by central banks in advanced countries in response to the sub-prime turmoil. In general, challenges to liquidity management emanating from changes in the cash balances of the Central Government and large and volatile capital flows have accentuated in recent years on account of a number of factors. First, direct tax collections have increased substantially on account of sustained improvement in corporate profitability and income growth, thereby increasing the share of direct taxes in total tax revenue. As a result, larger amounts of liquidity move out from the banking system every quarter as advance tax. The liquidity impact of these advance tax inflows is large, but temporary. While the timing of such liquidity outflows is generally predictable, the sheer magnitude could cause unexpected volatility on a day to day basis. Second, on the expenditure side, the pattern of the Government spending is much less predictable all through the year. The position is exacerbated around the financial year-end; it is not unusual to see huge unwinding of cash balances

towards end-March/first half of April every year, after a build-up in the last quarter of the year. Third, the timing of capital flows is unpredictable as they are driven by a combination of domestic and external factors. Fourth, the magnitude of liquidity shocks and concomitantly, the scale of requisite policy/ operational responses get magnified whenever changes in Government cash balances and capital flows occur concurrently and in the same direction, as was observed in the recent past.

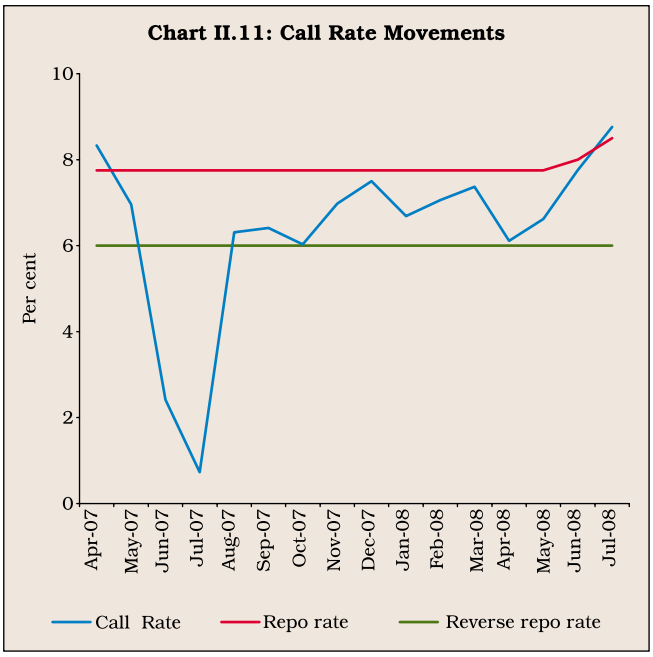
2.92 In the above backdrop, liquidity management continued to assume priority in the conduct of monetary policy during 2007-08. Surplus liquidity conditions persisted during the major part of the year mainly reflecting forex market operations of the Reserve Bank in the face of strong capital inflows as well as the drawdown of Government cash balances, which were interspersed with spells of liquidity shortages when causative factors reversed. The Reserve Bank judiciously used the CRR, LAF and MSS to manage such swings in liquidity conditions. The CRR was hiked in stages (in April, August and November) by 150 basis points to 7.5 per cent during the year[5], while the ceiling on outstanding balances under the MSS was enhanced progressively from Rs.80,000 crore to Rs.2,50,000 crore. Issuances under the MSS were modulated over the year in terms of size and type of instrument to reflect the magnitude and volatility of capital flows. While the rupee equivalent of the cumulative amount of net forex market purchases by the Reserve Bank was Rs.3,12,054 crore during 2007-08, the net increase in balances under MSS was Rs.1,05,691 crore over the same period.

2.93 During 2007-08, with the gradual easing of liquidity pressures from April 4, 2007 till mid-April 2007, partly on account of a reduction in cash balances of the Central Government, liquidity injection through LAF declined from Rs.29,185 crore at end-March 2007 to Rs.1,455 crore by April 5, 2007 which was followed by liquidity absorption during April 9-15, 2007. As liquidity absorption through reverse repo was capped at Rs.3,000 crore with effect from March 5, 2007 in accordance with the modified arrangements under LAF, liquidity was predominantly managed by a two-stage hike in CRR of 25 basis points each in April 2007 and increased issuances of Government securities under the MSS. The annual ceiling of MSS outstandings for 2007-08 was raised to Rs.1,10,000 crore on April 27, 2007. The system shifted into a phase of large surplus liquidity from May 28, 2007, reflecting increase in Government expenditure and the Reserve Bank's forex market operations. The LAF window, accordingly, turned into an absorption mode and remained so, barring a few occasions, during June-July 2007.

2.94 In view of the macroeconomic and overall monetary and liquidity conditions, the ceiling of Rs.3,000 crore on the daily reverse repo window of LAF was withdrawn with effect from August 6, 2007. The Second LAF, which was introduced from November 28, 2005, was also withdrawn with effect from August 6, 2007. Call rates, which fell below the lower bound of the corridor in June and July 2007, remained mostly within the informal corridor of the reverse repo and repo rates during August, September and October 2007 (Chart II.11) (see next section for details).

2.95 The average absorptions under LAF during August and September 2007 were Rs.21,729 crore and Rs.16,558 crore, respectively. The moderation in the amount absorbed under LAF reflected the cumulative impact of the hike in CRR by 50 basis points to 7.0 per cent in August 2007 and the market operations under the MSS. In view of large and continuous capital flows, the ceiling of the MSS was again raised to Rs.1,50,000 crore in August 2007.

Chart II.11: Call Rate Movements



[5] The CRR was further raised by 150 basis points during 2008-09.

2.96 Liquidity conditions eased in the beginning of the third quarter on account of a decline in surplus balances of the Central Government and Reserve Bank's foreign exchange operations. In October 2007, the daily average absorption under LAF was at Rs.36,665 crore. Notwithstanding brief periods of tightness on account of festive season currency demand, liquidity conditions remained easy up to second week of November 2007, reflecting continued inflows of foreign capital. This necessitated upward revisions in the ceiling for outstandings under the MSS to Rs.2,00,000 crore on October 4, 2007 and further to Rs.2,50,000 crore on November 7, 2007. The CRR was also raised by 50 basis points to 7.5 per cent in November 2007. However, as the surplus cash balances of the Central Government increased and the CRR hike came into effect, liquidity conditions tightened from the middle of the month. The tightness in liquidity conditions persisted in December 2007 largely on account of quarterly advance tax outflows. This necessitated temporary injection of liquidity by the Reserve Bank through LAF.

2.97 Some easing of liquidity conditions was observed in the beginning of the fourth quarter on account of reduction in the surplus cash balances of the Central Government and foreign exchange operations by the Reserve Bank in the wake of large capital flows over the period. Keeping in view the evolving liquidity conditions, auction of dated securities under the MSS was resumed in January 2008. However, in the second-half of January 2008, surplus liquidity declined with the increase in the Centre's cash balances with the Reserve Bank. The average daily net outstanding liquidity absorption through LAF was Rs.15,692 crore during January 2008. During February 2008, the LAF window shifted from absorption to injection mode as the surplus cash balances of the Central Government with the Reserve Bank increased in the second-half of the month. The average daily net outstanding liquidity injection was Rs.1,294 crore in February 2008. In view of the prevailing liquidity conditions, no auction under the MSS was conducted from the middle of the month. Liquidity conditions eased in the beginning of March 2008 due to reduction in the surplus cash balances of the Centre and purchase of securities under the OMO by the Reserve Bank. Liquidity conditions, however, again tightened from March 17, 2008 mainly because of advance tax outflows. In view of the schedule of advance tax payments in mid-March 2008 and the subsequent bank holidays (March 20 - 22, 2008), the Reserve Bank decided, at the request of a number of banks, to make additional LAF arrangements for smoothening the liquidity and conducted (i) three-day repo/reverse repo auctions under additional LAF on March 14, 2008; (ii) seven-day repo auction under additional LAF on March 17, 2008; and (iii) two-day repo/ reverse repo auctions under additional LAF on March 31, 2008.

2.98 For the year as a whole, there was net absorption of liquidity on 171 days and net injection of liquidity on 75 days during 2007-08 (197 days and 48 days, respectively, in 2006-07). During the year, the average daily net outstanding balances under LAF varied between injection of Rs.10,804 crore (December 2007) to absorption of Rs.36,665 crore (October 2007).

2.99 During the course of 2007-08, the stock of Government securities in the Reserve Bank's portfolio declined, mainly on account of periodic redemptions. In order to replenish its stock of Government securities, the Reserve Bank resorted to purchases of government securities through open market operations, beginning December 2007. Such operations are liquidity neutral up to the amount of redemption of Government securities in the portfolio of the Reserve Bank. During 2007-08, the total amount of Government of India securities purchased under OMO was Rs.13,510 crore.

Liquidity Management during 2008-09 so far

2.100 Liquidity conditions eased from the beginning of April 2008, mainly due to substantial reduction in the cash balances of the Central Government. Auctions under the MSS were resumed and the balances under the MSS were at Rs.1,72,444 crore as on April 25, 2008. Absorption under the LAF was placed at Rs.32,765 crore as on April 25, 2008. On a review of the liquidity situation, the Reserve Bank announced a two-stage hike of the CRR by 25 basis points each to 8.0 per cent, effective from the fortnights beginning April 26, 2008 and May 10, 2008, respectively. The average daily net outstanding liquidity absorption under the LAF was Rs.26,359 crore during April 2008. On a review of the evolving liquidity situation, the Annual Monetary Policy Statement issued on April 29, 2008, announced an increase in the CRR by 25 basis points to 8.25 per cent with effect from the fortnight beginning May 24, 2008. Reflecting the impact of the CRR hikes, average daily absorption under LAF declined to Rs.11,841 crore during May 2008. No auction of dated securities was conducted during May 2008 and the outstanding balance under the MSS was at

Rs.1,75,362 crore on May 30, 2008. Liquidity conditions eased in the early part of June and the average daily absorption under LAF was placed at Rs.15,469 crore during June 1-9, 2008. On a review of the prevailing macroeconomic and overall monetary conditions and with a view to containing inflationary expectations, the Reserve Bank increased the repo rate under the LAF by 25 basis points to 8 per cent with effect from June 12, 2008. Subsequently, with the build-up in Government balances in the face of advance tax collections, liquidity conditions turned into a deficit mode and the average daily net injection under LAF during June 2008 was Rs.8,622 crore. Liquidity conditions tightened further in July 2008 in comparison with that of June 2008 after the two-stage CRR hike became effective. The average daily net injection was Rs.27,961 crore during July 2008. Consistent with the stance of monetary policy set out in the Annual Policy Statement (April 2008) and on the basis of latest information on domestic and global macroeconomic and financial development, it was decided on June 24, 2008 to raise the CRR by 50 basis points in two stages of 25 basis points each effective from the fortnight beginning July 5, 2008 and July 19, 2008. On the same day (*i.e.* June 24, 2008), the repo rate was also hiked by 50 basis points to 8.5 per cent. In view of the current assessment of the economy including the outlook for growth and inflation, the Reserve Bank announced, in the first Quarter Review of the Annual Statement on Monetary Policy, issued on July 29, 2008, a 50 basis points hike in the repo rate (to 9 per cent) with immediate effect and 25 basis points hike in CRR to 9 per cent with effect from fortnight beginning August 30, 2008. The liquidity conditions remained tight during August 2008 and the average daily net injection under LAF was Rs.26,478 crore during August 1-22, 2008.

2.101 Keeping in view the systemic implications of the liquidity and other related issues faced by public sector oil companies arising from the unprecedented escalation in international crude oil prices, the Reserve Bank announced Special Market Operation (SMO) on May 30, 2008, for the smooth functioning of financial markets and for overall financial stability. The operation commenced from June 5, 2008. Under SMO, the Reserve Bank in the first leg of operation purchased oil bonds held by public sector oil marketing companies in their own accounts through designated banks, subject to an overall ceiling of Rs.1,500 crore (revised upwards from Rs.1,000 crore on June 11, 2008) on any single day. In the second stage, it provided equivalent foreign exchange through designated banks at market exchange rate to the oil companies. The settlement of the forex and the bond transactions were synchronous so that there was no liquidity impact. The total amount of oil bonds purchased by the Reserve Bank under SMO aggregated Rs.19,325 crore. The SMO was an exceptional measure taken in the interest of financial stability. It was terminated effective August 8, 2008.

Money Market

Call Money Market

2.102 Reflecting the impact of liquidity management operations, money markets remained largely orderly during 2007-08, barring a few brief spells of volatility. During 2007-08, liquidity pressures eased gradually from April 4, 2007 till mid-April 2007, partly on account of reduction in the cash balances of the Central Government. Reflecting this, the call rate, which had moved above the repo rate in the second half of March 2007, gradually eased to 3.27 per cent on April 12, 2007. Notwithstanding the continued reduction in the cash balances of the Central Government, liquidity conditions tightened subsequently partly on account of a two-stage hike in cash reserve ratio (CRR) of 25 basis points each, announced on March 30, 2007 effective from the fortnights beginning April 14, 2007 and April 28, 2007. Consequently, the call rate edged higher and exceeded the repo rate during the second half of April 2007 and some part of May 2007. From May 28, 2007 onwards, the liquidity conditions eased significantly, reflecting increase in Government expenditure and the Reserve Bank's forex market operations. Since the amount that could be absorbed under the reverse-repo window of LAF, on a daily basis, was capped at Rs.3,000 crore in accordance with the modified arrangements for liquidity management, the call rate remained below the reverse repo rate in June and July 2007. In fact, the call rate was placed below 1 per cent on a number of occasions in June and July 2007 and reached as low as 0.13 per cent on August 2, 2007. With the withdrawal of the ceiling of Rs.3,000 crore on the daily reverse repo window of LAF with effect from August 6, 2007, the call rate increased but remained mostly within the informal corridor of the reverse-repo and repo rates during August, September and October 2007. In the wake of relative tightness in liquidity conditions from the second week of November 2007, the call/notice money market rates edged up and moved around the upper bound of the informal corridor. This was mainly because of festive season demand for currency, increase in Government's cash balances with the

Reserve Bank and hike in the CRR by 50 basis points to 7.5 per cent with effect from the fortnight beginning November 10, 2007. In December 2007, the call/notice rate moved around the repo rate and the average call/notice rate for December 2007 was at 7.50 per cent. With the easing of liquidity conditions, partly on account of reduction in the cash balances of the Central Government, the call rate declined and mostly remained within the informal corridor in January 2008 and averaged 6.69 per cent for the month. In February 2008, the rate hardened over the previous month and averaged 7.06 per cent. In March 2008, the Central Government's cash balances with the Reserve Bank started picking up during the second half mainly on account of advance tax outflows and the call rate remained mostly above the repo rate beginning from March 15, 2008. The average call rate in March 2008 increased further to 7.37 per cent. For the full year 2007-08, the average call rate was, however, placed lower at 6.07 per cent as compared with 7.22 per cent in 2006-07.

2.103 As liquidity conditions eased, the average call rate declined to 6.11 per cent in April 2008 (Table 2.30). Reflecting the impact of CRR increases in April and May 2008, the average call rate increased to 6.62 per cent in May 2008. During June 2008, the average call rate increased to 7.75 per cent, reflecting the tightness in liquidity conditions mainly on account of advance tax outflows. As liquidity conditions tightened further, the average call rate increased to 8.76 per cent during July 2008.

Collateralised Markets

2.104 The collateralised market – the market repo (outside the LAF) and the collateralised borrowing and lending obligation (CBLO) – has emerged as the dominant segment of the money market after the phasing-out of non-bank participants from the call money market from August 6, 2005. At present, the collateralised segment comprises about 80 per cent of the total volume of the money market. Mutual funds are the major lenders in the collateralised segment, while banks and primary dealers (PDs) are the major borrowers in this segment.

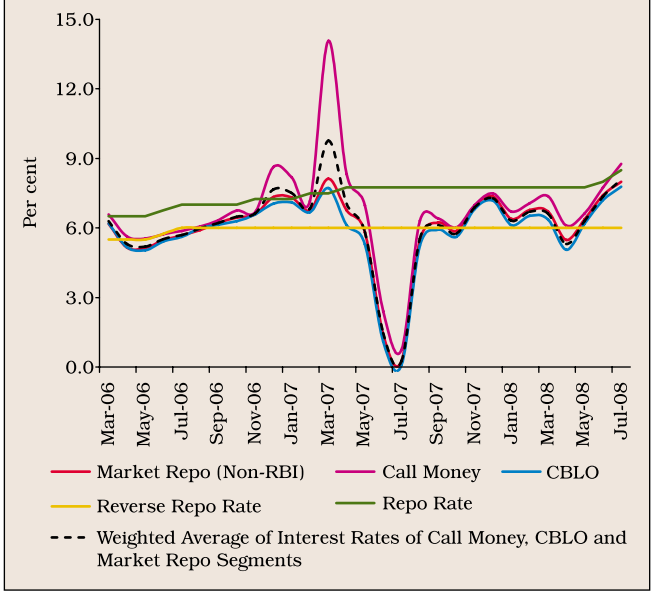
2.105 During 2007-08, interest rates in the market repo (outside the LAF) and the CBLO segments moved in tandem with but remained below call rate. Interest rates averaged 5.20 per cent and 5.50 per cent, respectively, in the CBLO and market repo segments during 2007-08 as compared with 6.24 per cent and 6.34 per cent, respectively, a year ago. The average rates in the CBLO and market repo segments increased from 5.05 per cent and 5.48 per cent, respectively, during April 2008 to 7.78 per cent and 7.99 per cent, in July 2008, in line with the movement in the call rate (Chart II.12).

2.106 A screen-based negotiated quote-driven system for all dealings in the call/notice and term money market (NDS-CALL) was launched on September 18, 2006. Though the dealing on the platform is optional, 86 banks and 8 primary dealers have taken membership of NDS-CALL so far. NDS-CALL now accounts for more than 75 per cent of total call-notice transactions.

Commercial Paper

2.107 The issuance of commercial paper (CP) increased significantly during 2007-08. The outstanding amount of CP increased from Rs.17,863 crore at end-March 2007 to Rs.32,592 crore as on March 31, 2008. The major issuers of CP were 'leasing and finance companies', accounting for three-fourths of total outstanding. Manufacturing companies and financial institutions accounted for 17 per cent and 8 per cent of the total outstanding of CP, respectively at end-March 2008. The weighted average discount rate (WADR) on CP declined from 11.3 per cent at end-March 2007 to 7.7 per cent as at end-October 2007, reflecting the general easing of liquidity conditions in the money market. Thereafter, the WADR hardened to reach 10.4 per cent as on March 31, 2008. The most preferred tenor of CP issuance was

Chart II.12: Movements in Key Market Rates



for the period ranging from 181 to 365 days. The amount of outstanding CP increased to Rs.51,569 crore as on July 31, 2008 and the WADR stood at 10.95 per cent.

Certificates of Deposit (CDs)

2.108 The issuance of certificates of deposit (CDs) by scheduled commercial banks increased by 58.5 per cent from Rs.93,272 crore at end-March 2007 to Rs.1,47,792 crore as on March 28, 2008. The outstanding amount of CDs constitute 6.0 per cent of the aggregate deposits of CD-issuing banks with significant inter-bank variation (very high percentage in respect of certain small banks with lower deposit base and lower percentage for large banks). The large issuance of CDs during 2007-08 was resorted to by the banks to augment their deposit mobilisation. Mutual Funds were the major investors in CDs. The weighted average discount rate (WADR) of CDs declined from 10.8 per cent as at end-March 2007 to 7.9 per cent in end-October 2007 before increasing to 10.0 per cent as at end-March 2008. The amount of outstanding CDs increased to Rs.1,64,892 crore and the WADR was placed at 10.23 per cent as at July 18, 2008.

Government Securities Market

Central Government Cash Management

2.109 In pursuance with the new regime under the Fiscal Responsibility and Budgetary Management (FRBM) Act, 2003, the WMA limits for 2007-08 were fixed at Rs.20,000 crore for the first half of the year (April-September) and Rs.6,000 crore for the second half of the year (October-March). The Reserve Bank retained the flexibility to revise the limits in consultation with the Government taking into consideration the transitional issues and prevailing circumstances. The applicable interest rate on WMA and overdraft was continued to be linked to the repo rate as hitherto. The Centre began the fiscal year with a large surplus balance of Rs.50,092 crore, which eroded rapidly and turned into a deficit by April 27, 2007 reflecting sharp reduction in the investments in the Government of India Treasury Bills by States, higher than anticipated spending and lower collections under the National Small Savings Fund (NSSF). The cash balances of the Government persisted in a deficit mode till June 17, 2007 except for a brief period of 2 days on May 17-18, 2007. The cash deficit crossed the WMA limit of Rs.20,000 crore on May 30, 2007 and remained in an overdraft position till June 8, 2007. Additional issuance of 91-day,182-day and 364-day Treasury Bills amounting to Rs.27,500 crore on six occasions, during June 6-27, 2007, coupled with an auction of dated securities amounting to Rs.5,000 crore on June 12, 2007 outside the calendar, advance tax inflows for the April-June quarter together with the resumption of investments by States in the Government of India Treasury Bills facilitated building up of a surplus position in Government balances from June 18, 2007. With the transfer of the State Bank of India (SBI) stake from the Reserve Bank of India to the Government involving cash outgo of Rs.35,531 crore on June 29, 2007, the cash balance of the Government again turned into a deficit and remained so till August 8, 2007. Following the transfer of surplus from the Reserve Bank on August 9, 2007, the cash balance of the Government of India returned to a surplus mode. The Government resorted to overdraft on three occasions during 2007-08 in contrast with the previous year when it did not resort to any overdraft. During 2007-08 the Government availed of WMA/OD on 91 days as against 39 days during the previous year.

2.110 The WMA limits for 2008-09 have been fixed at Rs.20,000 crore for the first half of the year (April-September) and Rs.6,000 crore for the second half of the year (October-March). The applicable interest rate on WMA and overdraft would continue to be linked to the repo rate as hitherto. The Centre began the fiscal year with a large surplus balance of Rs.76,686 crore and continued to be in surplus till August 3, 2008. The Centre resorted to WMA for 3 days from August 4, 2008 to August 6, 2008. In all, the Centre resorted to 3 days WMA during 2008-09 so far (up to August 11, 2008) as against 91 days WMA (inclusive of 37 days overdraft) during the corresponding period of the previous year.

Market Borrowings of the Central Government - 2007-08

2.111 Market borrowings (including dated securities and 364-day TBs) of the Central Government for 2007-08 were budgeted at Rs.1,88,828 crore (net Rs.1,09,579 crore) which were Rs.9,455 crore higher than the actual amount raised in 2006-07. The issuance calendar for dated securities for the first and second half of 2007-08 was issued in consultation with the Central Government fixing the market borrowing at Rs.92,000 crore and Rs.59,000 crore, respectively, as against Rs.89,000 crore and Rs.57,000 crore, respectively, raised during the corresponding periods last year. The actual amount raised during the first half of 2007-08 was Rs.97,000 crore, of which Rs.5,000 crore was raised outside the

issuance calendar towards partially financing the transfer of stake in the State Bank of India from the Reserve Bank of India to the Government of India. In the second half, Rs.59,000 crore was raised, which was as per the issuance calendar.

Dated Securities

2.112 During 2007-08, gross market borrowings by way of dated securities by the Central Government amounted to Rs.1,56,000 crore as compared with Rs.1,46,000 crore during the previous year. Gross market borrowings through dated securities during 2007-08 accounted for 100.35 per cent of the budget estimates as against 94.18 per cent in the previous year. During the year, only one new security (7.99 % GS 2017) was issued in July 2007, while all the remaining 34 securities were re-issues. The total devolvement on PDs during the financial year was at Rs.957 crore.

2.113 The weighted average yield of dated securities issued during 2007-08 was higher at 8.12 per cent as compared with 7.89 per cent during 2006-07. The weighted average maturity of dated securities issued during the year worked out to 14.90 years as compared with 14.72 years during the previous year.

Market Borrowings during 2008-09

2.114 The market borrowings (including dated securities and 364-day TBs) of the Central Government for 2008-09 are budgeted lower at Rs.1,75,780 crore (net Rs.99,000 crore) than the actual amount raised in 2007-08. On March 24, 2008, the issuance calendar for dated securities for the first half of 2008-09 (April-September) was released in consultation with the Central Government. Accordingly, an amount of Rs.96,000 crore is scheduled to be raised as compared with Rs.97,000 crore raised during the corresponding period of the previous year. The monthly amount to be raised varies from Rs.8000 crore (September 2008) to Rs.20,000 (April and May 2008). While 36 per cent of the securities to be raised during the first half of 2008-09 would be of tenor between 10-14 years, 32 per cent of the securities would be of the tenor 20 years and above.

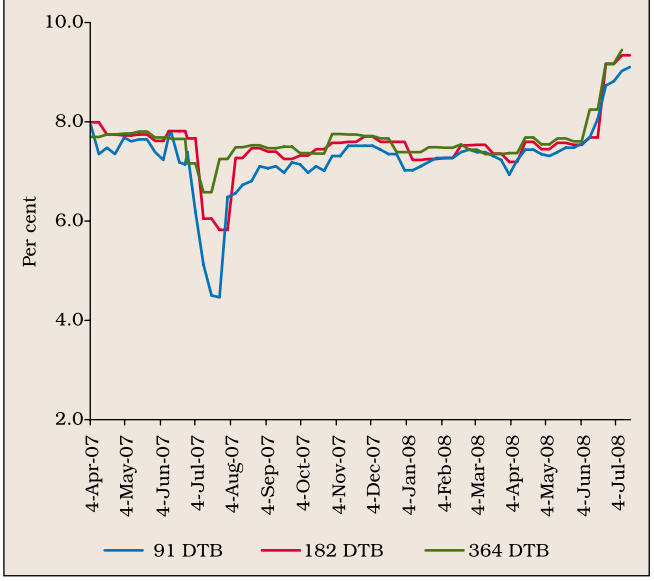
2.115 During 2008-09 so far (up to August 11, 2008), the Central Government has raised Rs.82,000 crore through dated securities under the market borrowing programme. The borrowings were raised in accordance with the indicative calendar except for the auction on July 24, 2008, where a 10 year benchmark security was issued in place of a higher maturity security in view of uncertain market conditions. The auctions held on July 24, 2008 and August 8, 2008 were based on uniform price method. All auctions during 2008-09 (up to August 11, 2008) were for reissuance of existing securities, barring one new issue of 10-year maturity. The weighted average maturity of dated securities issued during 2008-09 (up to August 11, 2008) at 15.21 years was higher than 14.32 year during the corresponding period of the previous year. The weighted average yield of dated securities issued during the same period increased to 8.72 per cent from 8.24 per cent.

Treasury Bills

2.116 As per the annual issuance calendar that was issued on March 30, 2007, the notified amounts of 91-day, 182-day and 364-day Treasury Bills under the normal market borrowing programme were kept unchanged at Rs.500 crore (weekly auction), Rs.500 crore (fortnightly auction) and Rs.1,000 crore (fortnightly auction), respectively. However, as indicated earlier, the notified amounts were increased on several occasions in June 2007 to *inter alia*, finance the temporary cash mismatch that was anticipated to arise on account of transfer of the Reserve Bank's stake in SBI on June 29, 2007.

2.117 During April - June 2007, the primary market yields of 91-day, 182-day and 364-day Treasury Bills remained relatively stable around their end-March levels at 7.32 per cent, 7.73 per cent and 7.75 per cent, respectively. Yields softened during the second quarter of 2007-08, especially in July 2007, reflecting the trends in money market segments as well as fall in domestic inflation rate. Yields dipped on July 18, 2007, reflecting easy liquidity conditions and very low short-term rates. The surplus liquidity in the wake of ceiling of Rs.3,000 crore in LAF Reverse Repo resulted in extremely low short-term rates and aggressive bidding in auctions of TBs and hence the lower auction cut-off. Treasury Bills, yields hardened during August-mid-September 2007 in tandem with higher money market interest rates and removal of the ceiling on absorption through reverse repo. Forex inflows increased following the rate cut of 50 basis points by the US Federal Reserve on September 18, 2007 and another 25 basis points on October 31, 2007. Consequently, treasury bills yields softened during mid-September-October 2007. The yields hardened again in November 2007 with the hike in CRR by 50 basis points with effect from November 10, 2007. Following the aggressive rate cuts by the US Fed (by 25 basis points, 75 basis points and 50 basis points, respectively, on December 11, 2007, January 22, 2008 and January 30, 2008), yields softened in January 2008 and remained rangebound till March 2008 (Chart II.13). The primary market yields

Chart II.13: Movement of Primary Yield of Treasury Bills



of 91-day, 182-day and 364-day Treasury Bills averaged at 7.11 per cent, 7.42 per cent and 7.50 per cent, respectively, in 2007-08.

2.118 The calendar for the regular auction of TBs for 2008-09 was announced on March 24, 2008. The notified amounts were kept unchanged at Rs.500 crore each for 91-day and 182-day TBs and Rs.1,000 crore for 364-day TBs. However, the notified amount (excluding MSS) of 91-day TBs was increased by Rs.2,500 crore each on seven occasions and by Rs.1,500 crore on one occasion and that of 182-days TBs was increased by Rs.500 crore each on two occasions during 2008-09 (up to end-July 2008). Thus, an additional amount of Rs.20,000 crore was raised to finance the expected temporary cash mismatch in July 2008 arising out of expenditure on farmers' debt waiver scheme.

Market Borrowings of State Governments

2.119 The net allocation under the market borrowing programme for the State Governments for 2007-08 was placed at Rs.28,781 crore. Taking into account additional allocations amounting to Rs.40,234 crore (inclusive of Rs.35,780 crore allocation on account of NSSF shortfall) and repayments of Rs.11,555 crore during the year (excluding Rs.156.44 crore of buy-back by Government of Orissa), the gross allocation amounted to Rs.80,570 crore as compared with the actual gross borrowings of Rs.20,825 crore in the previous year. The gross borrowings of the State Governments during the year amounted to Rs.67,779 crore raised exclusively through auction route. In the auctions of State Government market loans during the year 2007-08, the spread over the corresponding 10 year Central Government securities ranged between 19 and 90 basis points. The spread for all the States (excluding Jammu and Kashmir) was less than 50 basis points up to October 2007, however, for subsequent auctions, the spreads for majority of the States was more than the usual spread of 50 basis points fixed over the prevalent yield of Central Government security of equivalent tenor in the secondary market in case of tap sale and ranged from 35 to 89 basis points.

2.120 During 2007-08, the weighted average yield of the securities issued by the State Governments was at 8.25 per cent as compared with 8.10 per cent during the previous year (Chart II.14). The cut-off yield ranged between 7.84 and 8.90 per cent during the year (Table 2.31). All the issues during the fiscal were of 10-year maturity. Four States did not enter the market during the year.

2.121 On a review of the State-wise limits of Normal WMA, it was decided to keep these limits unchanged for 2007-08. Reserve Bank has entered into an agreement with the Government of Union Territory of Puducherry effective from December 17, 2007, to carry out its general banking business and manage rupee public debt. The Government of Union Territory of Puducherry has Rs.50 crore Normal Ways and Means Advance limit. Accordingly, the aggregate Normal WMA limit inclusive of UT of Puducherry stood at Rs.9,925 crore for 2007-08.

Chart II.14: Weighted Average Interest Rate of State Governments' Market Borrowing

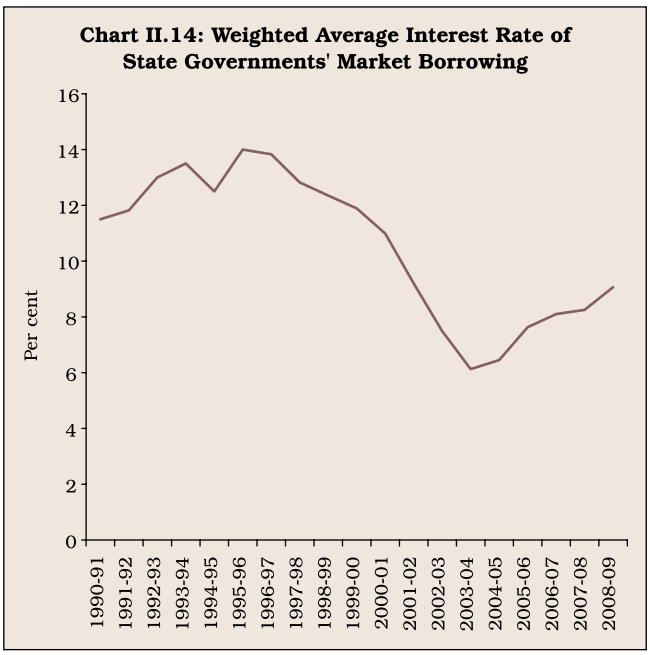


Table 2.31: Market Borrowings of the State Governments (Up to July 31, 2008)

Items	Date	Cut-off Rate (Per cent)	Tenor (years)	Amount Raised (Rs. crore)
1	2	3	4	5
Auctions				
2007-08				
First	April 19, 2007	8.30	10	1,837
Second	May 10, 2007	8.34	10	350
Third	May 17, 2007	8.40	10	1,400
Fourth	June 19, 2007	8.45-8.57	10	3,566
Fifth	July 26, 2007	8.00-8.25	10	1,389
Sixth	August 16, 2007	8.30-8.90	10	3,484
Seventh	September 20, 2007	8.14-8.50	10	3,074
Eighth	October 4, 2007	8.20	10	590
Nineth	October 8, 2007	8.31-8.40	10	4,672
Tenth	November 13, 2007	8.39-8.69	10	5,300
Eleventh	November 30, 2007	8.45-8.50	10	5,212
Twelfth	December 18, 2007	8.39-8.58	10	2,963
Thirteenth	January 7, 2008	8.03-8.12	10	5,833
Fourteenth	January 24, 2008	7.84-7.98	10	7,778
Fifteenth	February 15, 2008	7.93-8.02	10	7,776
Sixteenth	February 22, 2008	8.12-8.48	10	4,975
Seventeenth	March 7, 2008	8.28-8.45	10	4,349
Eighteenth	March 26, 2008	8.35-8.70	10	3,229
Total				**67,779**
2008-09				
First	April 22, 2008	8.50-8.60	10	2,648
Second	May 27, 2008	8.39-8.68	10	3,264
Third	June 27, 2008	9.38-9.59	10	2,300
Fourth	July 10, 2008	9.81	10	500
Fifth	July 31, 2008	9.86-9.90	10	2,100
Total				**10,812**

Source: Reserve Bank of India.

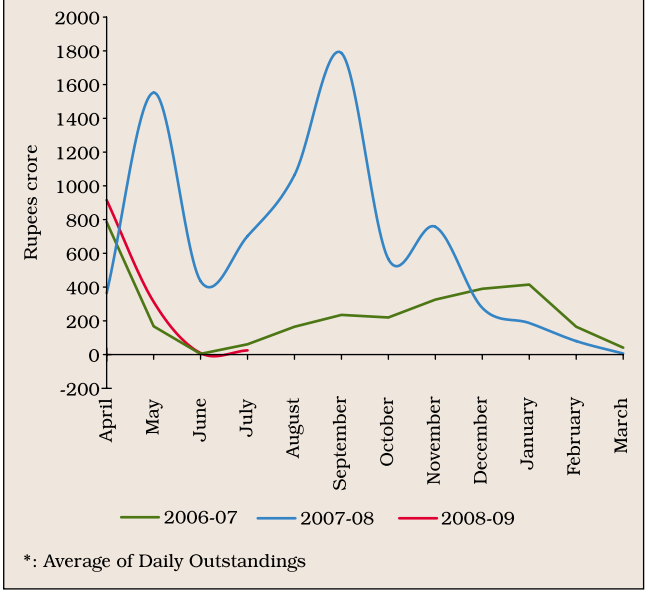
2.122 The liquidity position of a majority of States continued to remain comfortable during 2007-08. The monthly average investment by the States in 14-day intermediate treasury bills (ITBs) and auction treasury bills (ATBs) during 2007-08 at Rs.74,047 crore was higher than that of Rs.63,908 crore in the previous year. The average utilisation of WMA and overdraft by the States during 2007-08 was placed somewhat higher at Rs.648 crore as against Rs.248 crore during the previous year (Chart II.15) though significantly lower than the WMA limit of Rs.9,925 crore fixed for 2007-08 and 2008-09. During the year 2007-08, eight States availed of WMA and three States resorted to overdraft as compared with seven States and three States, respectively, during the previous year. During 2008-09 (upto end-July 2008) average utilisation of WMA and overdraft of States was Rs.313 crore. During the same period four States availed WMA and three States resorted to overdraft. The consolidated investment by the State Governments in 14-day ITBs and auction TBs were at Rs.97,615 crore as at end-March 2008 as compared with Rs.73,403 crore as at end-March 2007, while the aggregate outstanding WMA and Overdraft of States was at Rs.172 crore as at end-March 2008 as against Rs.285 crore as at end-March 2007.

Market Borrowings of State Governments during 2008-09 so far (up to August 11, 2008)

2.123 The estimated net market borrowings of the State Governments for 2008-09 are placed at Rs.44,692 crore. Taking into account repayments of Rs.14,371 crore, the gross market borrowings of the State Governments are estimated at Rs.59,108 crore. During the current year (up to August 11, 2008), eight State Governments raised Rs.10,812 crore under the market borrowing programme as compared with Rs.8,542 crore during the corresponding period of the previous year. The cut-off yield in the auction ranged between 8.39 per cent and 9.90 per cent. The weighted average interest rate on market loans firmed up to 9.07 per cent during 2008-09 (up to August 11, 2008) from 8.35 per cent during the corresponding period of 2007-08. The spreads of State Government securities over the yields of Central Government security of corresponding maturity ranged between 30 and 98 basis points as against 19 and 44 basis points during the corresponding period of the last year.

2.124 The consolidated investments by the State Governments in 14-day intermediate treasury bills (ITBs) and auction TBs were at Rs.86,464 crore as on August 11, 2008. The average investment by the States

Chart II.15: Utilisation of WMA and Overdraft by States*



*: Average of Daily Outstandings

in Treasury Bills (14-day and Auction) during April-July 2008 amounted to Rs.82,298 crore as against Rs.70,513 crore in the corresponding period of the previous year (Chart II.16).

Secondary Market Transactions in Government Securities

2.125 During 2007-08, the total volume of secondary market transactions increased by 57 per cent to Rs. 56,27,347 crore (30 per cent of which were outright transactions and the remaining on account of repos) from Rs.35,83,336 crore (29 per cent of which accounted for outright transactions and the remaining for repos) in 2006-07. The total volume of secondary market transactions was lowest during April 2007 at Rs.2,31,094 crore (average benchmark 10-year yield during the month was at 8.17 per cent) and at peak at Rs.7,42,365 crore during January 2008 as the yields softened (average benchmark 10 year yield during the month was at 7.57 per cent) (Chart II.17).

2.126 During 2008-09 so far (April to July 2008), the total volume of secondary market transactions increased by 20 per cent to Rs.16,85,238 crore from Rs.14,09,136 crore during the corresponding period last year.

Yield Movement and Yield Curve

2.127 Yields in the Government Securities market declined marginally during 2007-08, barring the first quarter of 2007-08, when yields hardened, and again during August-December 2007. Yields hardened somewhat during the first quarter of 2007-08, partly reflecting the global trends and announcement of an unscheduled auction. Yields generally remained range-bound during August-December 2007 period and softened during January and February 2008, partly reflecting global trends in yields, successive rate cuts by the Federal Reserve, lower inflation and easy liquidity conditions. However, yields hardened again in the second half of March 2008, reflecting higher inflation. The 10-year yield moved in a range of 7.42-8.32 per cent during 2007-08. As on March 31, 2008, the yield stood at 7.93 per cent, 4 basis points lower than that at end-March 2007. The spread between 1-year and 10-year yields was 45 basis points at end-March 2008 as compared with 42 basis points at end-March 2007. The spread between 10-year and 30-year yields was 47 basis points at end-March 2008 as compared with 37 basis points at end-March 2007. The average yield for entire year 2007-08 at 7.91 per cent was higher as against 7.78 per cent during the previous year.

Chart II.16: Investments in 14-day Intermediate and Auction Treasury Bills by the State Governments

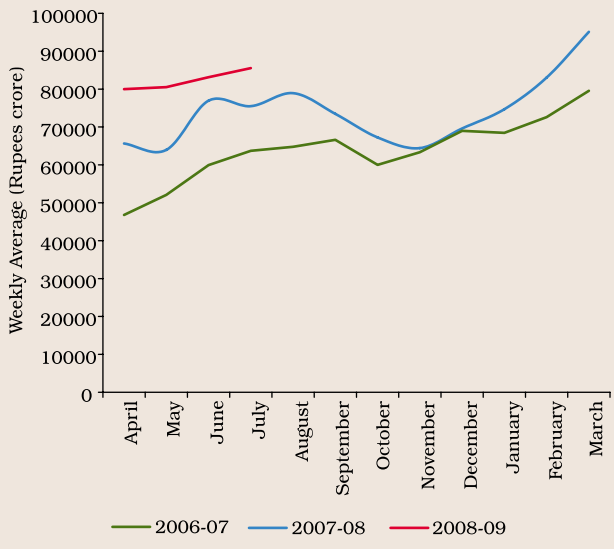
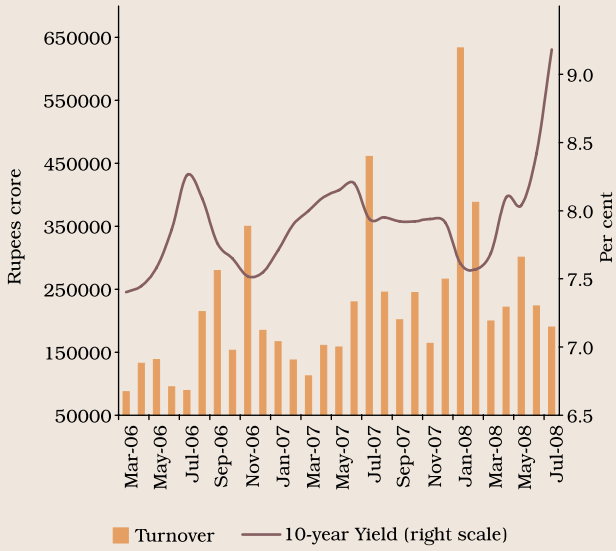


Chart II.17: Government Securities Turnover and Yields (Monthly Average)

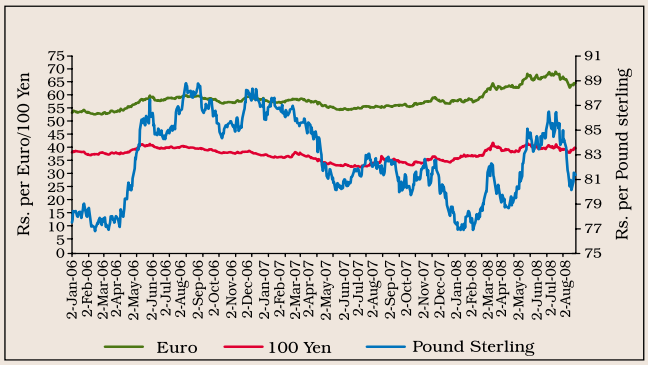


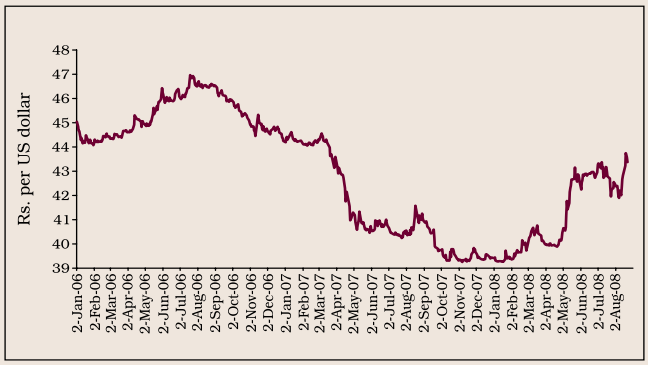
2.128 During 2008-09 so far (April to July 2008), yields remained range-bound in the first two months but hardened significantly during June-July 2008 due to hardening of inflation and soaring international oil prices. The 10-year yield, which varied between 7.90-8.20 per cent during the first two months, peaked at 9.51 per cent on July 15, 2008.

Foreign Exchange Market

2.129 During 2007-08, the rupee moved in the range of Rs.43.15-39.26 per US dollar with an upward bias.

Chart II.18: Movement of Rupee *vis-à-vis* Major Currencies





The rupee depreciated during the first half of August 2007 due to strong FII outflows led by bearish conditions in the equity market in India, concerns over subprime lending crisis in the US and the news that the international bank BNP Paribas had been forced to suspend calculation of the net asset value of three of its mutual funds. Thereafter, the rupee appreciated as a result of large capital inflows, weakening of the US dollar *vis-à-vis* other currencies and bullish conditions in the domestic stock market. However, the rupee started depreciating against the US dollar from the beginning of February 2008 on account of bearish conditions in the stock market, capital outflows, rising oil prices, increased demand for dollars by importers and FIIs. The rupee was placed at Rs.39.99 per US dollar on March 31, 2008. At this level, the Indian rupee appreciated by 9.0 per cent over its level on March 30, 2007 against US dollar, 7.6 per cent against the Pound sterling. However, it depreciated by 7.8 per cent against the Euro and 7.6 per cent against the Japanese yen (Chart II.18). During 2008-09 so far, the rupee continuing its previous trend, reached at Rs.43.58 per US dollar on August 21, 2008. Between end-March 2008 and August 21, 2008, the exchange rate of Indian rupee depreciated by 8.2 per cent against the US dollar, 2.4 per cent against the Pound sterling, 2.2 per cent against the Euro and 0.1 per cent against the Japanese yen. Between March 2007 and March 2008, the 36-currency trade weighted nominal effective exchange rate (NEER) and real effective exchange rate (REER) of the Indian rupee experienced an appreciation of 1.4 per cent and 2.0 per cent, respectively, as against a depreciation of 2.7 per cent and 0.7 per cent, respectively, during the corresponding period of the previous year. The 6-currency trade weighted NEER and REER of the rupee appreciated by 0.2 per cent and 3.2 per cent, respectively, between March 2007 and March 2008 (Table 2.32).

Table 2.32: Nominal and Real Effective Exchange Rate of the Indian Rupee (Trade Based Weights)

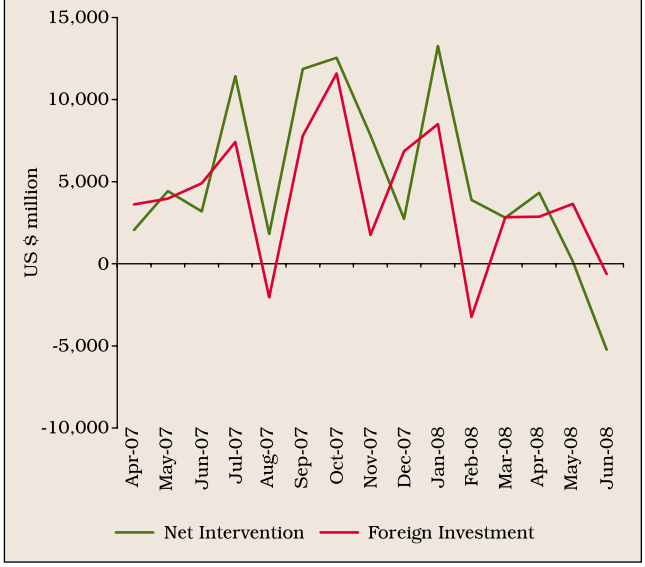
Year/Month	Base : 1993-94 (April-March) = 100			
	6-Currency		36-Currency	
	NEER	REER	NEER	REER
1	2	3	4	5
1993-94	100.00	100.00	100.00	100.00
2000-01	77.43	102.82	92.12	100.09
2002-02	76.04	102.71	91.58	100.86
2002-03	71.27	97.68	89.12	98.18
2003-04	69.97	99.17	87.14	99.56
2004-05	69.58	101.78	87.31	100.09
2005-06	72.28	107.30	89.85	102.35
2006-07 (P)	68.49	105.57	85.89	98.43
2007-08 (P)	74.17	114.09	92.46	105.08
Apr 2006	71.63	105.86	87.73	98.17
May 2006	69.39	103.70	85.43	96.39
Jun 2006	68.79	103.19	85.11	96.53
Jul 2006	68.14	102.31	84.22	95.72
Aug 2006	67.65	102.26	83.61	95.59
Sep 2006	68.40	104.88	84.65	97.96
Oct 2006	69.66	107.34	86.18	99.91
Nov 2006	69.90	107.92	86.50	100.27
Dec 2006	69.38	106.52	85.89	99.05
Jan 2007 (P)	70.32	107.69	87.05	100.59
Feb 2007(P)	70.42	107.67	87.21	100.49
Mar 2007(P)	70.23	107.46	87.11	100.50
Apr 2007 (P)	72.74	111.63	91.79	102.84
May 2007 (P)	75.19	115.73	94.68	106.24
Jun 2007 (P)	75.37	115.22	93.24	106.14
Jul 2007 (P)	75.15	115.10	93.08	106.19
Aug 2007 (P)	74.44	114.10	92.63	105.54
Sep 2007 (P)	74.64	115.03	92.89	106.15
Oct 2007 (P)	75.45	115.79	93.49	106.34
Nov 2007 (P)	74.34	113.90	92.47	104.85
Dec 2007 (P)	74.65	114.52	92.92	105.16
Jan 2008 (P)	74.31	114.23	92.55	105.12
Feb 2008 (P)	73.41	113.06	91.41	103.84
Mar 2008 (P)	70.38	110.87	88.34	102.55

NEER : Nominal Effective Exchange Rate.
REER : Real Effective Exchange Rate.
P : Provisional.
Note : Rise in indices indicate appreciation of the rupee and vice versa.

Management of Exchange Rate

2.130 The conduct of monetary policy in recent times had to contend with large capital flows and increased volatility in such flows. During 2007-08, FIIs invested in the Indian stock markets on a significant scale reflecting the buoyant stock markets, strong domestic activity and the appreciating trend in the Indian rupee. These inflows, however, were marked by volatile pattern over the months. During the large part of the year, the intervention by the Reserve Bank in the foreign exchange market mirrored the large capital flows on a month to month basis with the only exceptions being months of August 2007, November 2007, February 2008 and March 2008 when net purchases were made by the Reserve Bank despite net outflows on account of FIIs (Table 2.33 and Chart II.19). In August 2007, there were outflows on account of concerns over tightening of FII norms regarding Participatory Notes, bearish conditions in Asian stock markets including India, and a major sell-off in the US stock markets over concerns of further weakness in the housing market. The large outflows by FIIs in February 2008 were mainly due to refund of money brought in during January 2008 to subscribe to IPO issues.

Chart II.19: Monthly Movement in Foreign Investment Inflows and Intervention



2.131 During the months of July, September, October 2007 and January 2008, the large purchases made by the Reserve Bank were in tandem with the large capital inflows during these months.

Table 2.33: Sales/Purchases of US Dollar by the Reserve Bank

(US $ million)

Year	Purchase	Sale	Net Purchase/ Sale (-)	Foreign Investment Inflows **	FII Inflows (net)	Appr. /Dep. of Indian Rupee (%) (month-on-month basis)
1	2	3	4	5	6	7
2006-07	26,824	0	26,824	29,082	3,225	-2.2*
2007-08	79,696	1,493	78,203	61,830	20,328	12.5*
2007-08						
April 2007	2,055	0	2,055	3,617	1,963	4.5
May 2007	4,426	0	4,426	3,972	1,847	3.4
June 2007	3,192	0	3,192	4,902	3,279	0.0
July 2007	11,428	0	11,428	7,418	4,685	0.9
August 2007	1,815	0	1,815	-2,044	-3,323	-1.0
September 2007	11,867	0	11,867	7,794	7,057	1.2
October 2007	12,544	0	12,544	11,591	6833	2.1
November 2007	7,827	0	7,827	1,757	-265	0.2
December 2007	2,731	0	2,731	6,852	2,396	0.0
January 2008	13,625	0	13,625	8,506	6,490	0.2
February 2008	3,884	0	3,884	-3,234	-8,991	-0.9
March 2008	4,302	1,493	2,809	2,838	-1,643	-1.5
2008-09						
April 2008	4,325	0	4,325	2,869	-1,432	0.8
May 2008	1,625	1,477	148	3,644	-734	-5.0
June 2008	1,770	6,999	-5,229	-618	-3,011	-1.6

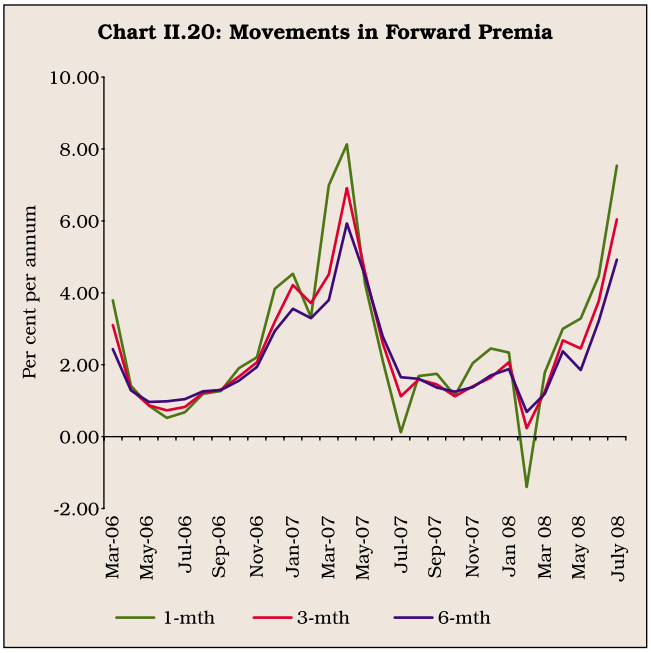
* : Appreciation (+)/ depreciation (-) on year-on-year basis.

** : Including FDI and portfolio flows in the form of resources raised by Indian corproates by way of ADRs/GDRs and inflows by FIIs (shown also separately in col. 6).

2.132 Despite large intervention by the Reserve Bank, the Indian rupee continued to appreciate during 2007-08. The rupee appreciated by 12.5 per cent on an annual average basis despite net purchases by the Reserve Bank to the tune of US $ 78.2 billion during the year 2007-08. In the absence of such large interventions, volatility in the exchange rate could have been significantly higher. In order to smoothen domestic liquidity impact of such interventions, the MSS operations – absorption in the face of heavy inflows and unwinding of balances during reversal/ lower inflows – were used on a significant scale, as detailed earlier.

2.133 Forward premia remained low during 2007-08, reflecting the easy liquidity conditions in the domestic money market and heavy forward sales by exporters. The forward premia in all maturities declined steadily during the year. The three-month forward premia declined from 5.1 per cent at end-March 2007 to 2.8 per cent at end-March 2008. The one-month forward rate turned into discount during February 2008. However, subsequently it was at premium. The one-month, three-month and six-month forward premia were 6.6 per cent, 5.3 per cent and 4.2 per cent, respectively, as on August 14, 2008 (Chart II.20).

Chart II.20: Movements in Forward Premia



Capital Market

2.134 The primary capital market in India witnessed generally buoyant conditions during 2007-08. The Indian stock markets witnessed sharp bouts of volatility during 2007-08 due mainly to trends in other emerging market economies.

Primary Market

2.135 Resource mobilisation through public issues was higher at Rs.83,707 crore (through 119 issues) during 2007-08 as compared with Rs.32,382 crore (through 119 issues) during the previous year (Table 2.34). All the public issues, except four, were by private sector companies. Further, out of 119 public issues, 116 were in the form of equity and only three in debt. However, resource mobilisation through public issues was adversely affected for a brief period in January 2008 due to sharp correction in the secondary market on account of concerns over recession in the

Table 2.34: Mobilisation of Resources through the Primary Market*

(Amount in Rupees crore)

Item	2005-06		2006-07		2007-08 P	
	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount
1	2	3	4	5	6	7
A. Public Issues @ (Prospectus and Rights)	**138**	**26,940**	**119**	**32,382**	**119**	**83,707**
I. Public Sector	7	5,786	2	1,779	4	20,069
II. Private Sector	131	21,154	117	30,603	115	63,638
B. Private Placement	**1,115**	**96,473**	**1,681**	**1,45,866**	**1,812**	**2,12,568**
I. Public Sector	169	55,283	157	64,025	198	83,046
II. Private Sector	946	41,190	1,524	81,841	1,614	1,29,522
C. Euro Issues@@	**48**	**11,352**	**40**	**17,005**	**26**	**26,556**
Total (A+B+C)	**1,301**	**1,34,765**	**1,840**	**1,95,253**	**1,957**	**3,22,831**

* : Including both debt and equity.
@ : Excluding offers for sale. @@ : ADRs and GDRs. P : Provisional
Note : Estimates are based on information gathered from arrangers, FIs and SEBI.

US economy and turmoil in the global credit markets as detailed in the next section. This led to withdrawal of three issues from the market and also postponement of some planned issues. However, subsequently all the 16 issues, which entered the market during February-March 2008, were fully subscribed.

2.136 Resource mobilisation through private placement aggregated at Rs.2,12,568 crore during 2007-08, which was 45.7 per cent higher than that in 2006-07. Public sector entities accounted for 39.1 per cent of total resource mobilisation through private placements during 2007-08 as compared with 43.9 per cent in 2006-07 (Table 2.34). Resources mobilised by financial intermediaries (both public and private sector) increased by 43.6 per cent to Rs.1,44,336 crore during 2007-08 from Rs.1,00,531 crore in the last year.

2.137 Resource mobilisation through Euro issues by way of American depository receipts (ADRs) and Global depository receipts (GDRs) increased by 56.2 per cent during 2007-08. There were 26 Euro issues during 2007-08 amounting to Rs.26,556 crore as compared with 40 issues aggregating Rs.17,005 crore during 2006-07.

2.138 Net resource mobilisation by mutual funds (net of redemption) increased by 63.6 per cent during 2007-08 to Rs.1,53,802 crore (Table 2.35). Scheme-wise, 9.7 per cent of the net mobilisation of funds was under liquid/money market oriented schemes during 2007-08 (as compared with 5.3 per cent during the previous year) and 57.5 per cent by way of debt-oriented schemes (63.9 per cent during the previous year). Funds mobilised under equity-linked savings schemes, accounted for 4.0 per cent of total mobilisation during the period under review.

Secondary Market

2.139 The domestic stock markets began the financial year 2007-08 on a weak note. However, the markets bounced back soon and continued to surge till mid-August 2007 on the back of encouraging Q4 corporate results of 2006-07 declared by major companies, softening of global crude oil prices, reports of a normal South-West monsoon forecast by the India Meteorological Department (IMD) and strong US employment data released on April 06, 2007. The BSE Sensex closed above the 15000-level on July 9, 2007. The markets, however, could not sustain the momentum and declined after mid-August 2007 taking cues from sharp correction in the global equity markets triggered by slump in the US home sales and rising concerns about the US mortgage and corporate lending markets. Increase in international crude oil prices, restrictions on repatriation of funds raised through external commercial borrowings (ECBs) by the Government and decline in global copper prices also affected the market sentiment.

Table 2.35: Net Resource Mobilisation by Mutual Funds

(Rupees crore)

Category	2005-06	2006-07	2007-08 P
1	2	3	4
I. UTI Mutual Fund	3,424	7,326	10,677
II. Private Sector	42,977	79,038	1,33,304
III. Public Sector	6,379	7,621	9,821
Total (I+II+III)	**52,780**	**93,985**	**1,53,802**

Source: Securities and Exchange Board of India.

2.140 The stock markets recovered again and remained buoyant till January 8, 2008 on the back of robust macroeconomic fundamentals, healthy corporate earnings, strong FIIs inflows, rise in global metal prices, cut in US Fed rate and easing of domestic annual inflation rate. Though, the domestic stock markets witnessed mild corrections during mid-October due to restrictions on Participatory Notes by SEBI and during mid-December 2007 due to downward trend in major international equity markets on account of worries over sub-prime losses and credit crunch in the US and Europe, concerns over the slowdown in the US economy, depreciation of US dollar against major currencies and increase in global crude oil prices to record high levels, they recovered again to attain new highs. The BSE Sensex closed at the all time high level of 20873.33 on January 08, 2008, registering a gain of 59.7 per cent over end-March 2007.

2.141 Beginning, January 11, 2008, however, the domestic stock markets witnessed volatile conditions due to heightened concerns over recession in the US economy on account of contraction in the US service industry, weak earnings growth reported by some of the leading US companies, home foreclosures climbing to record high levels and lacklustre retail sales in the US. Liquidity squeeze from the secondary market in the wake of a large IPO, heavy sales by FIIs in the Indian equity market, downward revision of GDP growth rate by CSO, hike in short term capital gains tax from 10 per cent to 15 per cent in the Union Budget 2008-09, increase in domestic annual inflation rate, rise in global crude oil prices to record high levels and decline in ADR prices in the US markets also dampened the market sentiment. As a consequence of these developments, the BSE Sensex and the S&P CNX Nifty closed at 15644.44 and 4734.50, respectively on March 31, 2008, registering a decline of 25.1 per cent and 24.7 per cent, respectively, over January 8, 2008.

However, for the year as a whole, the BSE Sensex and S&P CNX Nifty registered gains of 19.7 per cent and 23.9 per cent, respectively.

2.142 Most of the sectoral indices, *viz.*, metal, oil and gas, capital goods, fast moving consumer goods, public sector undertakings, banking and consumer durables registered gains during 2007-08. However, IT and auto sector stocks recorded declines (Chart II.21).

2.143 According to SEBI data, net investments by FIIs in Indian equities during 2007-08 at Rs.52,574 crore were more than two times the net investments in the previous year. Net investments in debt were Rs.12,499 crore as compared with Rs.6,081 crore during the previous year. Net investments by mutual funds in equities and debt instruments also increased sharply (Table 2.36).

2.144 The combined turnover in the cash segment of BSE and NSE during 2007-08 recorded an increase of 76.8 per cent over that of last year. The market capitalisation as a percentage of GDP improved from 85.5 per cent at end-March 2007 to 156.7 per cent on January 08, 2008 before declining to 109.5 per cent by end-March 2008. The price earning (P/E) ratio of BSE Sensex also rose from 20.3 at end-March 2007 to 28.5 by January 8, 2008, before sliding to 20.1 by end-March 2008. Volatility, measured by coefficient of variation, also increased during 2007-08 (Table 2.37).

2.145 During 2008-09, the domestic stock markets witnessed an increasing trend till May 21, 2008, registering gains of 10.2 per cent over end-March 2008. The markets, however, turned cautious thereafter mainly on account of hike in domestic retail fuel prices, rise in domestic inflation rate, net sales by FIIs in the Indian equity market, concerns over rising trade deficit and downward trend in major international equity markets, increase in international crude oil prices among others. As a result, both the BSE Sensex and the S&P CNX Nifty closed lower at 14297 and 4292, respectively, on August 27, 2008, registering losses of 8.6 per cent and 9.3 per cent, respectively, over their end-March 2008 level. Between end-March 2008 and August 27, 2008, the BSE Sensex moved in a range of 12576-17600.

2.146 The total turnover in the derivative segment on NSE during 2007-08 continued to remain significantly higher than the turnover in the cash segment (Table 2.38).

Chart II.21: Trends in Sectoral Stock Indices
(Normalised to March 31, 2007= 100)

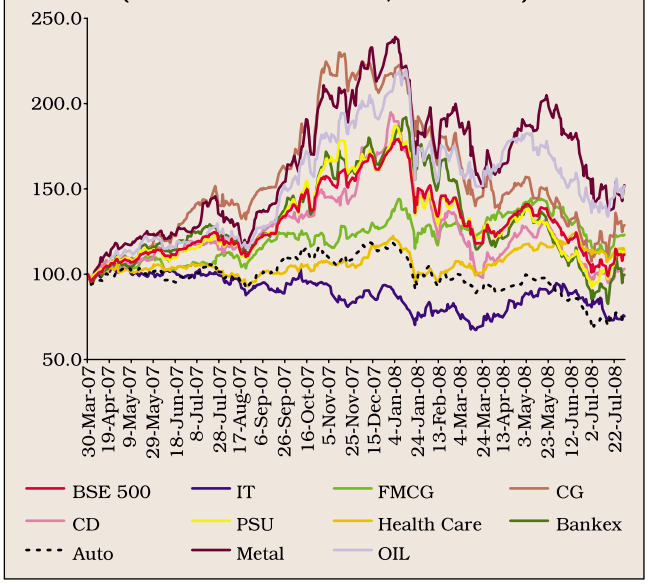


Table 2.36: Net Investments by Institutional Investors

(Rupees crore)

Year	FIIs		Mutual Funds	
	Equity	Debt	Equity	Debt
1	2	3	4	5
2003-04	43,631	5,534	1,308	22,701
2004-05	40,991	1,927	448	16,987
2005-06	48,487	-7,334	14,303	36,801
2006-07	26,031	6,081	9,062	52,543
2007-08	52,574	12,499	16,306	73,790

Note : Net investments by FIIs represent actual investments in the equity and debt markets. Data in this table may not match with those on capital flows in respect of FIIs in the balance of payment section, which represent actual inflows/outflows into/from the country.

Source : Securities and Exchange Board of India.

Table 2.37: Trends in Stock Markets

Item	BSE		NSE	
	2006-07	2007-08	2006-07	2007-08
1	2	3	4	5
1. Average BSE Sensex/ S&P CNX Nifty	12277	16569	3572	4897
2. Volatility (Coefficient of Variation)	11.1	13.7	10.4	14.4
3. Cash Segment Turnover (Rs.crore)	9,56,185	15,78,856	19,45,285	35,51,038
4. Market Capitalisation (End-period) (Rs.crore)	35,45,041	51,38,014	33,67,350	48,58,122
5. P/E ratio (End-period)	20.3	20.1	18.4	20.6

Source : Bombay Stock Exchange Ltd. (BSE) and National Stock Exchange of India Ltd. (NSE).

Table 2.38: Turnover in Derivatives Market *vis-à-vis* Cash Market at NSE

(Rupees crore)

Year	Derivatives	Cash
1	2	3
2002-03	4,39,862	6,17,989
2003-04	21,30,610	10,99,535
2004-05	25,46,982	11,40,071
2005-06	48,24,174	15,69,556
2006-07	73,56,242	19,45,285
2007-08	130,90,478	35,51,038

Source: National Stock Exchange of India Ltd. (NSE).

VI. BANKS AND FINANCIAL INSTITUTIONS

2.147 Robust macroeconomic performance continued to underpin the business operations and financial performance of commercial banks, urban co-operative banks, FIs and NBFCs. The total assets of Scheduled Commercial Banks (SCBs) expanded by 24.3 per cent during 2006-07. The ratio of assets of SCBs to GDP (at factor cost at current prices) increased to 91.4 per cent at end-March 2007 from 85.0 per cent at end-March 2006, suggesting a faster growth of the banking system in relation to the real economy. However, after two consecutive years of strong expansion, the bank credit witnessed a modest slowdown in 2006-07.

2.148 For the third year in succession, loans and advances grew by over 30 per cent in 2006-07 (*i.e.,* 30.6 per cent as compared with 31.8 per cent in 2005-06 and 33.2 per cent in 2004-05). The modest slowdown in overall credit[6] was reflected in all the four major sectors, *viz*., agriculture, industry, services and personal loans. The credit slowdown was especially evident in real estate loans and personal loans. Credit growth to the priority sector also decelerated to 24.0 per cent in 2006-07 compared with the growth of 36.1 per cent in 2005-06. Credit to 'other priority sector', which witnessed a sharp growth in recent years, also decelerated sharply during 2006-07. Credit growth to the SSI sector, however, accelerated sharply. Reflecting the modest slowdown in credit growth and the sharp acceleration in deposits, the incremental credit deposit ratio (CDR), moderated towards the second half of 2006-07. As at end-March 2007, the incremental CDR was around 85 per cent (year-on-year) as compared with 110 per cent a year ago.

2.149 Net profits of SCBs, as a group, increased by 27.0 per cent during 2006-07 as compared with 17.3 per cent during 2005-06. The high growth in net profits was recorded despite a sharp increase in provisions and contingencies of SCBs. However, net profits as percentage of total assets were roughly the same as those in the previous year. Gross NPAs as percentage of gross advances at end-March 2007 declined further to 2.5 per cent from 3.3 per cent at end-March 2006. Net NPAs as percentage of net advances at end-March 2007 also declined to 1.0 per cent from 1.2 per cent at end-March 2006. SCBs' capital to risk-weighted assets ratio (CRAR) remained at the previous year's level of 12.3 per cent, suggesting that the increase in capital kept pace with the sharp increase in risk-weighted assets (Table 2.39).

2.150 The business operations of UCBs expanded by 5.9 per cent during 2006-07 compared with a growth of 24.3 per cent by SCBs during the same period. While loans and advances and other assets witnessed a sharp growth, growth in investments decelerated. Net profits of scheduled UCBs declined during 2006-07 as against an increase in the previous year mainly on account of increase in provisions, contingencies and taxes. Asset quality of UCBs improved significantly during 2006-07 as reflected in the decline in NPAs (gross and net) in absolute as well as percentage terms (Table 2.40).

2.151 As at end-March 2007, seven FIs were regulated by the Reserve Bank, *viz*., EXIM Bank, IFCI, IIBI, NABARD, NHB, SIDBI and TFCI. Of these, five FIs (EXIM Bank, IFCI, NABARD, NHB and SIDBI) were under the full-fledged regulation and supervision of the Reserve Bank. FIs not accepting public deposits but having asset size of Rs.500 crore and above are subject to limited off-site supervision by the Reserve Bank. TFCI belongs to this category, while IIBI is in the process of voluntary winding up. The exemption given to IFCI from NBFC regulations was withdrawn in August 2007 and it is now being regulated as a systemically important non-deposit taking non-banking financial company (NBFC-ND-SI).

2.152 Financial assistance sanctioned and disbursed (in absolute terms) by AIFIs, after showing a decline between 2000-01 and 2004-05, increased in the subsequent two years. Financial assistance sanctioned and disbursed by FIs, including AIFIs, specialised financial institutions and

[6] As per sectoral credit data relating to 51 scheduled commercial banks.

Table 2.39: Key Parameters of Bank Groups

(Per cent)

Bank Group	2002-03	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5	6
Operating Expenses/Total Assets					
Scheduled Commercial Banks	2.2	2.2	2.1	2.1	1.9
Public Sector Banks	2.3	2.2	2.1	2.1	1.8
Old Private Sector Banks	2.1	2.0	2.0	2.1	1.9
New Private Sector Banks	2.0	2.0	2.1	2.1	2.1
Foreign Banks	2.8	2.8	2.9	2.9	2.8
Spread/Total Assets					
Scheduled Commercial Banks	2.8	2.9	2.8	2.8	2.7
Public Sector Banks	2.9	3.0	2.9	2.9	2.7
Old Private Sector Banks	2.5	2.6	2.7	2.8	2.8
New Private Sector Banks	1.7	2.0	2.2	2.3	2.3
Foreign Banks	3.4	3.6	3.3	3.6	3.7
Net Profit/Total Assets					
Scheduled Commercial Banks	1.0	1.1	0.9	0.9	0.9
Public Sector Banks	1.0	1.1	0.9	0.8	0.8
Old Private Sector Banks	1.2	1.2	0.3	0.6	0.7
New Private Sector Banks	0.9	0.8	1.1	1.0	0.9
Foreign Banks	1.6	1.7	1.3	1.5	1.7
Gross NPAs to Gross Advances					
Scheduled Commercial Banks	8.8	7.2	5.2	3.3	2.5
Public Sector Banks	9.4	7.8	5.5	3.6	2.7
Old Private Sector Banks	8.9	7.6	6.0	4.4	3.1
New Private Sector Banks	7.6	5.0	3.6	1.7	1.9
Foreign Banks	5.3	4.6	2.9	2.0	1.8
Net NPAs to Net Advances					
Scheduled Commercial Banks	4.4	2.9	2.0	1.2	1.0
Public Sector Banks	4.5	3.0	2.1	1.3	1.1
Old Private Sector Banks	5.5	3.9	2.7	1.7	1.0
New Private Sector Banks	4.6	2.4	1.9	0.8	1.0
Foreign Banks	1.8	1.5	0.9	0.8	0.7
CRAR					
Scheduled Commercial Banks	12.7	12.9	12.8	12.3	12.3
Public Sector Banks	12.6	13.2	12.9	12.2	12.4
Old Private Sector Banks	12.8	13.7	12.5	11.7	12.1
New Private Sector Banks	11.3	10.2	12.1	12.6	12.0
Foreign Banks	15.2	15.0	14.0	13.0	12.4

investment institutions, increased by 12.9 per cent and 82.8 per cent, respectively, during 2006-07 as compared with an increase of 41.0 per cent and 38.0 per cent, respectively, during the previous year (Table 2.41).

Table 2.40: Urban Co-operative Banks – Select Financial Indicators

Indicator	2005-06	2006-07
1	2	3
Growth in Major Aggregates (Per cent)		
Deposits	8.6	6.1
Credit	5.2	9.8
Financial Indicators@ *(as percentage of total assets)*		
Operating Profits	36.0	2.2
Net Profits	104.8	-14.0
Spread	2.2	2.3
Gross Non-Performing Assets *(as percentage of advances)*	18.9	17.0

@ : Relates to Scheduled Urban Co-operative Banks.

2.153 Resources raised by FIs from the money market during 2006-07 were significantly higher than those raised during 2005-06. The aggregate umbrella limits of select FIs for raising resources increased from Rs.15,157 crore as on March 31, 2006 to Rs.19,001 crore as on March 30, 2007. The aggregate outstanding resources raised by these FIs under the umbrella limit increased from Rs.1,977 crore (13.1 per cent of aggregate limit) as on March 31, 2006 to Rs.3,293 crore (17.3 per cent of aggregate limit) as on March 30, 2007. Based on outstanding position as on March 30, 2007, FIs raised bulk of resources through commercial paper (Rs.2,540 crore), followed by certificate of deposits (Rs.663 crore) and term

Table 2.41: Financial Institutions – Select Performance Indicators

Indicator	2005-06	2006-07
1	2	3
Balance Sheet Indicators *(as percentage to total assets)*		
Operating Profits	1.4	2.1
Net Profits	1.0	1.5
Spread	1.8	1.6
Resource Flows *(Rs. crore)*		
Sanctions	27,666	31,238
Disbursements	21,146	38,656

Note : 1. Data on balance sheet indicators relate to IFCI, IIBI, TFCI, NABARD, NHB, SIDBI and EXIM Bank.
2. Data on resource flows pertain to AIFIs (IFCI, SIDBI and IIBI), Specialised Financial Institutions (IVCF, ICICI Venture and TFCI) and Investment Institutions (LIC and GIC with its former subsidiaries).

deposits (Rs.89 crore). None of the FIs mobilised resources through term money or inter-corporate deposits during the period.

2.154 The capital adequacy ratio of FIs continued to be significantly higher than the minimum stipulated norm of 9 per cent. Net interest income of select all-India FIs increased to Rs.2,598 crore during 2006-07 from Rs.2,555 crore during 2005-06. In line with the trend in the previous year, non-interest income of FIs increased significantly from Rs.1,353 crore during 2005-06 to Rs.1,913 crore during 2006-07. However, in contrast to the sharp increase observed during the previous year, the operating expenses of FIs registered a decline of 55.9 per cent during the year. As a result, the operating profit increased sharply by 73.6 per cent (from Rs.1,993 crore in 2005-06 to Rs.3,460 crore in 2006-07). This was also reflected in the significant increase in net profit of FIs, despite higher provisions earmarked for taxation.

2.155 Total assets/liabilities of deposit taking NBFCs (excluding RNBCs), expanded at a much higher rate of 26.9 per cent during 2006-07 compared with 5.1 per cent during 2005-06 (Table 2.42). Borrowings, which represent a major source of funds for NBFCs, increased by 30.6 per cent during the year, while public deposits declined by 16.5 per cent indicating a shift in the pattern of resources raised. On the asset side, loans and advances and hire purchase assets together accounted for more than three-fourths of total assets. While loans and advances declined marginally by 0.8 per cent, hire purchase assets increased by 30.2 per cent during 2006-07. A new classification of

Table 2.42: Consolidated Balance Sheets of NBFCs-D (Excluding RNBCs)

(Amount in Rupees crore)

Item	As at end-March	
	2006	2007P
1	2	3
Liabilities		
1. Paid up capital	1,827	2,289
	(4.8)	(4.8)
2. Reserves and Surplus	5,625	5,969
	(14.9)	(12.4)
3. Public Deposits	2,447	2,042
	(6.5)	(4.3)
4. Borrowings	24,942	32,563
	(65.9)	(67.8)
5. Other Liabilities	2,987	5,136
	(7.9)	(10.7)
Total Liabilities/Assets	**37,828**	**47,999**
Assets		
1. Investments		
i) Approved Securities@	292	241
ii) Other Investments	4,034	7,267
2. Loans and Advances	10,686	10,602
	(28.2)	(22.1)
3. Hire Purchase Assets	20,008	26,048
	(52.9)	(54.3)
4. Equipment Leasing Assets	1,502	1,334
	(4.0)	(2.8)
5. Bill Business	44	6
	(0.1)	(0.0)
6. Other Assets	1,261	2,500
	(3.3)	(5.2)

P : Provisional.
@ : SLR assets, comprise 'approved securities' and 'unencumbered term deposits' in scheduled commercial banks.
Note : Figures in parentheses are percentages to total liabilities/ assets.
Source : Annual Returns.

NBFCs, *viz.*, asset finance companies (AFCs) became effective since December 2006. Companies financing real/physical assets for productive/economic activities are reclassified as AFCs. As per this new classification, AFCs held the largest share in total assets/liabilities (51.5 per cent), followed by hire purchase finance companies (35.7 per cent) and loan companies (8.7 per cent). While assets of equipment leasing and hire purchase companies declined, reflecting mainly the reclassification of the NBFCs, those of loan and as well as investment groups increased during the year-ended March 2007.

2.156 Assets of three RNBCs increased by 5.9 per cent during the year ended March 2007. Their assets in the form of unencumbered approved securities as well as bonds/debentures increased sharply, while those in fixed deposits/certificate of deposits of SCBs and other investments registered a decline (Table 2.43). Net owned funds of RNBCs increased by 15.5 per cent during 2006-07.

2.157 To sum up, the balance sheet of scheduled commercial banks continued to register a strong growth during 2006-07 on the back of robust macroeconomic performance. Credit growth continued to be robust at over 30 per cent for the third year in succession. Banks were able to sustain their profitability despite sharp increase in provisions and contingencies. Their capital adequacy level remained at the previous year's level, despite a sharp increase in the risk-weighted assets. Asset quality, as reflected in gross and net NPA levels, improved further during the year.

Table 2.43: Profile of Residuary Non-Banking Companies (RNBCs)

(Rupees crore)

Item	As at end-March	
	2006	2007 P
1	2	3
I. Assets (i to v)	**21,891**	**23,172**
(i) Investment in Unencumbered Approved Securities	2,346	3,317
(ii) Investment in Fixed Deposits / Certificate of Deposits of Scheduled Commercial Banks /Public Financial Institutions	6,090	5,604
(iii) Bonds /Debentures/ Commercial Papers*	9,577	11,700
(iv) Other Investments	1,658	1,156
(v) Other Assets	2,220	1,395
II. Net Owned Funds	**1,183**	**1,366**
III. Total Income (i+ii)	**1,620**	**1,893**
(i) Fund Income	1,616	1,886
(ii) Fee Income	3	8
IV. Total Expenses (i+ii+iii)	**1,439**	**1,648**
(i) Financial Cost	1,165	1,230
(ii) Operating Cost	159	284
(iii) Other Costs	114	134
V. Provision for Taxation	**22**	**44**
VI. Operating Profit (PBT)	**180**	**246**
VII. Net profit (PAT)	**158**	**201**

P : Provisional.
* : of Government Companies/Public Sector Banks/Public Financial Institutions/Corporations.
Note : 1. PBT – Profit before tax. 2. PAT – Profit after tax.

VII. EXTERNAL SECTOR

Global Economic Outlook

2.158 Global economic activity remained strong in 2007, although it moderated from the robust conditions in 2006. Overall, global GDP measured at purchasing-power-parity weights is estimated to have increased by 5.0 per cent in 2007 - well above trend for the fourth consecutive year - as compared with 5.1 per cent in 2006 (Chart II.22). Following a stronger-than-expected third quarter growth, activity in advanced economies decelerated quite sharply towards the end of the year 2007, particularly in the United States, as the problem in the U.S. sub-prime mortgage market had knock-on effects across a broad range of financial markets and institutions. By contrast, emerging and developing economies continued to grow at a robust pace, notwithstanding some slowing down of activity towards the end of the year 2007. China and India, which grew by 11.9 per cent and 9.0 per cent, respectively, in 2007, continued to lead the growth in emerging economies. The growth momentum was provided by strong productivity gains as these countries progressively integrated into the global economy. Furthermore, these countries benefitted from favourable terms of trade for commodity producers (oil and other raw material) on account of increase in prices.

2.159 During the fourth quarter of 2007, growth in most of the advanced countries decelerated from the corresponding period of the last year. In contrast, growth of emerging market economies accelerated (Table 2.44).

Chart II.22: World Output Growth

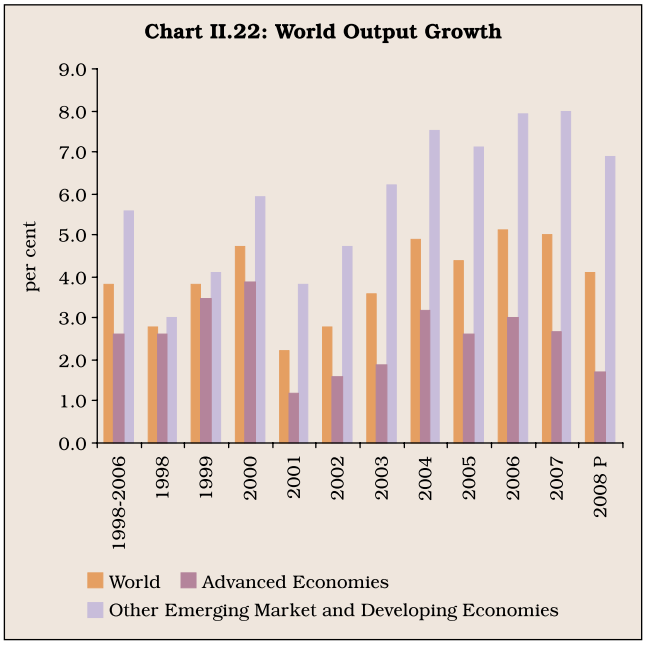


Table 2.44: Growth Rates - Global Scenario

(Per Cent)

Country/Region	2004	2005	2006	2007	2008 P	2009 P	2006				2007			
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
I. World Output	4.9	4.4	5.1	5.0	4.1	3.9								
I.1 Advanced Economies														
Euro area	2.1	1.6	2.8	2.6	1.7	1.2	2.2	2.7	2.8	3.3	3.0	2.5	2.7	2.2
Japan	2.7	1.9	2.4	2.1	1.5	1.5	3.0	2.1	1.6	2.2	2.6	1.6	1.9	2.0
Korea	4.7	4.2	5.1	5.0	4.2	4.4	6.3	5.1	4.6	4.0	4.0	5.0	5.2	5.7
UK	3.3	1.8	2.9	3.1	1.8	1.7	2.4	2.7	2.9	3.0	3.0	3.1	3.3	2.8
US	3.6	3.1	2.9	2.2	1.3	0.8	3.3	3.2	2.4	2.6	1.9	1.9	2.8	2.5
OECD Countries	3.1	2.5	3.1	2.7	1.8	1.7	3.2	3.3	2.8	3.1	2.8	2.5	3.0	2.7
I.2 Emerging Economies														
Argentina	9.0	9.2	8.5	8.7	7.0	4.5	8.6	7.9	8.7	8.6	8.0	8.7	8.7	9.1
Brazil	5.7	3.2	3.8	5.4	4.9	4.0	3.9	1.1	3.2	4.4	4.3	5.4	5.7	6.2
China	10.1	10.4	11.6	11.9	9.7	9.8	10.3	10.9	10.7	10.7	11.1	11.9	11.5	11.2
India	7.5	9.4	9.6	9.0	8.0	8.0	10.0	9.6	10.2	8.7	9.7	9.2	9.3	8.8
Indonesia	5.0	5.7	5.5	6.3	6.1	6.3	5.0	5.0	5.5	6.1	6.0	6.3	6.5	6.3
Malaysia	6.8	5.0	5.9	6.3	5.0	5.3	6.0	6.1	6.0	5.7	5.3	5.7	6.7	7.3
Thailand	6.3	4.5	5.1	4.8	5.3	5.6	6.1	5.0	4.5	4.3	4.3	4.4	4.9	5.7
II. World Trade Volume (Goods and Services)	10.7	7.6	9.2	6.8	5.6	5.8								

P : IMF Projections.

Note : Data for India in columns 2 to 5 refer to fiscal years 2004-05, 2005-06, 2006-07 and 2007-08, respectively.

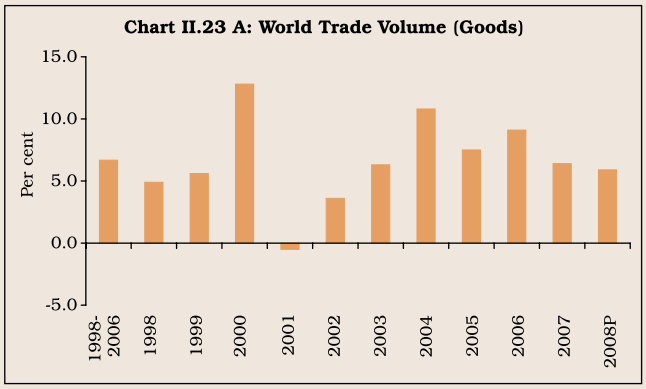
Source : International Monetary Fund; The Economist; and the OECD.

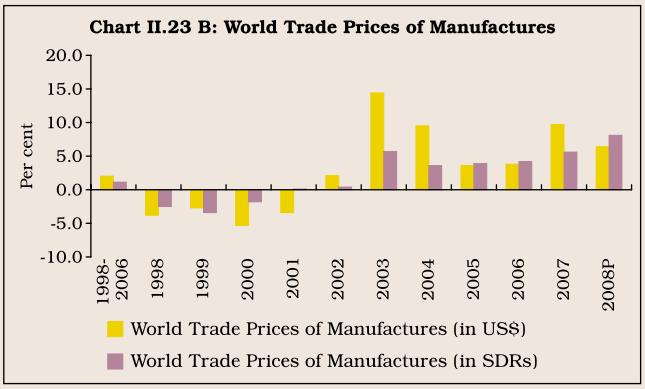
2.160 According to the IMF, the continuing housing correction in the United States would remain a drag on demand and a source of uncertainty for financial markets. As a result, the U.S. economy projected by the IMF, is to grow at 1.3 per cent in 2008 (Table 2.44), despite the substantial monetary and fiscal stimulus that has already been provided. Other advanced economies will also slow down in the face of trade and financial spillovers, with the housing market, in particular, acting as a source of drag in some European countries. Emerging and developing economies are also expected to decelerate, reflecting efforts to prevent overheating in some countries, spillovers from the advanced economies and some moderation in commodity prices. However, growth will continue to be above trend in all the regions.

2.161 According to the IMF, growth in world trade (goods and services) is expected to moderate to 5.6 per cent in volume terms in 2008 from 6.8 per cent in the preceding year (Chart II.23 A). Exports (goods and services) of other emerging market and developing countries are projected to grow by 7.1 per cent in 2008 (8.9 per cent a year earlier), while those of advanced countries are expected to grow by 4.5 per cent (5.8 per cent a year earlier). The prices of manufactures traded globally accelerated from 3.8 per cent in US$ terms (4.2 per cent in SDR terms) in 2006 to 9.7 per cent in US$ terms (5.6 per cent in SDR terms) in 2007 (Chart II.23 B). According to the IMF, private net capital flows to emerging and developing countries recorded a substantial increase from US$ 231.9 billion in 2006 to US$ 605.0 billion in 2007. Capital flows are projected to decline considerably to US$ 330.7 billion in 2008 mainly on account of projected decline in other private capital flows.

2.162 The overall balance of risks to the short-term global growth outlook remains tilted to the downside. The greatest risk comes from the still unfolding events in financial markets, particularly the potential for deep losses on structured credits related to the U.S. sub-prime mortgage market and other sectors, which could seriously impair the balance sheets of the financial system. Interaction between negative financial shocks and domestic demand, particularly through the housing market, remains a concern for the United States and to a lesser degree for Western Europe and other advanced economies. There is some upside potential from projections for domestic demand in the emerging economies, but these economies remain vulnerable to trade and financial spillovers.

Chart II.23: Growth in World Trade - Volume and Prices





2.163 International financial markets witnessed heightened uncertainties and turbulent conditions during 2007-08, triggered by problems in the US sub-prime market. The disturbances, subsequently, spilled over into the credit market and the short-term money markets, resulting in sharp increase in overnight interest rates in major economies in August 2007 as banks sought to conserve their own liquidity. Central banks of advanced economies responded with both conventional and unconventional measures to ease liquidity stress in financial markets and address solvency issues among large financial institutions. Some central banks, notably the ECB, the Reserve Bank of Australia and the Swiss National Bank responded by providing liquidity to inter-bank markets, implicitly viewing the financial turmoil as essentially a problem of liquidity tightness. These central banks provided liquidity through fine-tuning operations aimed at assuring orderly conditions in their respective money markets. On the other hand, some central banks like the US Fed, the Bank of England and the Bank of Canada responded in a more diverse manner to deal with the market stress as reflected in both liquidity seizure as well as broader threats to financial stability, coupled with dangers of the slowdown in economic activity becoming protracted. Accordingly, they moved to inject liquidity into money markets through normal and special facilities. They also relaxed the class of eligible securities for liquidity availment from the central bank. Furthermore, they also cut policy rates substantially amidst fears that the sub-prime crisis could turn into a major credit crunch with adverse implications for the real sector. The US Fed was also involved in resolution of problems arising in non-bank entities such as investment banks and insurance companies. The Bank of England provided generalised and institution-specific emergency liquidity and facilities for swapping securities.

2.164 In the second phase of central bank intervention in December 2007 (the first phase being spread over August-September, 2007), major central banks such as the US Federal Reserve, the Bank of Canada, the Bank of England, the European Central Bank and the Swiss National Bank (SNB) injected liquidity in a co-ordinated manner. Actions taken by the Federal Reserve included the establishment of a temporary Term Auction Facility (TAF) against a wide variety of collateral that could be used to secure loans at the discount window; the establishment of foreign exchange swap lines with the ECB and the SNB which would provide dollars in amounts of up to US $ 20 billion and US $ 6 billion to the ECB and the SNB, respectively, for use in their jurisdictions. Besides, a Term Securities Lending Facility was announced on March 11, 2008 and a Primary Dealer Credit Facility (PDCF) on April 22, 2008. The size of individual TAF auctions was raised from US $ 20 billion at the inception of the programme to US $ 75 billion in the auctions in May 2008.

2.165 Some central banks have reduced policy rates since the third quarter of 2007 when the financial market turmoil surfaced. During September 18, 2007 to April 30, 2008, the US Federal Reserve reduced its policy rate by 275 basis points to 2.00 per cent after seventeen increases to 5.25 per cent between June 2004 and June 2006. The Bank of England reduced its Bank Rate by 25 basis points each in February and April 2008 to 5.0 per cent. The Bank of Canada reduced its rate by 25 basis points each in December 2007 and January 2008 and 50 basis points each in March and April 2008 to 3.0 per cent. Central banks of some countries, including the Euro Area, Japan and Korea have not changed their rates since the last quarter of 2007. Some central banks that have tightened their policy rates

in recent months include the Reserve Bank of Australia (Cash Rate raised by 25 basis points in February-March 2008 to 7.25 per cent); the People's Bank of China (lending rate raised to 7.47 per cent in December 2007 from 7.29 per cent in September 2007); the Banco Central de Chile (benchmark lending rate raised to 6.25 per cent in January 2008 from 5.75 per cent in October 2007 and to 6.75 per cent is June 2008 and further to 7.25 per cent in July 2008), and Banco Central do Brasil (overnight Selic rate raised by 50 basis points to 11.75 per cent in April 2008, 12.25 per cent in June 2008 and by 75 basis points to 13 per cent in July 2008).

2.166 The sub-prime crisis in the US did not have any significant impact on the Indian economy, except that the equity market turned volatile in line with developments in the major international equity markets as detailed in the previous section. In India, however, surplus liquidity conditions and increase in inflation rate necessitated policy responses. The repo rate was revised from 7.75 per cent on March 30, 2007 to 8.00 per cent on June 11, 2008, 8.50 per cent on June 24, 2008 and further to 9.0 per cent with effect from August 30, 2008. The CRR was also revised progressively from 6.00 per cent on March 3, 2007 to 8.75 per cent on June 24, 2008 and further to 9.0 per cent with effect from August 30, 2008.

India's Merchandise Trade

2.167 India's merchandise trade (both exports and imports) continued to maintain high growth during 2007-08. According to the DGCI&S, exports at US $ 159.0 billion during 2007-08 registered a growth of 25.8 per cent as compared with 22.6 per cent in the previous year. Imports at US $ 239.7 billion during 2007-08 exhibited a growth of 29.0 per cent as compared with 24.5 per cent a year ago (Table 2.45).

2.168 Trade deficit during 2007-08 at US $ 80.6 billion showed an increase of US $ 21.3 billion over 2006-07. During 2007-08 trade deficit on oil account amounted to US $ 54.8 billion (US $ 38.5 billion a year ago) and non-oil trade deficit amounted to US $ 25.9 billion (US $ 20.9 billion a year ago).The annual growth in exports during the five year period (2003-08) averaged 24.7 per cent. As a result, India remained as one of the fastest growing exporting countries in the world (Table 2.46).

2.169 Commodity-wise exports data for 2007-08 (April-March) showed pick up in the growth of primary products, and manufactured goods exports (Table 2.47).

Table 2.45: India's Merchandise Trade

(US $ billion)

Item	2005-06	2006-07	2007-08 R	2007-08 R	2008-09 P
				April-June	
1	2	3	4	5	6
Exports	103.1 (12.7)	126.4 (13.8)	159.0 (13.6)	35.0	42.8
Imports	149.2 (18.4)	185.7 (20.3)	239.7 (20.6)	56.5	73.3
Oil	44.0 (5.4)	57.1 (6.2)	79.6 (6.8)	17.0	25.6
Non-Oil	105.2 (13.0)	128.6 (14.0)	160.0 (13.7)	39.5	47.7
Trade Balance	-46.1 (5.7)	-59.4 (6.5)	-80.6 (6.9)	-21.5	-30.4
Non-Oil Trade Balance	-13.8 (1.7)	-20.9 (2.3)	-25.9 (2.2)	-10.9	..
Variation (per cent)					
Exports	23.4	22.6	25.8	20.4	22.4
Imports	33.8	24.5	29.0	38.0	29.8
Oil	47.3	30.0	39.4	23.9	50.4
Non-Oil	28.8	22.2	24.4	45.1	20.9

Note : Figures in parentheses are percentage to GDP in rupee terms.
Source : DGCI&S.
R : Revised. P : Provisional.

2.170 Agricultural and allied products, engineering goods, gems and jewellery and petroleum products were the main drivers of export growth as these products together contributed about 69 per cent of export growth during 2007-08. Exports of primary

Table 2.46: Global Merchandise Export Growth

(Per cent)

Country/Region	2005	2006	2007	2007	2008
				January-March	
1	2	3	4	5	6
World	14.0	15.3	15.0	13.2	22.9
Industrial Countries	8.5	12.4	13.6	13.5	20.4
USA	10.8	14.7	12.2	10.8	17.1
France	3.8	9.9	12.0	10.3	22.9
Germany	7.3	14.7	18.5	21.2	20.9
Japan	5.2	9.2	9.2	5.4	28.7
Emerging and Developing Economies	22.0	19.1	16.8	13.0	26.0
Non-oil Developing Countries	19.3	19.4	17.9	27.8	21.3
China	28.4	27.2	25.6	27.8	21.3
India	**29.9**	**21.4**	**20.3**	**15.2**	**33.8**
Korea	12.0	14.4	14.2	14.6	17.4
Singapore	15.6	18.4	10.1	9.9	21.3
Indonesia	22.9	18.3	16.8	9.7	34.2
Malaysia	12.0	14.0	9.6	7.6	19.1
Thailand	14.5	18.5	16.8	17.2	21.3

Source: (1) IMF (www.imfstatistics.org).
(2) DGCI & S for India.

Table 2.47: Exports of Principal Commodities

Commodity Group	US $ billion			Variation (per cent)		
	2005-06	2006-07	2007-08	2005-06	2006-07	2007-08
	April-March			April-March		
1	2	3	4	5	6	7
1. Primary Products	**16.4**	**19.7**	**27.1**	**20.8**	**20.2**	**37.5**
of which:						
a) Agriculture and Allied Products	10.2	12.7	18.1	20.5	24.2	42.4
b) Ores and Minerals	6.2	7.0	9.0	21.4	13.6	28.6
2. Manufactured Goods	**72.6**	**84.9**	**101.1**	**19.5**	**17.0**	**19.1**
of which:						
a) Chemicals and Related Products	14.8	17.3	20.5	18.7	17.4	18.0
b) Engineering Goods	21.7	29.6	36.7	25.2	36.1	24.2
c) Textiles and Textile Products	16.4	17.4	19.0	21.0	5.9	9.5
d) Gems and Jewellery	15.5	16.0	19.7	12.8	2.9	23.0
3. Petroleum Products	**11.6**	**18.7**	**24.9**	**66.5**	**60.5**	**33.1**
4. Total Exports	**103.1**	**126.4**	**159.0**	**23.4**	**22.6**	**25.8**

Source : DGCI&S.

products during 2007-08 showed accelerated growth of 37.5 per cent due to pick up in the exports of agricultural and allied products (42.4 per cent) and iron ore (47.2 per cent). Exports of manufactured goods during 2007-08 recorded a growth of 19.1 percent (17.0 per cent a year ago). Within manufactured goods, chemicals and related products and gems and jewellery exhibited higher growth in exports, while engineering goods showed moderation. Exports of petroleum products recorded 33.1 per cent growth during 2007-08 (60.5 per cent a year ago). Destination-wise, the US continued to be the single largest market for India with a share of 13.0 per cent in the overall exports (14.9 per cent a year ago). The other major destinations were the UAE (9.7 per cent), China (6.8 per cent), Singapore (4.3 per cent), the UK (4.1 per cent), Hong Kong (4.0 per cent), Germany (3.2 per cent) and the Netherlands (3.0 per cent). Region-wise, exports to EU, Eastern Europe and Asian developing countries accelerated, while exports to OPEC and Latin American developing countries moderated (Table 2.48).

Table 2.48: Major Destinations of India's Exports

Group/ Country	US $ billion			Variation (per cent)		
	2005-06	2006-07	2007-08	2005-06	2006-07	2007-08
	April-March			April-March		
1	2	3	4	5	6	7
1. OECD Countries	**45.8**	**52.0**	**61.7**	**25.6**	**13.5**	**18.6**
of which:						
a) EU	22.4	25.8	32.2	27.6	15.1	24.9
b) North America	18.4	20.0	22.0	25.6	8.7	10.0
US	17.4	18.9	20.7	26.1	8.7	9.7
2. OPEC	**15.2**	**20.7**	**26.2**	**15.4**	**35.8**	**26.4**
of which:						
UAE	8.6	12.0	15.4	16.9	40.0	27.7
3. Developing Countries	**39.7**	**50.8**	**67.2**	**23.8**	**27.8**	**32.4**
of which:						
a) Asia	31.0	37.6	50.1	21.6	21.4	33.2
China	6.8	8.3	10.8	20.4	22.7	30.0
Singapore	5.4	**6.1**	6.9	35.6	11.9	12.9
4. Total Exports	**103.1**	**126.4**	**159.0**	**23.4**	**22.6**	**25.8**

Source : DGCI&S.

2.171 Imports maintained the growth momentum during 2007-08 due to high growth in both oil and non-oil imports (refer Table 2.45). During 2007-08, capital goods imports increased by 24.1 per cent (25.0 per cent a year ago), while gold and silver grew by 21.8 per cent (29.4 per cent a year ago) (Table 2.49). Source-wise, China was the principal source of imports, accounting for 11.3 per cent of total imports during 2007-08. The other major sources were Saudi Arabia (8.1 per cent), the UAE (5.6 per cent), the US (5.5 per cent), Iran (4.6 per cent), Switzerland (4.1 per cent), Germany (4.0 per cent) and Australia (3.3 per cent).

2.172 During 2008-09 (April-June) merchandise exports recorded a growth of 22.4 per cent [20.4 per cent in 2007-08 (April-June)] and imports posted a growth of 29.8 per cent (38.0 per cent a year ago). Trade deficit during April-June 2008 at US $ 30.4 billion was higher by US $ 9.0 billion than US $ 21.5 billion during April-June 2007.

Balance of Payments

2.173 India's balance of payments position remained comfortable during 2007-08. Despite significant widening of the trade deficit, the current account deficit was contained, although it was somewhat higher than 2006-07, due to the surplus on the invisibles account led by higher private remittances and software services export. The higher current account deficit, however, was easily financed by capital flows, which remained large during 2007-08. Of the components of capital flows, portfolio investment including FIIs, external commercial borrowings, inward foreign direct investment and short term trade credit increased significantly in 2007-08. Outward FDI continued to grow, reflecting the appetite of Indian companies for global expansion in terms of markets and resources.

Current Account

2.174 The trade deficit (balance of payments basis) widened to US $ 90.1 billion during 2007-08 from US $ 63.2 billion in 2006-07. Net surplus in invisibles was at US $ 72.7 billion during 2007-08 as against US $ 53.4 billion during 2006-07, exhibiting a growth of 36.0 per cent. The net invisible surplus offset 80.7 per cent of the trade deficit during 2007-08 as compared with 84.5 per cent during the corresponding period of the previous year. The current account deficit increased to US $ 17.4 billion in 2007-08 from US $ 9.8 billion in 2006-07 (Table 2.50).

2.175 Invisible receipts recorded a growth of 26.2 per cent during 2007-08 (28.3 per cent during 2006-07) (Chart II.24). The key contributors of invisibles receipts were remittances from overseas Indians, software services exports, investment income, travel earnings and transportation. Private transfers comprising primarily remittances from the Indians working overseas and local withdrawal from non-resident rupee account for domestic use, were at US $ 42.6

Table 2.49: India's Principal Imports

Commodity/ Group	US $ billion			Variation (per cent)		
	2005-06	2006-07	2007-08	2005-06	2006-07	2007-08
	April-March			April-March		
1	2	3	4	5	6	7
Petroleum, Petroleum Products and Related Material	44.0	57.1	79.6	47.3	30.0	39.4
Edible Oils	2.0	2.1	2.6	-17.9	4.2	21.3
Iron and Steel	4.6	6.4	8.7	71.3	40.5	35.2
Capital Goods	37.7	47.1	58.4	49.9	25.0	24.1
Pearls, Precious and Semi-Precious Stones	9.1	7.5	8.0	-3.1	-18.0	6.5
Chemicals	7.0	7.8	9.9	22.5	12.1	26.2
Gold and Silver	11.3	14.6	17.8	1.5	29.4	21.8
Total Imports	**149.2**	**185.7**	**239.7**	**33.8**	**24.5**	**29.0**
Memo:						
Non-oil Imports	105.2	128.6	160.0	28.8	22.2	24.4
Non-oil Imports excluding Gold and Silver	93.9	114.0	142.2	33.1	21.4	24.7
Mainly Industrial Inputs*	87.5	104.7	130.0	34.7	19.6	24.2

* : Non-oil imports net of gold and silver, bulk consumption goods, manufactured fertilisers and professional instruments.
Source : DGCI&S.

Table 2.50: India's Current Account

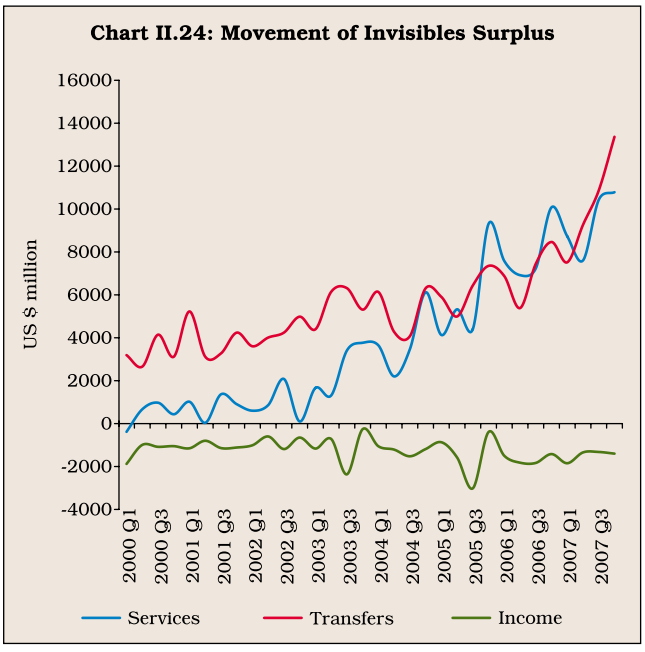
(US $ million)

Item	2002-03	2003-04	2004-05	2005-06R	2006-07PR	2007-08P
1	2	3	4	5	6	7
I. Merchandise Balance	-10690	-13718	-33702	-51904	-63171	-90060
II. Invisibles Balance (a+b+c)	17035	27801	31232	42002	53405	72657
a) Services	3643	10144	15426	23170	31810	37550
i) Travel	-29	1435	1417	1215	2438	2118
ii) Transportation	-736	879	144	-2012	-18	-2107
iii) Insurance	19	56	148	-54	560	543
iv) G.n.i.e.	65	28	-10	-215	-153	-51
v) Miscellaneous	4324	7746	13727	24236	28983	37047
of which : Software Services	8863	12324	16900	22262	29033	37051
b) Transfers	16838	22162	20785	24687	28168	41017
i) Official	451	554	260	194	227	239
ii) Private	16387	21608	20525	24493	27941	40778
c) Income	-3446	-4505	-4979	-5855	-6573	-5910
i) Investment Income	-3544	-3757	-4095	-5262	-6018	-5239
ii) Compensation of Employees	98	-748	-884	-593	-555	-671
Total Current Account	**6345**	**14083**	**-2470**	**-9902**	**-9766**	**-17403**

G.n.i.e : Government not included elsewhere. R : Revised. PR : Partially Revised. P : Preliminary.

billion (US $ 29.0 billion in 2006-07), recording a growth of 47.1 per cent in 2007-08 (16.0 per cent in 2006-07). Software services exports at US $ 40.3 billion in 2007-08 showed a lower growth of 28.8 per cent than that of 32.6 per cent in 2006-07. Invisible payments recorded a growth of 17.7 per cent during 2007-08 (29.3 per cent in 2006-07). The major components of invisible payments were travel payments, transportation, business service payments

Chart II.24: Movement of Invisibles Surplus



such as business and management consultancy; engineering and other technical services; and dividend, profit and interest payments.

2.176 The current account deficit of India widened to US $ 17.4 billion in 2007-08 reflecting the sharp rise in trade deficit led by high growth of crude oil imports, capital goods and gold and silver. According to the DGCI&S data, non-oil imports recorded a higher growth of 24.4 per cent during 2007-08 (22.2 per cent in 2006-07). The other major non-oil products, which showed accelerated growth in imports during the period were edible oil, fertilisers, iron and steel, pearls, precious and semi-precious stones, chemicals, textiles, coal, and coke. Oil imports, according to the DGCI&S data, increased by 39.4 per cent in 2007-08 (30.0 per cent in 2006-07) with the average price of the Indian basket of international crude (a mix of Oman, Dubai and Brent varieties) rising to US $ 79.5 per barrel (ranging between US $ 65.5 to US $ 99.8 per barrel) in 2007-08 from US $ 62.4 per barrel in the corresponding period of the previous year.

Capital Account

2.177 Capital inflows (net) into India during 2007-08 were at US $ 108.0 billion as compared with US $ 45.8 billion during the corresponding period of last year (Table 2.51). All the components of capital flows, barring NRI deposits, recorded higher inflows during 2007-08.

Table 2.51: Capital Flows (Net)

(US $ million)

Item	2005-06R	2006-07PR	2007-08P
1	2	3	4
Foreign Direct Investment	3,034	8,479	15,545
Portfolio Investment#	12,494	7,062	29,261
External Assistance	1,702	1,767	2,114
External Commercial Borrowings	2,508*	16,155	22,165
NRI Deposits	2,789	4,321	179
Banking Capital excluding NRI Deposits	-1,416	-2,408	11,578
Short Term Credits	3,699	6,612	17,683
Rupee Debt	-572	-162	-121
Other Capital	1,232	3,953	9,627
Total	**25,470**	**45,779**	**108,031**

P : Provisional. PR: Partially Revised. R: Revised.
* : Includes the impact of India Millennium Deposits of US $ 5.5 billion
# : Portfolio investment includes net inflows by FIIs, resources raised by Indian companies through ADRs/GDRs and offshore funds.

Table 2.52: Foreign Investment Inflows by Category

(US $ million)

Item	2005-06	2006-07	2007-08 P
1	2	3	4
A. Direct Investment (I+II+III)	**8,961**	**22,079**	**32,435**
I. Equity (a+b+c+d)	5,975	16,482	25,241
a. Government (SIA/FIPB)	1,126	2,156	2,298
b. RBI	2,233	7,151	17,129
c. Aquisition of shares*	2,181	6,278	5,148
d. Equity capital of unincorporated bodies #	435	897	666
II. Re-invested earnings **	2,760	5,091	6,884
III. Other Capital ***	226	506	310
B. Portfolio Investment (a+b+c)	**12,492**	**7,003**	**29,395**
a. GDRs/ADRs	2,552	3,776	8,769
b. FIIs @	9,926	3,225	20,328
c. Offshore funds and others	14	2	298
C. Total (A+B)	**21,453**	**29,082**	**61,830**

P : Provisional.
* : Relates to acquisition of shares of Indian Companies by non-residents under Section 6 of FEMA 1999.
# : Figures for equity capital of unincorporated bodies for 2006-07 and 2007-08 are estimates.
** : Data for 2006-07 and 2007-08 are estimated as average of previous two years.
*** : Data include inter-company debt transaction of FDI entities.
@ : Data represents net inflow of funds by FIIs.
Note : Data on foreign investment presented in this table represent inflows into the country and may not tally with the data presented in other tables. The net FII inflows may also differ from data relating to net investment in stock exchanges by FIIs.

2.178 Foreign investment inflows continued to be robust, registering an inflow of US $ 61.8 billion in 2007-08. The inflows into India under direct investment (including equity capital of unincorporated entities, reinvested earnings and inter-corporate debt transactions between the related entities) at US $ 32.4 billion during 2007-08 were higher than those of the previous year (Table 2.52). The pick-up in FDI inflows reflected growing investors' interest in the Indian economy due to rationalisation/liberalisation of the FDI policy. In continuation of India's liberalisation policy, FDI ceiling was raised from 49 per cent to 74 per cent in the telecom sector. FDI was channelled mainly into manufacture, financial services and construction. Mauritius, Singapore, Netherlands and the UK remained the dominant sources of FDI into India.

2.179 During 2007-08, gross inflows and gross outflows by FIIs were of a higher order at US $ 226.6 billion and US $ 206.3 billion, respectively, resulting in net inflows of US $ 20.3 billion (US $ 3.2 billion in 2006-07). At the beginning of the year 2007-08, FIIs made net investments in the Indian stock markets on a significant scale, reflecting the strong domestic economic activity and the appreciating trend in the Indian rupee (Table 2.53 and Chart II.25). During June-July 2007, FII net inflows surged mainly due to two large IPOs as also the excess liquidity available in the global markets. However, in August 2007, there were heavy net outflows emanating from concerns over tightening of FII norms regarding participatory notes, bearish condition in the Asian stock markets including India, and the major sell-off in the US stock markets over concerns of further weakness in the housing market. This was followed by a surge in inflows to a record level in September 2007, which broadly continued till January 2008. During January 2008, there were net inflows of US $ 6.5 billion by FIIs mainly due to subscription to two large issues. However, a net outflow of US $ 9.0 billion was witnessed in February 2008 mainly because of refund of money brought in during January 2008 for subscription to IPOs.

2.180 The outflows continued during March 2008 till July 2008, which could be ascribed to the persistence of volatile global credit market conditions emanating from the US sub-prime loan crisis. The number of FIIs

Table 2.53: Net Inflows/Outflows by Foreign Institutional Investors

(US $ million)

Month	2006-07	2007-08	2008-09
1	2	3	4
April	3,276	1,963	-1,432
May	-3,906	1,847	-734
June	-1,157	3,279	-3,011
July	-595	4,685	-499
August	1,212	-3,323	
September	1,064	7,057	
October	1,703	6,833	
November	2,159	-265	
December	-507	2,396	
January	24	6,490	
February	2,385	-8,991	
March	-2,433	-1,643	

registered with the SEBI increased from 997 at end-March 2007 to 1,319 by March 31, 2008 and further to 1,457 as on July 31, 2008. Capital inflows by way of American depository receipts (ADRs)/Global depository receipts (GDRs) abroad were US $ 8.8 billion during 2007-08 (refer Table 2.52).

2.181 During the financial year 2007-08, the inflows (net) under external commercial borrowings (ECBs) were higher at US $ 22.2 billion as compared with US $ 16.2 billion in the corresponding period of previous year.

2.182 A net inflow of US $ 179 million was recorded under NRI deposits during 2007-08, reflecting the impact of downward revision in ceiling interest rates during January 2007 and April 2007 and large local withdrawals from Non-Resident External Rupee Account (NR(E)RA) deposits. However, there were inflows under NR(E)RA deposits and Non-Resident Ordinary (NRO) Rupee account segments (Table 2.54 and Chart II.26).

Table 2.54: Inflows under NRI Deposit Schemes

(US $ million)

Scheme	2005-06	2006-07	2007-08
1	2	3	4
1. FCNR (B)	1,612	2,065	-960
2. NR (E) RA	1,177	1,830	109
3. NRO	930	426	1,030
Total	**3,719**	**4,321**	**179**

Foreign Exchange Reserves

2.183 During 2007-08 (April-March), capital inflows were significantly larger than the current account deficit, resulting in an increase in foreign exchange reserves of US $ 110.5 billion (including valuation) over end-March 2007. India's foreign exchange reserves comprising foreign currency assets, gold, Special Drawing Rights (SDRs) and Reserve Tranche Position (RTP) at the IMF reached US $ 296.2 billion as on August 15, 2008 (US $ 226.4 billion as on corresponding period of the previous year). At end-March 2008, India was the third largest holder of the stock of reserves among the emerging market economies and the fourth largest in the world.

Chart II.25: Net Inflows/Outflows by Foreign Institutional Investors

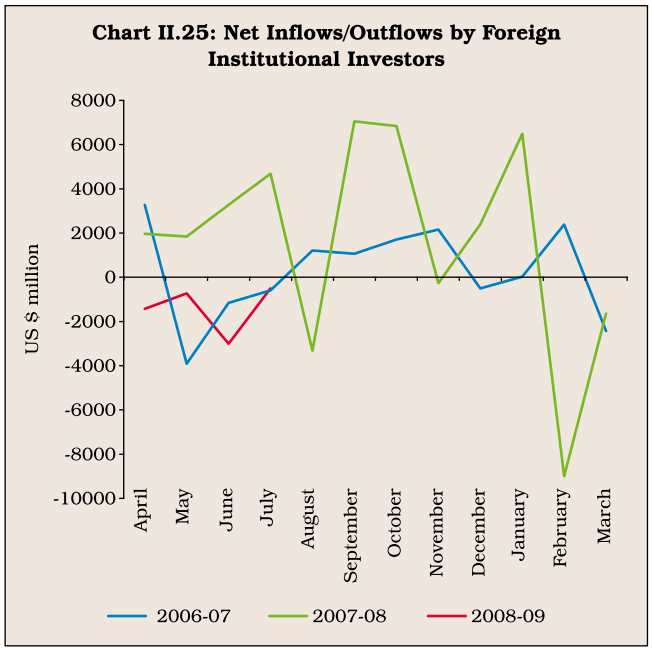
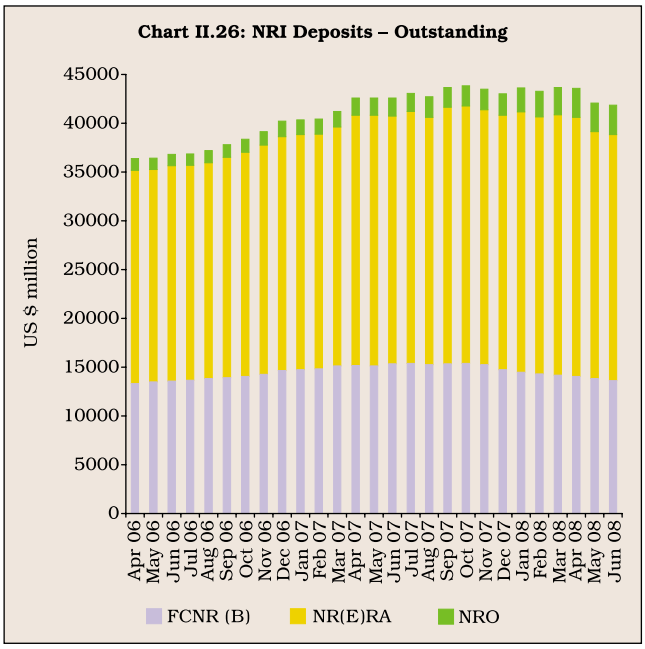


Chart II.26: NRI Deposits – Outstanding

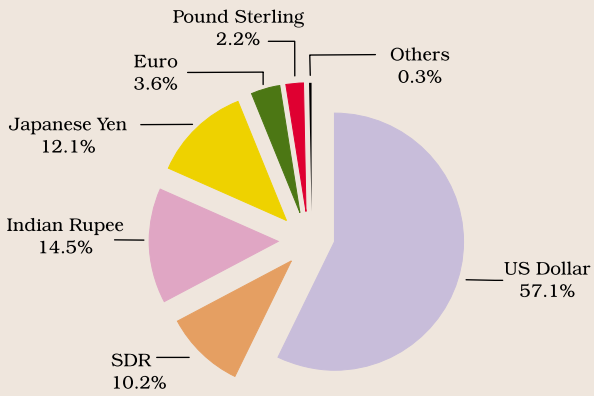


India's External Debt

2.184 India's total external debt was placed at US $ 221.2 billion at end-March 2008, recording an increase of US $ 51.5 billion (30.4 per cent) over end-March 2007. The increase in external debt during the period was mainly on account of higher external commercial borrowings, and higher short-term trade credit. Higher external commercial borrowing by Indian companies reflected the existing interest differential between domestic and international rates and benign exchange rate expectations. Furthermore, of the increase of US $ 51.5 billion in external debt during the year 2007-08, valuation effects reflecting the depreciation of the US dollar against other major international currencies and Indian rupee accounted for US $ 9.9 billion. Suppliers' credits up to 180 days maturity and investment by foreign institutional investors in short-term debt instruments have been included in short-term debt of India since March 2005. The short-term debt outstanding increased to US $ 44.3 billion at end-March 2008 from US $ 26.4 billion at end-March 2007, accounting for 34.8 per cent of the total increase in external debt (Table 2.55). The US dollar remained as the leading currency in which India's external debt was denominated, accounting for about 57.1 per cent of total debt (Chart II.27).

2.185 Debt sustainability indicators remained at comfortable levels during 2007-08. The external debt to GDP ratio increased to 18.8 per cent at end-March 2008 from 17.8 per cent at end-March 2007.

Chart II.27: Currency Composition of India's External Debt as at end - March 2008



The ratio was 30.8 per cent at end-March 1995. The debt service ratio was placed at 5.4 per cent during 2007-08 as against 4.8 per cent in 2006-07 and 9.9 per cent in 2005-06. Reflecting the rise in short term debt during 2007-08, the ratio of short-term to total debt and short term debt to reserves rose to 20.0 per cent and 14.3 per cent, respectively. India's foreign exchange reserves exceeded the external debt by US $ 88.5 billion providing a cover of 140.0 per cent to the external debt stock at end-March 2008 (Table 2.55).

Table 2.55: India's External Debt

(US $ million)

Item	End-March 1995	End-March 2005	End-March 2006	End-March 2007	End-March 2008
1	2	3	4	5	6
1. Multilateral	28,542	31,744	32,620	35,337	39,312
2. Bilateral	20,270	17,034	15,761	16,061	19,613
3. International Monetary Fund	4,300	0	0	0	0
4. Trade Credit (above 1 year)	6,629	5,022	5,420	7,051	10,267
5. External Commercial Borrowings	12,991	26,405	26,452	41,657	62,019
6. NRI Deposit	12,383	32,743	36,282	41,240	43,672
7. Rupee Debt	9,624	2,302	2,059	1,947	2,016
8. Long-term (1 to 7)	94,739	115,250	118,594	143,293	176,899
9. Short-term	4,269	17,723	19,539	26,376	44,313
Total (8+9)	99,008	1,32,973	1,38,133	1,69,669	2,21,212
Total debt /GDP	30.8	18.6	17.2	17.8	18.8
Short-term/Total debt	4.3	13.3	14.1	15.5	20.0
Short-term debt/Reserves	16.9	12.5	12.9	13.2	14.3
Concessional debt/Total debt	45.3	30.9	28.6	23.3	19.9
Reserves/ Total debt	25.4	106.4	109.8	117.4	140.0
Debt Service Ratio	25.9	6.1	9.9	4.8	5.4

VIII. OVERALL ASSESSMENT

2.186 The Indian economy during 2007-08 continued to show robust growth, *albeit* with some moderation relative to the previous year. The performance of the South-West monsoon was better than the rainfall forecast by IMD. According to the fourth advance estimates released by the Ministry of Agriculture, the total foodgrain production during 2007-08 was estimated at a record high. The industrial sector growth moderated during 2007-08 mainly due to slowdown in the manufacturing sector growth. However, the capital goods sector continued to show robust growth performance. The service sector continued to register double-digit growth during 2007-08. The revised estimates by the CSO suggest that the service sector would continue to grow at double-digit rate, although the overall growth would be marginally lower than that in 2006-07. The revised estimates by the CSO placed the real GDP growth during 2007-08 at 9.0 per cent.

2.187 The gross fiscal deficit and revenue deficit, as percentages to GDP, under the revised estimates of the Central Government for 2007-08 were placed lower than the budgeted estimates. This was enabled by buoyant revenue receipts, especially direct taxes, which more than offset the increased expenditure on account of higher provisions for interest payments and subsidies. The budget estimates for 2008-09 project a further reduction in all the key deficit indictors, based on buoyant tax receipts on the one hand and better expenditure management on the other. Though the FRBM target of achieving GFD at 3.0 per cent of GDP by 2008-09 was set to be achieved, the target of achieving zero revenue deficit by 2008-09 was proposed to be rescheduled on account of implementation of plan programmes and schemes which entail substantial revenue expenditures. Off-budgetary pressure from oil bonds, Sixth Pay revision of salaries of the Central Government employees, fertiliser subsidy and systemic rigidities in containing non-plan expenditures in the short-run may exert some pressures on finances of the Central Government in 2008-09.

2.188 Inflation, based on wholesale price index (WPI), while remaining largely subdued in the first eight months of 2007-08, began to harden from December 2007 onwards on account of firming of prices of primary non-food articles and manufactured products. On a y-o-y basis, inflation was 7.7 per cent at end-March 2008. However, on an annual average basis, inflation at 4.7 per cent during 2007-08 was lower than that in the previous year. Inflation based on consumer price indices declined up to January 2008 on account of the moderation in food price inflation. However, subsequently CPI inflation measures hardened due to rise in food, fuel and services (represented by the miscelloneous group) prices. In recognition of the unanticipated supply-side pressures on inflation in recent months, partly due to global developments, the Government undertook several measures such as reduction in import duty on wheat and edible oils, a ban on exports of non-basmati rice, edible oils and pulses, an increase in the minimum export price relating to basmati rice, and reduction in customs duty on rice, skimmed milk powder, edible oils, butter oil and maize. Other administrative measures were also initiated such as imposition of stock limits on select agricultural products to contain inflationary expectations. Between end-March 2008 and July 29, 2008, the Reserve Bank also announced monetary measures such as increase in CRR by 150 basis points (including the 25 basis points to be effective from August 30, 2008) and the repo rate by 125 basis points. The recent initiatives with regard to supply management by the Government and monetary measures by the Reserve Bank are expected to have moderating impact on inflation in the near future.

2.189 Financial market conditions remained orderly during 2007-08, barring the equity market which witnessed bouts of volatility in tandem with the trends in major international equity markets. The money market witnessed brief spells of volatility on account of changes in capital flows and cash balances of the Central Government with the Reserve Bank. Money market interest rates remained within the informal corridor set by reverse repo and repo rates during most part of the second half of the year. In the foreign exchange market, Indian rupee generally exhibited two-way movements during the year. Yields in the Government securities market softened during the major part of the year.

2.190 The balance sheet of scheduled commercial banks continued to expand at a robust pace in 2006-07, underpinned by strong macroeconomic performance. The strong credit growth during the year was also accompanied by an improvement in asset quality. Banks profitability improved and they were able to maintain the CRAR at the previous year's level.

2.191 India's balance of payments position remained comfortable during 2007-08. Despite significant widening of trade deficit, the current account deficit was contained mainly due to increased surplus on invisibles account led by higher private remittances and software services export. During 2007-08, net capital inflows were large amounting to US $ 108.0

billion as compared with US $ 45.8 billion during 2006-07. India's foreign exchange reserves increased by US $ 110.5 billion during the year to reach US $ 309.7 billion at end-March 2008.

2.192 Global economic activity is projected to slow down in 2008 on account of slowdown in the US economy. Furthermore, there is an apprehension that the financial turmoil may spill over to the real sector with adverse implication for employment and growth. In 2007-08, the food price inflation, triggered by strong demand and dwindling stocks, emerged as the key risk to global stability. World crude oil prices continued to remain high on account of low available crude oil surplus production capacity combined with supply concerns in several oil exporting countries. Inflationary pressures were evident in both mature economies and EMEs during 2007-08, although they were more pronounced in EMEs. Elevated inflationary pressure in many economies reflected historical peaks in crude oil prices.

2.193 The Reserve Bank's Annual Policy Statement for 2008-09 (April 2008) noted that there were significant shifts in both global and domestic developments during 2007-08 in relation to the initial assessments. According to the Statement, the dangers of global recession had increased although consensus expectations did not rule out a soft landing. The Annual Policy Statement also noted that given the unprecedented complexities involved and the heightened uncertainties, there are some key factors that governed the setting of the stance of monetary policy for 2008-09. First, there is the immediate challenge of escalated and volatile food and energy prices which possibly contain some structural components. It is necessary, however, to recognise that there are also cyclical components in their evolution. Second, while demand pressures persist, there has been some improvement in the domestic supply response alongside a build-up of additional capacities, enabled by a conducive policy environment. Accordingly, even as investment demand remains strong, supply elasticities can be expected to improve further and new capacities should come on stream in the months ahead. Third, calibrated monetary policy actions undertaken since September 2004 continue to have some stabilising influence on the economy. Further, the recent initiatives in regard to supply-management by the Government of India and measures relating to the cash reserve ratio by the Reserve Bank are in the process of impacting the economy, although, inflationary outlook would depend upon a more reliable assessment of crop prospects at that point of time. Fourth, critical to the setting of monetary policy is the importance of anchoring expectations relating to both global and domestic developments. Accordingly, policy responses for managing expectations should consider the evolving global and domestic uncertainties surrounding the slowing down of global output growth and also the potential for exaggerated bearishness in the Indian context. Fifth, while monetary policy has to respond proactively to immediate concerns, it cannot afford to ignore considerations over a relatively longer term perspective of, say, one to two years, with respect to overall macroeconomic prospects. At the same time, it is critical at the prevailing juncture to demonstrate on a continuing basis a determination to act decisively, effectively and swiftly to curb any signs of adverse developments in regard to inflation expectations. In view of the above unprecedented uncertainties and dilemmas, it is important to take informed judgements with regard to the timing and magnitude of policy actions; and such judgements need to have the benefit of evaluation of incoming information on a continuous basis.

2.194 The Reserve Bank in the Annual Policy Statement released in April 2008 placed the real GDP growth for 2008-09 at around 8.0 to 8.5 per cent, which has been placed at around 8.0 per cent in Statement on Quarterly Review of Monetary Policy July 2008. Against this backdrop, barring the emergence of any adverse and unexpected developments in various sectors of the economy and keeping in view the prevailing assessment of the economy including the outlook for growth and inflation, in the Annual Policy Statement for the year 2008-09, the overall stance of monetary policy was broadly stated as : (i) to ensure a monetary and interest rate environment that accords high priority to price stability, well-anchored inflation expectations and orderly conditions in financial markets while being conductive to continuation of the growth momentum; (ii) to respond swiftly on a continuing basis to the evolving constellation of adverse international developments and to the domestic situation impinging on inflation expectations, financial stability and growth momentum, with both conventional and unconventional measures, as appropriate; and (iii) to emphasise credit quality as well as credit delivery, in particular, for employment-intensive sectors, while pursuing financial inclusion.

III EVOLUTION OF BANKING IN INDIA

3.1 Globally, the story of banking has much in common, as it evolved with the moneylenders accepting deposits and issuing receipts in their place. According to the Central Banking Enquiry Committee (1931), money lending activity in India could be traced back to the Vedic period, *i.e*., 2000 to 1400 BC. The existence of professional banking in India could be traced to the 500 BC. *Kautilya's Arthashastra*, dating back to 400 BC contained references to creditors, lenders and lending rates. Banking was fairly varied and catered to the credit needs of the trade, commerce, agriculture as well as individuals in the economy. Mr. W.E. Preston, member, Royal Commission on Indian Currency and Finance set up in 1926, observed "....it may be accepted that a system of banking that was eminently suited to India's then requirements was in force in that country many centuries before the science of banking became an accomplished fact in England."[1] An extensive network of Indian banking houses existed in the country connecting all cities/towns that were of commercial importance. They had their own inland bills of exchange or *hundis* which were the major forms of transactions between Indian bankers and their trans-regional connections.[2] Banking practices in force in India were vastly different from the European counterparts. The dishonoring of *hundis* was a rare occurrence. Most banking worked on mutual trust, confidence and without securities and facilities that were considered essential by British bankers. Northcote Cooke observed "....the fact that Europeans are not the originators of banking in this country does not strike us with surprise."[3] Banking regulation also had a rich tradition and evolved along with banking in India. In fact, the classic '*Arthashastra*' also had norms for banks going into liquidation. If anyone became bankrupt, debts owed to the State had priority over other creditors (Leeladhar, 2007).

3.2 The pre-independence period was largely characterised by the existence of private banks organised as joint stock companies. Most banks were small and had private shareholding of the closely held variety. They were largely localised and many of them failed. They came under the purview of the Reserve Bank that was established as a central bank for the country in 1935. But the process of regulation and supervision was limited by the provisions of the Reserve Bank of India Act, 1934 and the Companies Act, 1913. The indigenous bankers and moneylenders had remained mainly isolated from the institutional part of the system. The usurious network was still rampant and exploitative. Co-operative credit was the only hope for credit but the movement was successful only in a few regions.

3.3 The early years of independence (1947 to 1967) posed several challenges with an underdeveloped economy presenting the classic case of market failure in the rural sector, where information asymmetry limited the foray of banks. Further, the non-availability of adequate assets made it difficult for people to approach banks. With the transfer of undertaking of Imperial Bank of India to State Bank of India (SBI) and its subsequent massive expansion in the under-banked and unbanked centres spread institutional credit into regions which were un-banked heretofore. Proactive measures like credit guarantee and deposit insurance promoted the spread of credit and savings habits to the rural areas. There were, however, problems of connected lending as many of the banks were under the control of business houses.

3.4 The period from 1967 to 1991 was characterised by major developments, *viz*., social control on banks in 1967 and nationalisation of 14 banks in 1969 and six more in 1980. The nationalisation of banks was an attempt to use the scarce resources of the banking system for the purpose of planned development. The task of maintaining a large number of small accounts was not profitable for the banks as a result of which they had limited lending in the rural sector. The problem of lopsided distribution of banks and the lack of explicit

[1] As quoted by the Indian Central Banking Enquiry Committee (1931), Chapter II page 11.

[2] Hundis are the oldest form of credit instruments that were used as early as the 12 century AD. Deposits were accepted by some indigenous banks under the *'khata putta'* system. However, most indigenous banks like *Multanis* and *Marwaris* did not accept deposits as they relied on their own funds, see Bagchi(1987).

[3] Northcote Cooke, 'Rise and Progress of Banking in India' (1863) quoted by Tandon (1988).

articulation of the need to channel credit to certain priority sectors was sought to be achieved first by social control on banks and then by the nationalisation of banks in 1969 and 1980. The Lead Bank Scheme provided the blue-print of further bank branch expansion. The course of evolution of the banking sector in India since 1969 has been dominated by the nationalisation of banks. This period was characterised by rapid branch expansion that helped to draw the channels of monetary transmission far and wide across the country. The share of unorganised credit fell sharply and the economy seemed to come out of the low level of equilibrium trap. However, the stipulations that made this possible and helped spread institutional credit and nurture the financial system, also led to distortions in the process. The administered interest rates and the burden of directed lending constrained the banking sector significantly. There was very little operational flexibility for the commercial banks. Profitability occupied a back seat. Banks also suffered from poor governance. The financial sector became the 'Achilles heel' of the economy (Rangarajan, 1998). Fortunately, for the Indian economy, quick action was taken to address these issues.

3.5 The period beginning from the early 1990s witnessed the transformation of the banking sector as a result of financial sector reforms that were introduced as a part of structural reforms initiated in 1991. The reform process in the financial sector was undertaken with the prime objective of having a strong and resilient banking system. The progress that was achieved in the areas of strengthening the regulatory and supervisory norms ushered in greater accountability and market discipline amongst the participants. The Reserve Bank made sustained efforts towards adoption of international benchmarks in a gradual manner, as appropriate to the Indian conditions, in various areas such as prudential norms, risk management, supervision, corporate governance and transparency and disclosures. The reform process helped in taking the management of the banking sector to the level, where the Reserve Bank ceased to micro-manage commercial banks and focused largely on the macro goals. The focus on deregulation and liberalisation coupled with enhanced responsibilities for banks made the banking sector resilient and capable of facing several newer global challenges.

3.6 In the above backdrop, this chapter traces the history of the banking sector in India. Although the focus is on its post-independence history, it starts with a broad brush sketch of the early years of banking. The chapter is organised in six sections. Section II narrates the story as it unfolded historically in the pre-independence period. Section III outlines the major developments in the banking sector from 1947 to 1967. Section IV deals at length with the major developments in the period from 1967 to 1991. Developments from 1991 and onwards are covered in Section V. Section VI sums up the main points of discussions.

II. THE EARLY PHASE OF BANKING IN INDIA – UP TO 1947

Beginning of Banking in India

3.7 The phase leading up to independence laid the foundations of the Indian banking system. The beginning of commercial banking of the joint stock variety that prevailed elsewhere in the world could be traced back to the early 18th century. The western variety of joint stock banking was brought to India by the English Agency houses of Calcutta and Bombay (now Kolkata and Mumbai). The first bank of a joint stock variety was Bank of Bombay, established in 1720 in Bombay[4]. This was followed by Bank of Hindustan in Calcutta, which was established in 1770 by an agency house.[5] This agency house, and hence the bank was closed down in 1832. The General Bank of Bengal and Bihar, which came into existence in 1773, after a proposal by Governor (later Governor General) Warren Hastings, proved to be a short lived experiment[6]. Trade was concentrated in Calcutta after the growth of East India Company's trading and administration. With this grew the requirement for modern banking services, uniform currency to finance foreign trade and remittances by British army personnel and civil servants. The first 'Presidency bank' was the Bank of Bengal established in Calcutta on June 2, 1806 with a capital of Rs.50 lakh. The Government subscribed to 20 per cent of its share capital and shared the privilege of appointing directors with voting rights. The bank had the task of discounting the Treasury Bills to provide accommodation to the Government. The bank was given powers to issue notes in 1823. The Bank of Bombay was the second Presidency bank set up in 1840 with a capital of Rs.52 lakh, and the Bank of Madras the third Presidency

[4] Reserve Bank of India (2006).

[5] Indian Central Banking Enquiry Committee(1931)

[6] Reserve Bank of India (History), Volume I, page 6.

bank established in July 1843 with a capital of Rs.30 lakh. They were known as Presidency banks as they were set up in the three Presidencies that were the units of administrative jurisdiction in the country for the East India Company. The Presidency banks were governed by Royal Charters. The Presidency banks issued currency notes until the enactment of the Paper Currency Act, 1861, when this right to issue currency notes by the Presidency banks was abolished and that function was entrusted to the Government.

3.8 The first formal regulation for banks was perhaps the enactment of the Companies Act in 1850. This Act, based on a similar Act in Great Britain in 1844, stipulated unlimited liability for banking and insurance companies until 1860, as elsewhere in the world. In 1860, the Indian law permitted the principle of limited liability following such measures in Britain. Limited liability led to an increase in the number of banking companies during this period. With the collapse of the Bank of Bombay, the New Bank of Bombay was established in January 1868.

3.9 The Presidency Bank Act, which came into existence in 1876, brought the three Presidency banks under a common statute and imposed some restrictions on their business. It prohibited them from dealing with risky business of foreign bills and borrowing abroad for lending more than 6 months, among others. In terms of Act XI of 1876, the Government of India decided on strict enforcement of the charter and the periodic inspection of the books of these banks. The proprietary connection of the Government was, however, terminated, though the banks continued to hold charge of the public debt offices in the three presidency towns, and the custody of a part of the Government balances. The Act also stipulated the creation of Reserve Treasuries at Calcutta, Bombay and Madras into which sums above the specified minimum balances promised to the presidency banks, were to be lodged only at their head offices. The Government could lend to the presidency banks from such Reserve Treasuries. This Act enabled the Government to enforce some stringent measures such as periodic inspection of the books of these banks. The major banks were organised as private shareholding companies with the majority shareholders being Europeans.

3.10 The first Indian owned bank was the Allahabad Bank set up in Allahabad in 1865, the second, Punjab National Bank was set up in 1895 in Lahore, and the third, Bank of India was set up in 1906 in Mumbai. All these banks were founded under private ownership. The *Swadeshi* Movement of 1906 provided a great impetus to joint stock banks of Indian ownership and many more Indian commercial banks such as Central Bank of India, Bank of Baroda, Canara Bank, Indian Bank, and Bank of Mysore were established between 1906 and 1913. By the end of December 1913, the total number of reporting commercial banks in the country reached 56 comprising 3 Presidency banks, 18 Class 'A' banks (with capital of greater than Rs.5 lakh), 23 Class 'B' banks (with capital of Rs.1 lakh to 5 lakh) and 12 exchange banks. Exchange banks were foreign owned banks that engaged mainly in foreign exchange business in terms of foreign bills of exchange and foreign remittances for travel and trade. Class A and B were joint stock banks. The banking sector during this period, however, was dominated by the Presidency banks as was reflected in paid-up capital and deposits (Table 3.1).

Table 3.1: Number of Banks, Capital and Deposits

(Amount in Rs. Lakh)

End-Dec.	Number of Reporting Commercial Banks					Paid-up Capital and Reserves				Deposits				
	Presidency/ Imperial Bank@	Class A*	Exchange Bank	Class B**	Total	Presidency/ Imperial Bank@	Class A*	Class B**	Total	Presidency/ Imperial Bank@	Class A*	Exchange Bank	Class B**	Total
1870	3	2	3	–	8	362	12	–	374	1,197	14	52	–	1,263
1880	3	3	4	–	10	405	21	–	426	1,140	63	340	–	1,543
1890	3	5	5	–	13	448	51	–	499	1,836	271	754	–	2,861
1900	3	9	8	–	20	560	128	–	688	1,569	808	1,050	–	3,427
1910	3	16	11	–	30	691	376	–	1,067	3,654	2,566	2,479	–	8,699
1913	3	18	12	23	56	748	364	#	1,112	4,236	2,259	3,104	151	9,750
1920	3	25	15	33	76	753	1,093	81	1,927	8,629	7,115	7,481	233	23,458
1930	1	31	18	57	107	1,115	1,190	141	2,446	8,397	6,326	6,811	439	21,973
1934	1	36	17	69	123	1,128	1,267	149	2,544	8,100	7,677	7,140	511	23,428

@ : Three presidency banks were amalgamated into a single bank *i.e.,* Imperial Bank of India in 1921.
* : Banks with capital and reserves of Rs.5 lakh and over.
** : Banks with capital and reserves over Rs.1 lakh and up to Rs.5 lakh.
# : Negligible.
Source : Statistical Tables Relating to Banks in India, various issues.

3.11 The *Swadeshi* Movement also provided impetus to the co-operative credit movement and led to the establishment of a number of agricultural credit societies and a few urban co-operatives. The evolution of co-operative banking movement in India could be traced to the last decade of the 19th Century. The late Shri Vithal L Kavthekar pioneered the urban co-operative credit movement in the year 1889 in the then princely State of Baroda.[7] The first registered urban co-operative credit society was the Conjeevaram Urban Co-operative Bank, organised in Conjeevaram, in the then Madras Presidency. The idea of setting up of such a co-operative was inspired by the success of urban co-operative credit institutions in Germany and Italy. The second urban co-operative bank was the Peoples' Co-operative Society in 1905 in Bangalore city in the princely State of Mysore. The joint stock banks catered mainly to industry and commerce. Their inability to appreciate and cater to the needs of clientele with limited means effectively drove borrowers to moneylenders and similar agencies for loans at exorbitant rates of interest - this situation was the prime mover for non-agricultural credit co-operatives coming into being in India. The main objectives of such co-operatives were to meet the banking and credit requirements of people with smaller means to protect them from exploitation. Thus, the emergence of urban co-operative banks' was the result of local response to an enabling legislative environment, unlike the rural co-operative movement that was largely State-driven (Thorat, 2006).

3.12 After the early recognition of the role of the co-operatives, continuous official attention was paid to the provision of rural credit. A new Act was passed in 1912 giving legal recognition to credit societies and the like. The Maclagan Committee, set up to review the performance of co-operatives in India and to suggest measures to strengthen them, issued a report in 1915 advocating the establishment of provincial co-operative banks. It observed that the 602 urban co-operative credit societies constituted a meager 4.4 per cent of the 13,745 agricultural credit societies. The Committee endorsed the view that the urban co-operative societies were eminently suited to cater to the needs of lower and middle-income strata of society and such institutions would inculcate banking habits among middle classes.

3.13 Apart from commercial and co-operative banks, several other types of banks existed in India. This was because the term "bank" was an omnibus term and was used by the entities, which, strictly speaking, were not banks. These included loan companies, indigenous bankers and nidhis some of which were registered under the Companies Act, 1913. Although very little information was available about such banks, their number was believed to be very large. Even the number of registered entities was enormous. Many doubtful companies registered themselves as banks and figured in the statistics of bank failures. Consequently, it was difficult to define in strict legal terms the scope of organised banking, particularly in the period before 1913 (Chandavarkar, 2005).

World War I and its Impact on Banking in India

3.14 The World War I years (1913 to 1918) were indeed difficult years for the world economy. The alarming inflationary situation that had developed as a result of war financing and concentration on the war led to other problems like neglect of agriculture and consumers. Most activity during the war period was concentrated in urban areas. This further tilted the already adverse urban-rural balance. Rural areas lacked access to organised banking and this led to almost complete dependence of farmers on moneylenders who charged exorbitant rates of interest. During the war period, a number of banks failed. Some banks that failed had combined trading functions with banking functions. More importantly, several of the banks that failed had a low capital base. For instance, average capital of failed banks in 1913 was Rs.2.9 lakh as against the average capital of Rs.12 lakh for the category of Class A and B banks. The crisis had begun before the World War I, but accentuated during it (Table 3.2).

3.15 Most of these banks had also maintained an unduly low proportion of cash and other liquid assets. As a result, they were not resilient enough to be able to perform under difficult times. There were also some big banks that failed, such as Indian Specie Bank, a British bank with a paid-up capital of Rs.75.6 lakh. It failed not due to low capital, but due to its involvement in silver speculation (Tandon, 1988).

3.16 In retrospect, bank failures in India were attributed by scholars and committees, in a large measure, to individual imprudence and mismanagement, fraudulent manipulation by directors and managers; and incompetence and inexperience.

[7] RBI (1999), Madhav Rao Committee Report, Chapter II.

Table 3.2: Bank Failures in India – 1913 to 1921

Year (January-December)	Number of Banks Failed	Paid-up Capital of Failed Banks (Rs. '000)	Average paid-up capital of Failed Banks (Rs. '000)	Average paid-up capital of Reporting Banks in Category A & B (Rs. '000)
1	2	3	4	5
1913	12	3514	293	1152
1914	42	10902	260	1195
1915	11	451	41	1190
1916	13	423	33	1170
1917	9	2526	281	1315
1918	7	146	21	1433
1919	4	403	101	1585
1920	3	725	242	1675
1921	7	125	18	1901

Note : Category A : Banks with capital and reserves of Rs.5 lakh and over.
Category B : Banks with capital and reserves of over Rs.1 lakh and up to Rs.5 lakh.
Source : Banking and Monetary Statistics of India, RBI, 1954.

Many banks had granted a large amount of unsecured advances to directors and their companies. The absence of adequate regulatory safeguards made it easy for directors and managers to mislead depositors/shareholders. It underscored the need for suitable machinery for regulation of commercial banking in India. Several exchange banks also failed during this period mainly due to external reasons relating to their parent countries/companies. The mortality rate among exchange banks was disconcertingly high. The commonest causes of failure of exchange banks were global, the highs and lows of the World Wars and inflation.

3.17 Interestingly, the co-operatives presented a somewhat different picture primarily because these organisations were based on mutual trust and had effective control by its member owners. The member depositors had confidence in the working of co-operatives because of their small size. There was a phenomenon of flight of deposits from joint stock banks to urban co-operative banks. The Maclagan Committee that investigated the crisis stated "as a matter of fact, the crisis had a contrary effect and in most provinces there was a movement to withdraw deposits from non-co-operative institutions and place them in co-operative institutions. The distinction between the two classes of security was well appreciated and preference given to the co-operatives due partly to the local character, but mainly to the connection of Government with the co-operative movement" (Thorat, 2006).

3.18 The presidency banks were amalgamated into a single bank, the Imperial Bank of India, in 1921.[8] The Imperial Bank of India was further reconstituted with the merger of a number of banks belonging to old princely states such as Jaipur, Mysore, Patiala and Jodhpur. The Imperial Bank of India also functioned as a central bank prior to the establishment of the Reserve Bank in 1935. Thus, during this phase, the Imperial Bank of India performed three set of functions, *viz.,* commercial banking, central banking and the banker to the government.

3.19 By 1930, the number of commercial banks increased to 107 with the Imperial Bank of India still dominating the Indian banking sector (refer Table 3.1). Besides, at end-March 1929, 158 co-operative banks also existed. The number of co-operative banks rose sharply (more than doubled) between 1922-23 to 1928-29 (Table 3.3). Although greater than

Table 3.3: Number of Co-operative Banks

(Amount in Rs. Lakh)

Year #	Class A*			Class B**			Total		
	Number	Capital and Reserves	Deposits	Number	Capital and Reserves	Deposits	Number	Capital and Reserves	Deposits
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1922-23	5	44	341	63	131	502	68	175	843
1925-26	10	91	538	104	203	930	114	294	1,468
1928-29	18	163	901	140	277	1,487	158	440	2,388

* : Banks with capital and reserves of Rs.5 lakh and over.
** : Banks with capital and reserves over Rs.1 lakh and up to Rs.5 lakh.
# : Year refers to the co-operative year, which differed across provinces in the period under reference.
Source : Indian Central Banking Enquiry Committee, 1931.

[8] The name Imperial Bank of India was suggested by Lord John Maynard Keynes.

Table 3.4: Province-wise Distribution of Banks in India – 1930*

No.	State	No of Reporting Banks
1.	Madras	167
2.	Bombay	30
3.	Bengal	919
4.	United Provinces of Agra and Oudh	33
5.	Punjab	29
6.	Burma	4
7.	Bihar and Orissa	18
8.	Central Provinces and Berar	3
9.	Assam	51
10.	N.W.F. Province	1
11.	Delhi Province	3
	Total	1258

* : Registered under the Indian Companies Act 1913.
Source: Indian Central Banking Enquiry Committee, 1930.

commercial banks in number, the size of deposits of co-operative banks was much smaller.

3.20 In 1930, the banking system, in all, comprised 1258 banking institutions registered under the Indian Companies Act, 1913 (Table 3.4).

3.21 Of the 1258 entities registered as banks in 1930, while some were banks in genuine terms, others were indigenous banks, nidhis and loan companies. In a large number of towns and villages, indigenous banks were the main source of credit. According to the Indian Central Banking Enquiry Committee, "a certain number of indigenous bankers work along modern lines and transact all kinds of business which the ordinary joint-stock banks transact, including the issue of pass books and cheque books." They did not publish balance sheets and were managed by proprietors. Some of these, such as 'Bank of Chettinad' were registered under the Indian Companies Act. However, there were other smaller banks that did not register themselves.

3.22 The world economy was gripped by the Great Depression during the period from 1928 to 1934. This also had an impact on the Indian banking industry with the number of banks failing rising sharply due to their loans going bad. The capital of banks that failed, on an average, was lower than the average size of the capital of reporting banks in categories A and B, indicating that the banks that failed were small (Table 3.5).

3.23 The Indian Central Banking Enquiry Committee, which was set up in 1929 to survey extensively the problems of Indian banking, observed that a central bank be established for the country and that a special Bank Act be enacted incorporating relevant provisions of the then existing Indian Companies Act (1913), and including new provisions relating to (i) organisation, (ii) management, (iii) audit and inspection, and (iv) liquidation and amalgamations. It also noted that the commercial banks played a negligible role in financing the requirements of agricultural production and co-operative credit.[9] Examining the credit requirements of the cultivator, it noted "his needs are satisfied, if at all, inadequately and at ruinous prices". In an agrarian economy, like India at that time, credit to agriculture was very crucial. Bank credit to agriculture was 0.3 per cent of GDP. Rural indebtedness in 1931 was estimated at Rs.900 crore, and it was increasing due to past indebtedness; extravagant social and ceremonial expenditure; high interest rates; recurring losses of cattle due to drought and disease; and lease of land at high prices and high rentals, resulting in the transfers of land from farmers to moneylenders.

3.24 The lack of spread of banking in rural areas and the consequent dependence of the rural population on informal sources was a major concern

Table 3.5: Capital and Reserves of Failed Banks

Year (January-December)	Number of Banks Failed	Paid-up Capital of Failed Banks (Rs. '000)	Average paid-up capital of Failed Banks (Rs. '000)	Average paid-up capital of Reporting Banks in Category A & B (Rs. '000)
1	2	3	4	5
1926	14	398	28	1017
1927	16	311	19	1005
1928	13	2312	178	1022
1929	11	819	74	1105
1930	12	4060	338	952
1931	18	1506	84	984
1932	24	809	34	1008
1933	26	300	12	973
1934	30	623	21	851
1935	51	6596	129	861

Note : Category A : Banks with capital and reserves of Rs.5 lakh and over.
Category B : Banks with capital and reserves of over Rs.1 lakh and up to Rs.5 lakh.
Source : Statistical Tables Relating to Banks in India, various issues.

[9] Reserve Bank of India (History) Vol.II, Pg 235

during these times. The problem of rural credit to some extent was also due to the fact that there was no distinction of the type of credit dispensed and the term for which it was granted. Bigger amounts of loans taken for investment purposes were unlikely to be paid off in a single season. It was reported that in many provinces, credit overdues to credit co-operative institutions constituted 60 to 70 per cent of the outstanding principal due.[10]

Setting up of the Reserve Bank and its Role

3.25 The setting up of a central bank for the country was recommended by various committees that went into the causes of bank failures.[11] It is interesting to note that many central banks were established specifically to take care of bank failures. For instance, the US Federal Reserve, was established in 1913 primarily against the background of recurrent banking crises. It was felt that the establishment of a central bank would bring in greater governance and integrate the loosely connected banking structure in the country. It was also believed that the establishment of a central bank as a separate entity that does not conduct ordinary banking business (like the Imperial Bank of India) was likely to have the stature to be able to deftly handle the central banking functions without the other joint stock banks feeling any rivalry towards it.[12] Accordingly, the Reserve Bank of India Act 1934 was enacted paving the way for the setting up of the Reserve Bank of India. The issue of bank failures and the need for catering to the requirements of agriculture were the two prime reasons for the establishment of the Reserve Bank. The banking sector came under the purview of the Reserve Bank in 1935. At the time of setting up of the Reserve Bank, the joint stock banks constituted the largest share of the deposits held by the banking sector, followed by the Imperial Bank of India and exchange banks (Table 3.6).

3.26 The Reserve Bank of India Act, 1934 gave the Reserve Bank powers to regulate issue of bank notes, the custody of the commercial banks' cash reserves and the discretion of granting them accommodation. The preamble to the RBI Act set forth its functions as "to regulate the issue of bank notes and the keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage". The Reserve Bank's main functions could be classified into the following broad categories (a) to act as a banker to the Government; (b) to issue notes; (c) to act as a banker to other banks; and (d) to maintain the exchange ratio. The RBI Act had a limited control on banks although its obligations in each sphere were spelt out in clear terms. There was some amount of built-in flexibility as the Reserve Bank was vested with extra powers and maneuverability under extra-ordinary circumstances, that could be exercised only with the prior approval of the Governor General in Council or the Central Board of the Bank as might be prescribed in each case.

Table 3.6: Number of Commercial Banks in India and Deposits with Them

(Amount in Rupees crore)

End-December	Imperial Bank of India		Exchange Banks		Joint-Stock Banks		Total - All Banks	
	Number	Deposits	Number	Deposits	Number	Deposits	Number	Deposits
1	2	3	4	5	6	7	8	9
1926	1	80 (37.4)	18	72 (33.3)	76	63 (29.4)	95	215
1929	1	79 (37.3)	18	67 (31.4)	79	66 (31.2)	98	212
1932	1	75 (33.6)	18	73 (32.5)	87	76 (33.9)	106	225
1935	1	79 (32.3)	17	76 (31.1)	106	90 (36.7)	124	245

Note : Figures within parentheses are percentage shares in total.
Source : Statistical Abstract Relating to Banks in India, 1935.

[10] The Indian Central Banking Enquiry Committee(1931).

[11] The Indian Central Banking Enquiry Committee(1931).

[12] The Indian Central Banking Enquiry Committee(1931).

3.27 The Reserve Bank, as the lender-of-last-resort, had a crucial role in ensuring the liquidity of the short-term assets of commercial banks. The banking sector had adequate liquidity in the initial years because it had a facility of selling Government securities freely to the Reserve Bank.[13] In 1935, banks were required to maintain cash reserves of 5 per cent of their demand liabilities and 2 per cent of their time liabilities on a daily basis. The task of managing the currency that was assigned to the Controller of Currency came to the Reserve Bank in March 1935 under Section 3 of the RBI Act, 1934. The provisions of the RBI Act also required the Reserve Bank to act as a banker's bank. In accordance with the general central banking practice, the operations of the Reserve Bank with the money market were to be largely conducted through the medium of member banks, *viz.,* the 'scheduled' banks and the provincial co-operative banks. The 'scheduled' banks were banks which were included in the Second Schedule to the RBI Act and those banks in British India that subsequently became eligible for inclusion in this Schedule by virtue of their paid-up capital and reserves being more than Rs.5 lakh in the aggregate. The power to include or exclude banks in or from the Schedule was vested with the Governor General in Council. The preamble of the Reserve Bank of India Act that was accepted had no reference to a 'gold standard currency' for British India unlike that envisaged in the initial preamble of the 1928 Bill. This change occurred due to the fluidity of the international monetary situation in the intervening period, following Great Britain's departure from the gold standard in September 1931.

3.28 Some promotional role was envisaged for the Reserve Bank from the very beginning as agricultural credit was a special responsibility of the Reserve Bank in terms of the RBI Act. The Reserve Bank assumed a proactive role in the sphere of agricultural credit for the economy and took concrete action by commissioning two studies in 1936 and 1937 in this area. Almost the entire finance required by agriculture at that time was supplied by moneylenders; co-operatives and other agencies played a negligible part (Mohan, 2004a). During the period from 1935 to 1950, the Reserve Bank continued to focus on agricultural credit by fostering the co-operative credit movement through the provision of financial accommodation to co-operatives. As a result of the concerted efforts and policies of the Reserve Bank, a well-differentiated structure of credit institutions for purveying credit to agriculture and allied activities emerged. Within the short-term structure, primary agricultural credit societies at the village level formed the base level, while district central co-operative banks were placed at the intermediate level, and the State co-operative banks at the apex level. The long-term structure of rural co-operatives comprised State co-operative agriculture and rural development banks at the State level, and primary co-operative agriculture and rural development banks at the decentralised district or block level. These institutions focused on providing typically medium to long-term loans for making investments in agriculture and rural industries.

3.29 The central bank, if it is a supervisory authority must have sufficient powers to carry out its functions, such as audit and inspection to be able to detect and restrain unsound practices and suggest corrective measures like revoking or denying licences. However, the Reserve Bank in the earlier years did not have adequate powers of control or regulation. Commercial banks were governed by the Company Law applicable to ordinary non-banking companies, and the permission of the Reserve Bank was not required even for setting up of a new bank. The period after setting up of the Reserve Bank saw increase in the number of reporting banks. The classification of banks was expanded to include the banks with smaller capital and reserve base. Class 'A' banks were divided into A1 and A2. Further, two new categories of banks, *viz,.* 'C' and 'D' were added to include the smaller banks. Banks with capital and reserves of greater than Rs.5 lakh and included in the second schedule to the RBI Act 1934 were classified as Class A1, while the remaining non-scheduled banks with capital and reserves of greater than Rs.5 lakh were classified as Class A2. The rest of the non-scheduled banks were classified according to their size; those with capital and reserves of greater than Rs.1 lakh and lower than Rs.5 lakh were classified as Class B; banks with capital and reserves of greater than Rs.50,000 and up to Rs.1 lakh were classified as Class C; and those with capital and reserves of less than Rs.50,000 were classified as Class D. In 1940, the number of reporting banks was 654 (Table 3.7).

3.30 The underdeveloped nature of the economy and the lack of an appropriate regulatory framework posed a problem of effective regulation of a large number of small banks. The *laisez faire* policy that permitted free entry and exit had the virtues of free competition. However, benefits of such a policy are

[13] Till November 1951, when the Reserve Bank stopped the practice of buying such securities barring under exceptional circumstances.

Table 3.7: Number of Reporting Banks and Deposits with them

(Rs. Lakh)

End-Dec.	Number of Reporting Commercial Banks								Deposits of Reporting Commercial Banks							
	Imperial Bank	Class A1	Exchange Bank	Class A2	Class B	Class C	Class D	Total	Imperial Bank	Class A1	Exchange Bank	Class A2	Class B	Class C	Class D	Total
	Scheduled Banks			Non-Scheduled Banks					Scheduled Banks			Non-Scheduled Banks				
1936	1	27	19	9	71			127	7880	9007	7523	540	546			25496
1940	1	41	20	17	122	121	332	654	9603	10611	8533	788	1104	286	272	31197
1947	1	80	15	68	185	119	188	656	28659	62334	17881	5192	2947	455	300	117768
1950	1	74	16	73	189	123	124	600	23137	52270	17039	4659	2176	370	131	99782
1951	1	75	16	70	186	117	96	561	23091	51734	16804	4426	2079	367	105	98606
1952	1	75	15	70	194	114	60	529	20585	50952	17523	3882	2023	303	68	95336

Note : 1. Class A1 were banks with capital and reserves greater than Rs.5 lakh and included in the second schedule to the RBI Act 1934.
2. Class A2 were non-scheduled banks with capital and reserves of greater than Rs.5 lakh.
3. Class B were non-scheduled banks with capital and reserves greater than Rs.1 lakh but lower than Rs.5 lakh.
4. Class C were non-scheduled banks with capital and reserves of greater than Rs.50,000 and up to Rs.1 lakh.
5. Class D were banks with capital and reserves of leass than Rs.50,000.

Source : Statistical Tables Relating to Banks in India, RBI, various issues.

best reaped in a system that is characterised by 'perfect competition' unalloyed by market failures and imperfect markets. Indian financial markets at that stage, however, were certainly far from perfect. The free entry ushered in a very high growth of banking companies only to be marred by the problem of massive bank failures. Mushrooming growth of small banks in a scenario, where adequate regulation was not in place, led to various governance issues. The Reserve Bank's statute alone then did not provide for any detailed regulation of the commercial banking operations for ensuring sound banking practices. The submission of weekly returns made by scheduled banks under Section 42(2) of the Act was mainly intended to keep a watch over their compliance with the requirements regarding maintenance of cash reserves with the Reserve Bank. Inspection of banks by the Reserve Bank was visualised for the limited purpose of determining the eligibility of banks for inclusion or retention in the Second Schedule to the Act. Thus, apart from the limited scope of the Reserve Bank's powers of supervision and control over scheduled banks, a large number of small banking institutions, known as non-scheduled banks, lay entirely outside the purview of its control. When the Reserve Bank commenced operations, there were very few and relatively minor provisions in the Indian Companies Act, 1913, pertaining to banking companies. This virtual absence of regulations for controlling the operations of commercial banks proved a serious handicap in the sphere of its regulatory functions over the banking system. There was ambiguity regarding the functioning of the smaller banks as there was no control on their internal governance or solvency.

3.31 Measures were taken to strengthen the regulation first by amending the Indian Companies Act in 1936. This amendment incorporated a separate chapter on provisions relating to banking companies. Prior to its enactment, banks were governed in all important matters such as incorporation, organisation and management, among others, by the Indian Companies Act, 1913 which applied commonly to banking as well as non-banking companies. There were only certain relatively innocuous provisions in the Companies Act 1913, which made a distinction between banks and other companies. The enactment of the Indian Companies (Amendment) Act, 1936 incorporated a separate chapter on provisions relating to banking companies, including minimum capital and cash reserve requirement and some operational guidelines. This amendment clearly stated that the banking companies were distinct from other companies.

3.32 In order to gradually integrate the non-scheduled banks with the rest of the organised banking, the Reserve Bank continued to make efforts to keep in close touch with the non-scheduled banks and provide them advice and guidance. The Reserve Bank also continued to receive the balance sheets and the cash reserve returns of these banks from the Registrars of Joint Stock Companies. According to the information received from them, in British India as on the 31st December 1938, about 1,421 concerns were operating which might be considered as non-scheduled banks. The real issue was to get them under the regulatory purview of the Reserve Bank because a large number of these companies *claimed that they were not really 'banks'* within the meaning of Section 277(F) of the Companies Act as that section defined a banking company as "a company which carried on as its

principal business, the acceptance of deposits subject to withdrawal by cheque, draft, or order", and *they did not accept deposits so withdrawable*.

3.33 In order to ensure a viable banking system, it was crucial that the weak links in the banking system were taken care of. For this, it was essential to address the root cause of bank failures, which was then the lack of adequate regulation. Hence, the need was felt to put in place sound regulatory norms. The fact that most of the banks that failed were small and non-scheduled underlined the need for monitoring the operations of the non-scheduled banks regularly. In October 1939, a report on the non-scheduled banks with a special reference to their assets and liabilities was submitted to the Reserve Bank's Central Board. The report mentioned the low reserves position of these banks and the overextension of advances portfolios and large proportion of bad and doubtful debt. The report stressed the need for comprehensive banking regulation for the country.

3.34 In 1939, the Reserve Bank submitted to the Central Government its proposals for banking legislation in India. The important features of the proposals were to define banking in a simpler and clearer way than had been done in the Indian Companies Act, 1936. Second, the proposals sought to ensure that institutions calling themselves 'banks' started with sufficient minimum capital to enable them to operate on a scale large enough to make it possible for them to earn reasonable profits. Third, the proposals visualised certain moderate restrictions on bank investments in order to protect the depositors. Finally, an endeavour was made to expedite liquidation proceedings so that in the event of a bank failing, the depositors were paid off with the minimum delay and expense. However, the Government decided not to undertake any comprehensive legislation during the war period when all the energies of the Government were inevitably concentrated on the war effort. Certain *interim* measures were taken to regulate and control by legislation certain issues that required immediate attention. After the war, the aspect of inadequate regulation was addressed partially by the promulgation of the RBI Companies (Inspection) Ordinance, 1946. New powers were given to the Reserve Bank under the Banking Companies (Restriction of Branches) Act, 1946 and the Banking Companies (Control) Ordinance, 1948. Most of the provisions in these enactments were subsequently embodied in the Banking Companies Act in 1949. This Act gave the Reserve Bank very comprehensive powers of supervision and control over the entire banking system as detailed in the subsequent section.

The World War II and its Impact on Indian Banking

3.35 The effects of the Second World War (1939 to 1944) on Indian banking were far-reaching. As India increasingly became a supply base for the Allied armies in the Middle East and South-East Asia, Government expenditure on defence and supplies to the Allies led to a rapid expansion of currency. As a result, the total money income of some sections of the community rose. This combined with a diversity of causes such as the difficulty in obtaining imports, the diversion of internal supplies to war needs, the control of the channels of investment and the distortion in the pattern of income distribution, among others, led to a rapid increase in the 'unspent margin' in the higher income groups, which, in turn, brought about a large pool of bank deposits. Such a situation encouraged the development of banking enterprises, apart from exchange banks, whose performance was driven mainly by external factors. The number of branches increased sharply between 1940 and 1945 and most of this branch expansion was accounted for by scheduled commercial banks (other than Imperial Bank of India and exchange banks) and non-scheduled banks (Table 3.8).

Table 3.8: Number of Bank Branches: 1940-1945

End-Dec.	Imperial Bank of India	Exchange Banks	Other Scheduled Banks	Total Scheduled Banks	Class 'A2' Non-Scheduled Banks*	Class 'B' and 'C' Non-Scheduled Banks **	All Banks (5+6+7)
1	2	3	4	5	6	7	8
1940	383	87	844	1,314	105	545	1,964
1941	393	84	937	1,414	204	678	2,296
1942	392	84	971	1,447	263	869	2,579
1943	399	84	1,395	1,878	400	996	3,274
1945	428	77	2,451	2,956	811	1,434	5,201

* : Banks with paid-up capital and reserves of above Rs.5 lakh.
** : Banks with paid-up capital and reserves of Rs.50,000 and up to Rs.5 lakh.
Source: Reserve Bank (History) Volume I.

3.36 Several of the banks that expanded had very low capital. For instance, one bank with a capital of less than Rs.2 lakh opened more than 75 branches. The banking system that prevailed, therefore, was freer than the 'free banking that prevailed in the US around the civil war'. This was because even under the free banking there were some norms regarding entry level capital, and anyone meeting the minimum requirement of integrity and capital could receive a charter. In India, even these entry level requirements were not enforceable. The funds deposited by the public were often utilised to acquire control over non-banking companies by the purchase of their shares at highly inflated prices. Other conspicuous features of these small banks were the cross holding of shares between the banks and other companies in which the management was interested, large unsecured advances to persons connected with the management, advances against speculative shares when prices were very high and advances against immovable property which could not be recovered easily in times of need. Between 1936 and 1945, many small banks failed (Table 3.9).

3.37 Several banks in the process of expansion spread out thin, which increased the risk of failure. Interestingly, in spite of this wave of bank failures, there was very little contagion across the banking sector. This was because the Indian banking sector was underdeveloped and was loosely connected. This lack of integration kept the effect of bank failures fairly localised even when relatively larger banks failed. The resilience of the Indian banking system came to a large measure from the relative isolation of banks and lack of integration of the banking sector. Besides, slower communications in those years paradoxically saved it from a wide spread crisis (Chandavarkar, 2005).

Table 3.9: Failure of Banks - 1936-1945

(Amount in Rs. '000)

Year (January-December)	No. of Failed Banks	Paid-up Capital of Failed Banks	Average Paid-up Capital of Failed Banks	Average Paid-up Capital of Reporting Banks*
1	2	3	4	5
1936	88	500	6	684
1937	65	1152	18	552
1938	73	3000	41	514
1939	117	2491	21	162
1940	107	2390	22	188
1941	94	1239	13	281
1942	50	1407	28	327
1943	59	749	13	406
1944	28	627	22	468
1945	27	474	18	503

* : Data refer to the reporting banks in categories A, B, C and D only.

Source: Statistical Tables Relating to Banks in India, various issues.

3.38 To sum up, the period leading up to the independence was a difficult period for Indian banks. A large number of small banks sprang up with low capital base, although their exact number was not known. The organised sector consisted of the Imperial Bank of India, joint-stock banks (which included both joint stock English and Indian banks) and the exchange banks dealing in foreign exchange. During this period, a large number of banks also failed. This was due to several factors. This period saw the two world wars and the Great Depression of 1930. Although global factors contributed to bank failure in a large measure, several domestic factors were also at play. Low capital base, insufficient liquid assets and inter-connected lending were some of the major domestic factors. When the Reserve Bank was set up in 1935, the predominant concern was that of bank failures and of putting in place adequate safeguards in the form of appropriate banking regulation. Yet, even after more than twelve years after the establishment of the Reserve Bank, the issue of strengthening of the Reserve Bank through a separate legislation did not come through. The major concern was the existence of non-scheduled banks as they remained outside the purview of the Reserve Bank. Banking was more focused on urban areas and the credit requirements of agriculture and rural sectors were neglected. These issues were pertinent when the country attained independence.

III. BANKING IN THE EARLY YEARS OF INDEPENDENT INDIA - 1947 TO 1967

3.39 When the country attained independence, Indian banking was entirely in the private sector. In addition to the Imperial Bank, there were five big banks, each holding public deposits aggregating Rs.100 crore and more, *viz.,* Central Bank of India Ltd., Punjab National Bank Ltd., Bank of India Ltd., Bank of Baroda Ltd. and United Commercial Bank Ltd. All other commercial banks were also in the private sector and had a regional character; most of them held deposits of less than Rs.50 crore. Interestingly, the Reserve Bank was also not completely State owned until it was nationalised in terms of the Reserve Bank of India (transfer to Public Ownership) Act, 1948.

3.40 Independence made a large difference to many spheres of economic activity and banking was one of the most crucial areas where a phenomenal transformation took place. On the eve of

independence, several difficulties plagued the banking system as noted by the then Governor C.D. Deshmukh:

> *"The difficulty of the task of the Reserve Bank of India in dealing with the banking system in the country does not lie in the multiplicity of banking units alone. It is aggravated by its diversity and range. There can be no standard treatment in practice although in theory the same law governs all".*[14]

3.41 At the time of independence, the banking structure was dominated by the domestic scheduled commercial banks. Non-scheduled banks, though large in number, constituted a small share of the banking sector (Table 3.10).

Table 3.10: Number and Deposits of Indian Banks – End-December 1947

Category of Reporting Banks	Number	Deposits (Rs. crore)
1	2	3
A. Scheduled Banks	**97**	**1090**
Imperial Bank	1	287 (22.8)
Other Banks (A1 Banks)	81	623 (49.4)
Exchange Banks*	15	180 (14.3)
B. Non-Scheduled Banks	**557**	**89 (7.1)**
i) Class A2	65	52
ii) Class B	185	29
iii) Class C	119	5
iv) Class D	188	3
C. Co-operative Banks	**395**	**82 (6.5)**
D. All Banks - Total	**1034**	**1261**

* : Data relate to Indian operations of foreign exchange banks.

Note : 1. Figures in parentheses are percentage shares in total.
2. Class A1 were banks with capital and reserves greater than Rs.5 lakh and included in the second schedule to the RBI Act 1934.
3. Class A2 were non-scheduled banks with capital and reserves of greater than Rs.5 lakh.
4. Class B were non-scheduled banks with capital and reserves greater than Rs.1 lakh but lower than Rs.5 lakh.
5. Class C were non-scheduled banks with capital and reserves of Rs.50,000 to Rs.1 lakh .
6. Class D were banks with capital and reserves of less than Rs.50,000.

Source : Statistical Tables Relating to Banks in India, 1947.

Table 3.11: Distribution of Commercial Banks – End-December 1947

(Amount in Rupees crore)

State	Scheduled Banks		Non-scheduled Banks		Total	
	No. of Banks	Paid-up capital	No. of Banks	Paid-up capital	No. of Banks	Paid-up capital
1	2	3	4	5	6	7
Assam	1	1	14	2	15	3
Bihar	2	6	10	1	12	6
Bombay	13	71	27	7	40	78
Madras	14	24	186	20	200	45
West Bengal	22	146	84	12	106	158
Delhi	5	32	3	1	8	33
East Punjab	7	14	20	5	27	19
C.P. and Berar	2	4	3	1	5	5
United Provinces	5	15	20	2	25	17
Ajmer Merwara	0	0	1	–	1	–
Indian States	11	53	187	38	198	91
Total	82	365	555	89	637	454

'–' : Negligible.

Source : Statistical Tables Relating to Banks in India, 1947.

3.42 Commercial banks had a regional focus, as alluded to earlier. West Bengal had the largest number of scheduled commercial banks, followed by Madras and Bombay. As regards the non-scheduled banks, Madras had the largest number, followed by a distant second and third by West Bengal and Bombay, respectively (Table 3.11).

Bank Failures and Liquidation/Consolidation of Smaller Banks

3.43 The partition of the country hurt the domestic economy, and the banking sector was no different. Of the 84 banks operating in the country in the organised sector before partition, two banks were left in Pakistan. Many of the remaining banks in two States of Punjab and West Bengal were deeply affected. In 1947, 38 banks failed, of which, 17 were in West Bengal alone, having total paid-up capital of Rs.18 lakh. The paid-up capital of banks that failed during 1947 amounted to a little more than 2 per cent of the paid-up capital of the reporting banks.[15] The average capital of the failed banks between 1947 and 1955 was significantly lower than the average size of paid-up capital of reporting banks in the industry, suggesting that normally it was small banks that failed (Table 3.12).

[14] "Central Banking in India, A Retrospect", Speech by Shri C.D Deshmukh for the Shri R.R.Kale Memorial Lecture at Gokhale Institute of Politics & Economics, 1948.

[15] Reporting banks included banks in categories A1, A2, B, C and D.

Table 3.12: Number of Banks Failed – 1947-1955

(Amount in Rs. lakh)

Year (January-December)	No. of Failed Banks	Paid-up Capital of Failed Banks	Average Paid-up Capital of the Failed Banks	Average Paid-up Capital of the Reporting Banks*
1	2	3	4	5
1947	38	83	2	105
1948	45	183	4	90
1949	55	131	2	84
1950	45	129	3	102
1951	60	62	1	73
1952	31	16	1	139
1953	31	114	4	135
1954	27	48	2	154
1955	29	47	2	142

* : Reporting banks include banks in categories A1, A2, B, C and D.
Source : Statistical Abstract Relating to Banks in India, various issues.

3.44 The year 1948 was one of the worst years for the relatively larger banks as 45 institutions (out of more than 637 banks) with paid-up capital averaging about Rs.4 lakh were closed down. They failed as they had over-reached themselves by opening more branches than they could sustain on the strength of their resources and by making large loans against property or inadequate security. Some of these, however, had prudential issues as they were functioning with very low capital base. Repeated bank failures caused great hardships to the savers. Failures also reduced faith in the banking system. Most of the savings during this period were in the form of land and gold. Household savings constituted 66 per cent of the total domestic savings. Of the total household savings, 89 per cent were in physical assets.[16] Financial savings flowed in greater measure to the postal department that was considered a safer avenue due to government ownership. Bank deposits mobilised by commercial banks were largely lent out to security based borrowers in trade and industry.

3.45 The first task before the Reserve Bank after independence, thus, was to develop a sound structure along contemporary lines. It was recognised that banks and banking soundness were crucial in promoting economic prosperity and stability. Banks, through their spread and mobilisation of deposits, promote the banking habits and savings in the economy. This could help in garnering resources for investment and development. The initiation of planned economic development required the banking industry to spread far and wide to augment deposit mobilisation and provide banking services.

3.46 The issue of bank failure in some measure was addressed by the Banking Companies Act, 1949 (later renamed as the Banking Regulation Act), but to a limited extent. The Banking Companies Act of 1949 conferred on the Reserve Bank the extensive powers for banking supervision as the central banking authority of the country.[17] It focused on basic prudential features for protecting the interests of depositors and covered various aspects such as organisation, management, audit and liquidation of the banking companies. It granted the Reserve Bank control over opening of new banks and branch offices, powers to inspect books of accounts of the banking companies and preventing voluntary winding up of licensed banking companies. The Act was the first regulatory step by the Government of independent India, enacted with a view to streamlining the functioning and activities of commercial banks in India. The Act was long overdue as the Indian Central Banking Enquiry Committee had, in 1931, recommended the enactment of such an Act for India. The most effective of the supervisory powers conferred on the Reserve Bank was the power to inspect banking companies at any time. The Reserve Bank was empowered to inspect any banking company with the objective of satisfying itself regarding the eligibility for a licence, opening of branches, amalgamation, compliance with the directives issued by the Reserve Bank. A key feature contained in this Act was to describe 'banking' as distinct from other commercial operations. This was in line with the traditional role of commercial banks, where banks were considered as a special entity in the financial system, requiring greater attention and separate treatment (Selgin, 1996).

3.47 The Banking Companies Act, however, had some limitations. It did not have adequate provisions against abuse of the powers by persons, who controlled the commercial banks' managements. The

[16] Handbook of Statistics on the Indian Economy, 2006-07.

[17] The Act (No.23 of 1965) substituted the word "Regulation" for the word Companies; the Act was renamed as the Banking Regulation Act, 1949 effective March 1, 1966.

Reserve Bank in July 1949 decided to organise efficient machinery for the systematic and periodical inspection of all banking companies in the country, irrespective of their size and standing. The ultimate aim was to create an organisation for the annual inspection of every bank. It was made clear that the primary objective of the inspections was to assist the banks in the establishment of sound banking traditions by drawing their attention to defects or unsatisfactory features in their working methods before they assumed serious proportions necessitating drastic action. The task of evolving an efficient machinery and organisation for conducting the inspections of all the banks was a formidable one.

3.48 Bank failures continued in the period after independence and after the enactment of the Banking Companies Act, although such failures reduced considerably. In order to protect public savings, it was felt that it would be better to wind up insolvent banks or amalgamate them with stronger banks. Accordingly, in the 1950s, efforts were tuned towards putting in place an enabling legislation for consolidation, compulsory amalgamation and liquidation of banks. This was required as the then existing procedure for liquidation was long and time consuming. It involved proceedings in the High Court and caused significant cost and hardship to the depositors. Similarly, the suspension of business was also a long drawn process for licensed banking companies as it involved declaration of moratorium, appointment of official liquidator by the High Court and inspection of the books and accounts of the respective banking companies by the Reserve Bank. Voluntary winding up was an easy exit route for banking companies that were not granted a licence under Section 22, as the provisions of Section 44 did not apply to such banking companies and the prior permission of the Reserve Bank was not required before voluntary liquidation of such companies. This made it easy for the fly-by-night operators to voluntarily wind-up their operations. Many non-scheduled banks, especially in West Bengal became untraceable. Of the 165 non-scheduled banks reported to exist in June 1954, the whereabouts of 107 banks were not known.[18] The licence of all of these and the remaining non-scheduled banks, barring six, was cancelled.

3.49 The Travancore – Cochin region also had a large number of small banks. According to a survey by Travancore – Cochin Inquiry Committee in 1954, out of 163 banks in the region, as many as 136 were small set up in hamlets. Of these, only 16 had deposits above Rs.40 lakh. The working capital of 95 banks was less than Rs.10 lakh. Thirty-nine banks had capital and reserves below the level applicable to them under Section 11 of the Banking Companies Act 1949. The Committee suggested that these banks be given time to enhance their capital. Eighteen banks were refused licences. Elsewhere in India, the banks faced fewer problems. At the all-India level, in December 1957, only 21 banks were refused licences as they were beyond repair.

3.50 Even some bigger banks such as the Palai Central Bank were not performing well. Their performance was marred by the poor level of reserves and high percentage of unsecured advances. The Reserve Bank's Committee of the Central Board in October 1952 considered the possibility of the bank being excluded from the second schedule of the Reserve Bank Act on the basis of the irregularities as pointed out by the inspection report.[19] The Reserve Bank had two options, *viz*., to exercise its powers to close the bank or to nurse it back to normalcy. The first option was easy but was fraught with risks that it might precipitate a systemic crisis. The second option was more difficult. With the interest of depositors in mind, the Palai Bank was given time to improve its working and it was placed under moratorium. However, the bank failed in 1960. There was a public and parliamentary outcry after this failure that speeded up the move towards the requisite legislation to tackle bank failures.

3.51 In the wake of this development, amalgamation of banks was seen as a solution. The moratorium and consequent amalgamation of the Kerala banks ushered in a new era of rapid consolidation of the Indian banking system. Accordingly, the Banking Companies (Amendment) Act 1961 was enacted that sought, *inter alia,* to clarify and supplement the provisions under Section 45 of the Banking Companies Act, which related to compulsory reconstruction or amalgamation of banks. The Act enabled compulsory amalgamation of a banking company with the State Bank of India or its subsidiaries. Until that time, such amalgamation was possible with only another banking company. The legislation also enabled amalgamation of more than two banking companies by a single scheme. Detailed provisions relating to conditions of service of

[18] As referred to in the Reserve Bank(History) Volume II, page 465.

[19] RBI History Vol. II pg 791.

Table 3.13: Commercial Banks Amalgamated - 1954-66

(Amount in Rs. Lakh)

Year (January-December)	Banks Compulsory Amalgamated under section 45 of BR Act 1949			Banks Voluntarily Amalgamated under section 44 A of BR Act 1949			Banks otherwise Ceased to Function/ Transferred their Liabilities and Assets to other banks		
	No. of Banks	Paid-up capital	Deposits	No. of Banks	Paid-up capital	Deposits	No. of Banks	Paid-up capital	Deposits
1	2	3	4	5	6	7	8	9	10
1954	–	–	–	–	–	–	17	25	88
1955	–	–	–	–	–	–	11	23	20
1956	–	–	–	–	–	–	6	11	47
1957	–	–	–	1	5	115	10	19	23
1958	–	–	–	4	56	523	10	15	63
1959	–	–	–	4	4	33	20	26	110
1960	–	–	–	2	1	3	15	34	40
1961	30	198	1722	–	–	–	9	17	142
1962	1	1	6	3	20	122	22	55	134
1963	1	1	7	2	3	16	15	34	781
1964	9	36	438	7	23	147	63	55	569
1965	4	13	54	5	3	39	24	59	501
1966	–	–	–	–	–	–	7	19	453

'-' : Nil or negligible.

Source : Statistical Tables Relating to Banks in India, RBI, 1962 and 1966.

employees of banks, subject to reconstruction or amalgamation, were also laid down.

3.52 Between 1954 and 1966, several banks were either amalgamated or they otherwise ceased to function or their liabilities and assets transferred to other banks. During the six year period before the Reserve Bank was formally given the powers in 1960 to amalgamate banks, a total number of 83 banks were amalgamated. However, between the period from 1960 to 1966, as many as 217 banks were amalgamated under different provisions such as under Section 45 of the BR Act 1949 (compulsory amalgamation) and Section 44 A of BR Act 1949 (voluntary amalgamation). Liabilities and assets of those banks which otherwise ceased to function were transferred to other banks. In the year 1960 alone, as many as 30 banks were amalgamated. However, as a conscious policy, the smaller but well-functioning banks were not consolidated. The transferring the assets and liabilities to other banks proved to be a popular exit route. In 1964 alone, as many as 63 banks went out of business (Table 3.13). The process of bank consolidation was accompanied by a vigorous bank licensing policy, wherein the Reserve Bank tried to amalgamate the unviable units. A number of banks that did not comply with the requisite norms were also delicensed.

3.53 The process of strengthening of the banking sector also took the form of weeding out the unviable banks by liquidation or the taking of the assets of the non-functioning banks by other banks. During the period 1954 to 1959 as many as 106 banks were liquidated. Of these, 73 banks went into voluntary liquidation and 33 went into compulsory liquidation. Between 1960 to 1966, another 48 banks went into liquidation (Table 3.14).

3.54 The policy of strengthening of the banking sector through a policy of compulsory amalgamation and mergers helped in consolidating the banking sector. The success of this could be gauged from the visible reduction in the number of non-scheduled banks from 474 in 1951 to 210 in 1961 and further to 20 in 1967. Their branch offices declined from 1504 in 1951 to 622 in 1961 and to 203 in 1967 (Table 3.15).

3.55 The bank failures and the hardship caused to the depositors led the Reserve Bank to provide safety nets to depositors. The Banking Companies (Second Amendment) Act, 1960, which came into force in September 19, 1960 sought to facilitate expeditious payments to the depositors of banks in liquidation and also vested the Government and the Reserve Bank with additional powers to rehabilitate banks in difficulties. Prior to the Amendment, the procedure for determination of claims of secured creditors and other persons entitled to preferential treatment was mainly responsible for a good deal of delay in the payment to depositors of banks in liquidation. The new provision required that such

Table 3.14: Commercial Banks under Liquidation - 1954-66

(Amount in Rs. '000)

Year (January-December)	Banks which went into Voluntary Liquidation			Banks which went into Compulsory Liquidation		
	No. of Banks	Paid-up capital	Deposits	No. of Banks	Paid-up capital	Deposits
1	2	3	4	5	6	7
1954	14	1374	96	6	2846	1140
1955	11	2655	199	6	2510	10102
1956	16	1452	499	6	695	1812
1957	16	1682	1659	3	917	2876
1958	9	927	1135	5	1367	10209
1959	7	566	6	7	2722	506
1960	4	238	34	5	5375	107027
1961	5	403	814	3	1106	3332
1962	4	786	12	3	969	5145
1963	1	90	11	1	224	1108
1964	3	225	–	–	–	–
1965	6	703	–	3	1359	137
1966	7	703	–	3	225	21

'-' : Nil or negligible.

Source : Statistical Tables Relating to Banks in India, 1962 and 1966.

preferential payment should be made or provided for within three months from the date of the winding-up order or within three months from the date of commencement of the Amendment Act in respect of banks which had gone into liquidation earlier. It further provided that after the preferential payments, the three-month period as specified in the Act, every saving bank depositor should be paid the balance at his credit, subject to a maximum of Rs.250.

3.56 In order to ensure the safety of deposits of small depositors in banks in India, the Deposit Insurance Corporation Act, 1961 was enacted. Accordingly, Deposit Insurance Corporation of India was established in January 1962. India was then one of the few countries to introduce such a deposit insurance; the US was the first country to introduce the deposit insurance. This scheme was expected to increase depositors' confidence in the banking system and was expected to facilitate the mobilisation of deposits and help promote the spread and growth of the banking sector. The Corporation provided insurance cover against loss of all or part of deposits with an insured bank up to a certain level.

Table 3.15: Scheduled and Non-Scheduled Commercial Banks in India

(End-December)

Category of banks	1961	1966	1967
1	2	3	4
1. Number of Banks (Reporting)	292	100	91
(a) Scheduled Banks	82	73	71
(b) Non-scheduled Banks	210	27	20
2. Number of Offices of Banks in India	5012	6593	6982
(a) Scheduled Banks	4390	6380	6779
(b) Non-scheduled Banks	622	213	203

Source: Banking Commission 1971 and Statistical Tables Relating to Banks in India (various issues).

3.57 As a regulator of the banking system, the Reserve Bank was empowered by the Banking Companies Act to inspect banks. The instances of failures of banks in Kerala that occurred due to misappropriation of depositors' funds by directors underscored the need to strengthen the mechanism of inspection. Accordingly, changes in the policy regarding inspection were made to undertake surprise inspection of banks, and cover many more branches than in the past to detect frauds. The legislative changes that followed took shape in the insertion of a new Chapter IIIA in the RBI Act in 1962. The entire purpose of regulation of banking was to plug the loopholes in law that permitted any irregularity. An amendment Act passed in 1963, which became effective February 1, 1964, gave further powers to the Reserve Bank, particularly to restrain the control exercised by particular groups of persons over the affairs of banks and to restrict loans and advances as well as guarantees given by banks. It also enlarged the Reserve Bank's powers of control in the appointment and removal of banks' executive personnel.

Lending to Agriculture and Spread of Banking to Rural Areas

3.58 With independence, not only did the operating environment change but policies also were geared towards planned objectives. Regulation was also aligned to the attainment of these objectives. The adoption of the Constitution in 1950 and the enactment of the State Reorganisation Act in 1956 brought banking in the entire country under the purview of the Reserve Bank. These also enhanced the ambit of the Reserve Bank as a banker to the Government. The Reserve Bank was expected to fill the resource gap for planned purposes. The First Five Year Plan observed that central banking in a planned economy could hardly be confined to the regulation of the overall supply of credit or to a somewhat negative regulation of the flow of bank credit. It would have to take on a direct and active role (i) in creating or helping to create the machinery needed for financing developmental activities all over the country; and (ii) ensuring that the finance available flows in the directions intended.

3.59 The Government's desire to use banking as an important agent of change was at the heart of most policies that were formulated after independence. These were the first attempts at enhancing the outreach of institutional credit. In India, thus, there was very little support for 'passive' or 'pure' role of banking. Banks were considered unique among financial institutions and were assigned a developmental role from the beginning of the planned era. Resources amassed from deposit mobilisation were required to be channeled to the most productive uses and the banking system was expected to function as an efficient conduit of the payment system. In doing this, the banking sector was expected to spread the institutional credit across the country. The need for these changes stemmed from the fact that at the time of independence of the country, the banking sector in India was relatively small, weak and concentrated in the urban areas. Most banks in the organised sector engaged primarily in extending loans to traders dealing with agricultural produce.

3.60 Banking had not penetrated into the rural and semi-urban centres and usury was still having a field day. A great degree of inter-linkage of markets of agricultural output and credit existed with the agricultural moneylender and traders giving advances to the cultivator and purchasing his produce at less than the market price. Such an inter-linkage between the credit and the output markets had sustained high interest rates and low product price cycles that brought about a high-interest rate-high debt-low income kind of equilibrium. This was sustained as institutional bank credit was not available to agriculture, small industries, professionals and self-employed entrepreneurs, artisans and small traders. Researchers found that since the rural credit markets were isolated, the moneylenders/landlords could act as monopolists and charge exorbitantly high rates of interest to cultivators (Bhaduri, 1977). The inter-linkage of markets of output, credit and labour could be effectively broken only by the spread of the institutional credit. Co-operatives had penetrated into the rural sector but were weak. At the time of independence, most of the bank credit went to commerce and industry, and very little to agriculture (Table 3.16). This was despite the fact that agriculture constituted about 55 per cent of GDP in 1950.

3.61 Lack of knowledge of the area caused asymmetry of information and the grant of small agricultural loans required the banks to maintain a large number of small accounts that were both time-consuming and less profitable. Besides, lending

Table 3.16: Sectoral Deployment of Credit by Scheduled Commercial Banks

As at End	Total (Rs. crore)	Share in Total (per cent)				
		Industry	Commerce	Agriculture	Personal and Professional	Others
1	2	3	4	5	6	7
December, 1949	439	30.4	51.4	1.9	8.7	7.6
March 1950	498	31.5	52.1	2.3	7.9	6.3
June, 1950	476	32.5	50.1	3.2	8.2	6.0
September, 1950	438	34.0	47.6	3.3	9.4	5.6
December , 1950	476	32.0	51.7	2.3	8.9	5.1

Source: Trend and Progress of Banking in India, RBI 1951-52.

operations were largely security based and the small borrowers had very little security apart from their land, which was often not unencumbered. According to the All India Rural Credit Survey Committee, the total borrowing of the farmers was estimated at Rs.750 crore in 1951-52. Of this, commercial banks provided only 0.9 per cent, agriculturist moneylenders provided 24.9 per cent and professional money lenders another 44.8 per cent. Thus, the financial system at the time of independence was typically underdeveloped. In 1951, there were 551 commercial banks in the country. The bank office to population ratio was at a staggering one branch per 1,36,000 persons.[20] Saving habits had also not developed adequately, with the saving rate being at 10 per cent of national income. The underdeveloped banking system was characteristic of a more general lack of depth in the financial system. The needs of the agricultural sector were not met adequately as the banks had no expertise or desire to expand their rural operations. Moreover, banks were run by business houses with other considerations such as profit and financing parent industries. The agricultural operation did not interest many of them.

3.62 Extending the banking facilities to the rural areas was a prominent objective at the time of independence. It was suggested that the Imperial Bank of India should extend its branches to *taluka* or *tehsil* towns where the volume of government transactions and business potentialities warranted such extension.[21] The Imperial Bank of India was given a target of opening 114 offices within a period of 5 years commencing from July 1, 1951. Other commercial banks and co-operative banks were advised to endeavour to extend their branches to the *taluka* towns, smaller towns and semi-urban areas. For the villages, it was considered desirable that the machinery of the postal savings banks and co-operative banks should be expanded and more fully utilised. As against the intention to open 114 branches in 5 years, the Imperial Bank of India could open only 63 branches till June 20, 1955.

3.63 The Reserve Bank assumed a unique role in this context that was occasioned by the predominantly agricultural base of the Indian economy and the urgent need to expand and co-ordinate the institutional credit structure for agriculture and rural development. The policy initiative by the Reserve Bank/Government was three-fold. First, to understand the dimension of the problem, a committee was set up. Second, the Imperial Bank of India was nationalised. Third, to address the issue of training of the bank officials in the area of agricultural banking, an institution was set up.

3.64 In order to understand the grass root level situation to be able to address the concerns regarding the financing of the rural sector, the Reserve Bank commissioned the All India Rural Credit Survey Committee (AIRCS) in 1951. The AIRCS survey results were submitted in August 1954 and published in December the same year. The survey had very clear suggestions regarding the Reserve Bank's development role. The agenda for action and institution-building proposed by the All-India Rural Credit Survey Committee was, by almost any reckoning, impressive in scope and ambition.[22] Equally more impressive were its principal recommendations. In fact, many of the changes that took place on the banking scene in India had their genesis in the recommendations of this report. The basic idea that the survey upheld was that banking should help to alleviate problems faced by the average Indian. The Survey Committee observed that the main deficiency of the rural credit system was its lack of focus. The Committee of Direction that conducted this survey observed that agricultural credit fell short of the right quantity, was not of the right type, did not serve the right purpose and often failed to go to the right people. The Committee also observed that the performance of co-operatives in the sphere of agricultural credit was deficient in more than one way, but at the same time, co-operatives had a vital role in channeling credit to the farmers and, thus, summed up that *"co-operation has failed, but co-operation must succeed"* (Mohan, 2004a). The Committee visualised co-operative credit to be very suitable to address the financial needs of agricultural operations, especially for specialised areas such as marketing, processing and warehousing. It noted that the Imperial Bank of India's vigorous involvement in promoting the institutionalisation of credit to agriculture could be crucial and recommended the statutory amalgamation of the Imperial Bank of India and major state associated banks to form the State Bank of India (SBI). The Report indicated that the nationalisation

[20] RBI History, Volume II, Page 1.

[21] Rural Banking Enquiry Committee (1950).

[22] RBI History Vol. I.

would be able to initiate an expeditious programme of bank expansion, particularly in rural areas.[23] The creation of SBI was expected to ensure that the banking sector moved in consonance with national policies. It was also expected to foster the growth of the co-operative network. According to the Survey, a major obstacle to the establishment of co-operative banks in rural areas was the absence of facilities for the cheap and efficient remittance of cash. Only the Imperial Bank (through the currency chests it got from the Reserve Bank) could offer such facilities.

3.65 The Government, therefore, first implemented the exercise of nationalisation of the Imperial Bank of India with the objective of "extension of banking facilities on a large scale, more particularly in the rural and semi-urban areas, and for diverse other public purposes". The Imperial Bank of India was converted into the State Bank of India in 1955 with the enactment of the State Bank of India Act, 1955. The nationalisation of the State Bank was expected to bring about momentous changes in the focus from 'credit worthiness' to 'purpose worthiness'. The idea was to gear the banks into institutions that work as efficient conduits in the process of rapid socio-economic development. A great care was taken to maintain an arm's length relationship between the SBI and the Government. It was in this context that the ownership of SBI was vested with the Reserve Bank. It was felt that the Reserve Bank would be able to safeguard the new institution from political and administrative pressures and ensure its adherence to sound banking principles and high standards of business even while orienting its policy broadly towards the desired ends. It was also believed that this step would preserve the corporate character of the Imperial Bank though under the changed name[24].

3.66 The State Bank of India, which was required to open 400 branches within 5 years in unbanked centres, exceeded the target by opening 416 branches (Mathur, 1995). The SBI was envisaged to act as the principal agent of the Reserve Bank to handle banking transactions of the Union and the State Governments throughout the country. The step was, in fact, in furtherance of the objectives of supporting a powerful rural credit cooperative movement in India. Its establishment led to a great deal of change in the banking scenario. With the setting up of the State Bank of India, a large number of branches were opened in unbanked centres. The 'Government' ownership of the State Bank of India helped it to compete with 'safe' avenues like post offices and physical savings. The sustained efforts to expand branch network had a positive impact on deposit mobilisation by banks and the overall savings rate. Aggregate deposits of scheduled commercial banks, which registered a negative growth in 1951-1953 and a small positive growth of 1.9 per cent in 1953-54, grew by 10-12 per cent during the period 1954-55 and 1956-57 (Table 3.17). The increased deposit mobilisation was also facilitated by the increased income levels. The Five Year Plan had a high multiplier effect on the economy. The income levels rose rapidly, which led to the spread of banking habits.

Table 3.17: Scheduled Commercial Banks - Deposit Mobilisation

(Amount in Rupees crore)

Year (April –March)	Demand Deposits	Growth Rate of Demand Deposits (per cent)	Time Deposits	Growth Rate of Time Deposits (per cent)	Aggregate Deposits (2+4)	Growth Rate of Aggregate Deposits (per cent)
1	2	3	4	5	6	7
1951-52	566	-4.4	286	-1.4	852	-3.4
1952-53	522	-7.8	310	8.4	832	-2.3
1953-54	522	0.0	326	5.2	848	1.9
1954-55	568	8.6	375	15.0	943	11.2
1955-56	631	11.1	412	9.9	1043	10.6
1956-57	703	11.5	472	14. 6	1176	12.7

Source : Handbook of Statistics on the Indian Economy, 2006-07 (RBI).

[23] RBI History Volume I, pg 238.

[24] RBI History Volume II, pg 338.

3.67 The increased deposit mobilisation by banks had a favourable impact on financial savings, which grew sharply during 1954-55 to 1955-56. A part of the increased financial savings during 1953-54 and 1955-56 emanated from conversion of physical savings into financial savings (Table 3.18).

3.68 Eight banks that then formed subsidiaries of SBI were nationalised in 1960. This brought one-third of the banking segment under the direct control of the Government. The idea was to spread institutional credit far and wide in order to free the average Indian from the often exorbitant interest rate-debt cycle.

3.69 Another recommendation of the Committee related to the restructuring of the short-term co-operative credit structure and the reorganisation of the institutions specialising in longer-term lending for agricultural development. The Report drew attention towards the need to have adequate institutional credit for medium-term lending to agriculture. These efforts culminated in the creation of Agricultural Refinance Corporation of India in 1963, which was to provide funds by way of refinance. To finance such investments, the Agricultural Refinance Corporation (ARC) was set up by the Act of July 1, 1963. Its objective was to refinance central land mortgage banks, State co-operative banks and scheduled commercial banks.

3.70 In order to address the genuine shortage of trained and experienced professional managers in the banking sector, the Reserve Bank took over the task of providing training facilities for the personnel involved in agri-rural development, co-operative banking and related areas to tone up effectiveness of their managerial staff. Accordingly, the Bankers' Training College was set up by the Reserve Bank in 1954 for "the purpose of imparting training to bank personnel and improving the quality of management of banks in India".[25]

3.71 The Banking Companies Act (section 23) required the banks to obtain the permission of the Reserve Bank before opening a new place of business. The mandate of spreading the umbrella of institutional credit was addressed by putting in place a 'New Branch Licensing Policy' in May 1962. The bank expansion policy put in place some entry level norms to take care of prudential requirements like in many other countries that had put in place extensive legal and regulatory norms for entry of banks. The rationale was to reinforce the bank's internal governance structure and to ensure market discipline. This policy also addressed the social goal of spread of banking as it laid the stress on starting banks in unbanked areas. The identification of unbanked areas was undertaken by examining the data on population per bank office. The new licensing policy marked a change in focus for extension of the banking facilities throughout the country. Prior to the initiation of new policy, branch licenses were granted primarily on the basis of the financial position of banks. It was felt that by linking the grant of permission to open new offices with the financial position of the applicant bank, the general quality of its management, the adequacy of its capital structure and its future earnings prospects could be addressed. With the issue of viability of the banks, the expansion of smaller banks would be discouraged. That is, the policy discriminated in favour of larger and all-India banks.

Table 3.18: Household Sector Savings

(Amount in Rupees crore)

Year (April-March)	Household sector Financial Savings	Growth in Household sector Financial Savings (per cent)	Household sector Physical Savings	Growth in Household sector Physical Savings (per cent)	Total Household Savings (2+4)	Growth in Total Household Savings (per cent)	Gross Domestic Savings	Growth in Gross Domestic Savings (per cent)	Total Household Savings to GDP (per cent)
1	2	3	4	5	6	7	8	9	10
1951-52	14	-77.4	532	3.1	546	-5.5	969	11.3	5.3
1952-53	72	414.3	527	-0.9	599	9.7	845	-12.8	5.9
1953-54	142	97.2	474	-10.1	616	2.8	875	3.6	5.6
1954-55	282	98.6	389	-17.9	671	8.9	988	12.9	6.5
1955-56	429	52.1	562	44.5	991	47.7	1356	37.3	9.4

Source : Handbook of Statistics on the Indian Economy, RBI 2006-07.

[25] RBI History Vol. II page 425.

Table 3.19: Branch Expansion of Commercial Banks

End-December	Rural	Semi Urban	Urban/ Metropolitan	Total
1	2	3	4	5
1952	540 (13.3)	1942 (47.8)	1451 (35.7)	4061#
1960	831 (16.5)	2512 (50.0)	1633 (33.5)	5026
1965	801 (13.1)	2836 (46.2)	2354 (38.4)	6133*
1967	1247 (17.9)	3022 (43.3)	2716 (38.9)	6985

: 128 branches were unclassified
* : 142 branches were unclassified
Note : Figures in parentheses are percentage to total.
Source : Statistical Abstract Relating to Banks in India, various issues.

3.72 In every single year between 1913 and 1955, several banks failed in India (Annex III.1). The number of reporting banks increased till 1945, but declined steadily thereafter (Annex III.2).

3.73 The number of branches increased significantly between 1952 and 1960 and further between 1960 and 1967. The population per office declined from 1,36,000 in 1951 to 92,000 in 1960 and further to 65,000 in 1967. However, the pattern of branches in rural/semi-urban and urban/metropolitan centres remained broadly unchanged (Table 3.19). The share of agriculture in credit dispensed by scheduled commercial banks also did not improve. Credit to agriculture constituted only 2.2 per cent, *i.e.,* an increase of merely 0.1 per cent between 1951 and 1967 in sharp contrast to almost doubling of the share of industry from 34 per cent in 1951 to 64.3 per cent in 1967 (Table 3.20).

Table 3.20: Advances of Scheduled Commercial Banks to Various Sectors

(Amount in Rupees crore)

Sector	End- March 1951		End- March 1967	
	Amount	Share in Total Advances (per cent)	Amount	Share in Total Advances (per cent)
1	2	3	4	5
Industry	199	34.0	1747	64.3
Commerce	211	36.0	527	19.4
Financial	74	12.7	97	3.6
Personal	40	6.8	115	4.2
Agriculture	12	2.1	57	2.2
Others	49	8.4	174	6.3
Total	**585**	**100**	**2716**	**100**

Source : Report on the Trend and Progress of Banking in India, 1951-52 and 1967-68.

Emergence of Administered Structure of Interest Rates and Micro Controls

3.74 This period was also difficult for monetary policy as it had to accommodate fiscal policy that was under pressure on account of two wars and a drought. The rising deficit and the accompanying inflation led to an administered structure of interest rates and several other micro controls. In early years, the Reserve Bank relied on direct control over the lending rates of banks, rather than indirect instruments such as the Bank Rate for influencing the cost of bank credit. This was generally done by stipulating *minimum* rates of interest. The exigencies also required further sub-classification of interest rates with *minimum* lending rates being separately prescribed for credit against various commodities covered under selective credit control. Also, concessional or *ceiling* rates of interest were made applicable to advances for certain purposes or to certain sectors to reduce the interest burden, thereby facilitating their development. Interest rates on deposits were also regulated in September 1964. The objectives behind fixing the rates on deposits were to avoid unhealthy competition amongst the banks for deposits and keep the level of deposit rates in alignment with the lending rates of banks to ensure the profitability of banks. Prior to these, changes in interest rates were governed by voluntary inter-bank agreements amongst the important Indian and foreign banks which used to fix ceilings on interest rates. Thus, interest rate regulations were aimed at satisfying the conflicting objectives such as enhancing savings rate, while keeping the cost of credit for productive activities at a reasonably low level. These seemingly opposing objectives were addressed by setting the interest rates according to depositor, borrower, purpose, the background of the borrower, his economic status, type of activity for which the credit was granted and the amount of such credit. Some change in the pattern of deposits was also sought to be achieved by change in the interest rate across the deposit categories. To encourage long-term deposits, the ceilings on deposit rates as well as specification of floors for longer term deposits were prescribed. The need for resources for planned development gradually increased the Government borrowing. The overriding objective of keeping the cost of Government borrowing low, in addition to objectives of promoting growth, and the difficulty in reducing interest rates on bank deposits once they were raised, brought in considerable inflexibility in interest rate determination. While in some measure, all the avowed objectives were addressed, the interest rates ceased to function as a signal of monetary policy. The banks

usually compete with each other by setting competitive interest rates. However, under the administrative set-up, the spreads of the banks were well worked out and the banks lost all initiative to optimise their resources, offer competitive rates and retain business. The net result was that borrowers had to pay higher interest rates. Because of the administered structure of interest rates, banks also could not price their products depending on the creditworthiness of the borrowers which also led to misallocation of resources.

3.75 The period during 1961 to 1967 was particularly difficult for the nation. These years witnessed two wars and a series of poor harvest seasons. Given the unstable situation and increased requirement of the public expenditure to be financed against the backdrop of a stagnating agriculture, the Government left no effort spared to ensure that the resources of the banking sector did not go into speculative or unproductive channels. Inflation was high and at times shortages also developed.

3.76 In 1966, the banking sector was increasingly subjected to selective credit controls. The issue of concentration of resources in the hands of a few entities starved the genuinely productive sectors. It was, therefore, decided to take measures to promote effective use of credit and prevent the larger borrowers from pre-empting scarce credit and enlarging the spectrum of borrowers covered by bank credit in the overall context of national priorities as enunciated over the years. Under the Credit Authorisation Scheme(CAS) introduced in 1965, the commercial banks were required to obtain prior permission of the Reserve Bank for sanctioning any fresh working capital limits above the prescribed norm which was revised from time to time. It was first set at Rs. one crore or more to any single party or any limit that would take the total limits enjoyed by such a party from the entire banking system to Rs. one crore or more, on a secured and/or unsecured basis. While in the first few years, the CAS meant no more than a scrutiny of proposed credit facilities with a view to ensuring that large borrowers were not unduly favoured by banks, in the subsequent years, it was seen as a means to achieving a closer alignment between the requirements of the Five Year Plans and the banks' lending activities.

3.77 To sum up, the banking scenario that prevailed in the early independence phase had three distinct disquieting features. One, bank failures had raised the concerns regarding the soundness and stability of the banking system. Two, there was large concentration of resources from deposits mobilisation in a few hands of business families or groups. Banks raised funds and on-lent them largely to their controlling entities. Three, agriculture was neglected insofar as bank credit was concerned. A major development during this period was the enactment of the Banking Regulation Act empowering the Reserve Bank to regulate and supervise the banking sector. These powers become necessary as banks continued to fail even after the Independence, although the number of banks that failed declined. The Reserve Bank was fairly successful in improving the safety and soundness of the banking sector over time as several weak banks (most of which were non-scheduled) were weeded out through amalgamations/liquidations. As a result, the number of non-scheduled banks declined sharply from 475 in 1951 to 20 in 1967. The banking sector grew steadily due to the impetus from the 'multiplier' effect of large public investments that led to higher incomes and structural changes in the economy during this period.

3.78 With the advent of planning for economic development and the growing social awareness of the role of bank credit in the economy, it was felt that the then commercial bank lending system had little social content and that it aided concentration of economic power. It was felt that the system was unresponsive to the needs of the weaker sections of the economy, small industry and agriculture, as it concentrated on lending to large customers. Although the Indian banking system had made considerable progress in the 1950s and the 1960s, the benefits of this did not flow down to the general public in terms of access to credit. This was primarily due to the nexus between banks and industrial houses that cornered bulk of bank credit, leaving very little for agriculture and small industries. Such an allocation of bank credit was not consistent with the goals of achieving equitable allocation of credit and the relative priorities set out in the Five Year Plans. The credit gaps between the requirement and supply of institutional credit were not necessarily filled by the co-operatives. Efforts, therefore, were made to increase the flow of credit to agriculture.

3.79 On the eve of independence, the banking system was concentrated primarily in the urban and metropolitan areas. During the early independence period, the efforts were made to spread banking to rural and neglected areas, especially through the State Bank of India and through the branch licensing policy. The number of bank branches rose from 4151 in 1951 to 7025 in 1967. This rise was mainly on account of rise in the number of branches of scheduled commercial banks that rose from 2647

offices (of 92 scheduled commercial banks) in 1951 to 6816 offices (of 71 SCBs) in 1967. The average population per branch declined from 1,36,000 in 1951 to 65,000 in 1967. However, during this period, the pattern of bank branches in rural and urban areas remained broadly the same. The share of agriculture in total bank credit also remained more or less at the same level between 1951 and 1967. In this period, various objectives such as enhancing the savings rates, while keeping the cost of credit for productive activities at a reasonably low level, led to a complex structure of interest rates and other micro controls. This period also witnessed several other controls such as credit authorisation scheme and selective credit controls to ensure that credit was not concentrated in the hands of a few and that it was well disbursed.

IV. SOCIAL CONTROL OVER BANKS - 1967 TO 1991

3.80 Two of the three major disquieting features related to banking at the time of independence, *viz.*, nexus between the banks and industry and neglect of agriculture continued to cause concern to the authorities even after 20 years of independence. There was apprehension that a few business houses might acquire control over a significant proportion of country's banking assets through the banks associated with them. Besides, such control might also jeoparadise the interests of the depositors if, as a consequence, banks became overexposed to individual firms or business groups.[26]

3.81 In order to address these concerns, the concept of social control over banking was introduced in December 1967 through the Banking Laws (Amendment) Act 1968, which came into force on February 1, 1969. In terms of the Act, not less than 51 per cent of the total members of the board of directors of a bank were to consist of persons who had special knowledge or practical experience in one or more of matters such as accountancy, agriculture and rural economy, banking co-operation, economics, finance, law and small scale industry. In addition, every bank was to have a whole-time chairman who was not an industrialist but was a professional banker and had special knowledge and practical experience of banking (including financial institutions) or financial, economic or business administration; his term was not to exceed five years at a time. The Reserve Bank was vested with the powers of appointment, removal or termination of the services of not only the chairman, but also of any director, the chief executive officer (by whatever name called) or any other officer or employee of a bank, whenever the circumstances so required. In exercising these functions, the Reserve Bank was required to keep in view not only the interests of the bank concerned or its depositors, but the interests of banking policy or public interest.

3.82 The main objectives of social control was to achieve a wider spread of bank credit, prevent its misuse, direct a larger volume of credit flow to priority sectors and make it more effective instrument of economic development. Social control was necessary to evolve proper guidelines for bank managements and to promote a re-orientation of their decision-making machinery in line with the plan priorities. It was felt that a purposeful and equitable distribution of credit should be ensured with the help of periodical assessment of the demand for bank credit, determination of priorities for lending and investment amongst various sectors of the economy and adequate follow-up of these by the banking system. It was expected that such a step would ensure a better alignment of the banking system with the needs of economic policy. The National Credit Council (NCC) was set up in February 1968 to assist the Reserve Bank and the Government to allocate credit according to plan priorities. It was entrusted with the task of (i) estimating the demand for bank credit from the different sectors of the economy; and (ii) fixing priorities for grant of loans or for investment after taking into account the availability of resources, and needs of the priority sectors, especially agriculture, small scale industries and exports. The council worked towards bringing about an optimum utilisation of resources by coordinating the lending and investment policy of commercial and co-operative banks and other specialised institutions. In the broader picture, the commercial banking sector and co-operatives were to supplant the usurious network of the moneylenders and its indigenous variants that charged exorbitant interest rates. In terms of the recommendations of the National Credit Council, the Banking Regulation Act was amended on February 1, 1969 in order to enable the appointments of directors with specialised knowledge or practical experience in the fields of agriculture, small scale industry, co-operation, rural economy as members of the boards of directors of commercial banks with the approval of the Reserve Bank. The scheme of social

[26] RBI (History) Volume II.

control was aimed at bringing some changes in the management and through it distribution of credit by the commercial banks and delinking the nexus between big business houses and big banks. Despite the system of social control on banks, a large segment of the population remained outside the purview of the organised sector credit.

Nationalisation of Banks and Spread of Banking

3.83 Although the banking system had made some progress in terms of deposit growth in the 1950s and the 1960s, its spread was mainly concentrated in the urban areas. The progress regarding the social objectives was not adequate. A notable feature of Indian commercial banking was the control of the major banks by leaders of commerce and industry. Banks were run to satisfy their requirements rather than along commercial principles. The consequence was the gradual erosion in the capital base of banks. The ratio of paid-up capital and reserves to deposits declined by more than 75 per cent from 9.7 per cent in 1951 to 2.2 per cent in 1969.[27] The rapid increase in deposits in relation to their owned capital enabled the industrialist shareholders to enjoy immense leverage. It was felt that if bank funds had to be channeled for rapid economic growth with social justice, there was no alternative to nationalisation of at least the major segment of the banking system. Accordingly, the Government nationalised 14 banks with deposits of over Rs.50 crore by promulgating the Banking Companies (Acquisition and Transfer of Undertakings) Ordinance, 1969. These banks were the Central Bank of India, Bank of Maharashtra, Dena Bank, Punjab National Bank, Syndicate Bank, Canara Bank, Indian Overseas Bank, Indian Bank, Bank of Baroda, Union Bank, Allahabad Bank, United Bank of India, UCO Bank and Bank of India. The objective was to serve better the needs of development of the economy in conformity with national policy objectives.

3.84 It was believed that nationalisation would mark a new phase in the implementation of the nation's avowed objectives and policies. It was also felt that bank deposits could be used for furthering the economic development of the country as a whole rather than for certain industries and business houses. Thus, the immediate tasks set for the nationalised banks were mobilisation of deposits on a large scale and on-lending those funds for all productive activities, irrespective of the size and social status of the borrower, particularly to weaker sections of the society. On the eve of nationalisation, the banks had a definite urban orientation as about 44 per cent of total deposits and 60 per cent of total credit were accounted for by the five centres (Table 3.21).

3.85 The Indian banking system underwent major structural transformation after the nationalisation in 1969. To address the issue of urban orientation, specific emphasis was laid on making banking facilities available in the then unbanked areas. This was executed through two definite steps, *viz*., by designing a specific branch licence policy and by initiating specific schemes like the Lead Bank Scheme (LBS). The LBS, launched by the Reserve Bank with

Table 3.21: Share of Major Cities in Total Deposits and Credit of Banks: End-December 1969

(Amount in Rupees crore)

Sr. No.	City	No. of Offices	Deposits		Credit		Credit-Deposit Ratio (per cent)
			Amount	Percentage share in Total	Amount	Percentage share in Total	
	2	3	4	5	6	7	8
1.	Ahmedabad	119	117	2.2	117	3.1	100.6
2.	Bombay	456	964	18.6	976	26.2	101.3
3.	Calcutta	258	573	11.2	694	18.6	121.1
4.	Delhi	296	493	9.5	200	5.4	40.6
5.	Madras	178	140	2.7	248	6.6	175.8
	Total (1 to 5)	**1,307**	**2,287**	**44.2**	**2,235**	**59.9**	**97.7**
	All India	**9,007**	**5,173**	**100**	**3,729**	**100**	**72.1**

Note : Cities with population of over 10,00,000 according to 1961 census.
Source : Statistical Tables Relating to Banks in India, 1969.

[27] Page 38, Banking Commission, 1971

a view to mobilising deposits on a massive scale throughout the country and also for stepping up lending to weaker sections of the economy, became the principal instrument for branch expansion. The 'lead bank' designated for the district was responsible for taking lead role in surveying the credit needs of the population, development of banking and of credit facilities in the district allotted to it.

3.86 Initially, all the districts of the country (barring metropolitan cities and the union territories) were allotted to 22 public sector banks (SBI and its 7 associates banks and 14 nationalised banks) and three private sector banks (Andhra Bank Ltd., Bank of Rajasthan Ltd. and Punjab and Sind Bank Ltd.). While allotting districts to the banks, the resource base of the bank concerned and regional orientation of banks were taken into consideration. Districts were allotted in clusters to facilitate control and in each State two or more than two banks were allotted the responsibility of districts. Each bank was also allotted districts in more than one State. The allotment of districts to various banks under the LBS had a major role in the spread of banking to unbanked centres. In about 5 years after nationalisation of banks, the branch network expanded by 129 per cent. The population per bank office declined from 65,000 per bank office in June 1969 to 31,660 in December 1975. Of the 10,543 new branches opened, 5,364 (50.1 per cent) were in rural areas. As a result, the share of rural branches in total bank branches increased from 17.6 per cent in 1969 to 36.3 per cent in 1975 (Table 3.22). Banks spread out first to rural areas and then building on this experience forayed further into unbanked areas. In 1977, banks were given the incentive of a license to open one branch in metropolitan and one in urban areas, as an incentive for opening four branches in rural areas.

3.87 Branch expansion continued in the 1980s. Regional distribution of bank branches also improved in the 1980s in comparison with the 1970s (Table 3.23).

3.88 While the branch licensing policy was geared to tackle the urban bias of the banking sector, it was felt that this policy alone could not address the issue of rural credit. In order to ensure that rural deposits were not used to just increase urban credit, banks were directed that each rural and semi-urban bank should maintain a credit-deposit ratio of at least 60 per cent. The credit-deposit ratios for the banks in rural and semi-urban branches were carefully monitored.

3.89 The nationalisation of banks also led to a considerable reorientation of bank lending to accelerate the process of development, especially of the priority sectors of the economy, which had not previously received sufficient attention from the commercial banks. There was a greater involvement of banks in these and other socially desirable sectors. Credit planning under the guidance of the Reserve Bank was implicit all these years. However, after nationalisation in July 1969, this got a new impetus. Integration of credit planning with economic planning and policy was implemented with rigour by the Reserve Bank. A broad credit plan tuned to the overall plan and monetary requirements was drawn up, taking into account the national priorities, the anticipated pace of deposits accretion, general economic situation and likely developments in the different economic sectors. The plan had to provide for allocation for certain activities such as Government requirements and certain essential Government

Table 3.22: Branch Network of Commercial Banks

As at end	Rural Centres	Semi-urban Centres	Urban Centres	Metropolitan Centres/Port Towns	Total	Population per Bank office
1	2	3	4	5	6	7
June 1969	1,443	3,337	1,911	1,496	8,187	65,000
	(17.6)	(40.8)	(23.3)	(18.3)		
December 1975	6,807	5,598	3,489	2,836	18,730	31,660
	(36.3)	(29.9)	(18.6)	(15.1)		
December 1980	15,105	8,122	5,178	4,014	32,419	20,481
	(46.6)	(25.1)	(16.0)	(12.4)		
December 1985	30,185	9,816	6,578	4,806	51,385	14,381
	(58.7)	(19.1)	(12.8)	(9.4)		
December 1990	34,791	11,324	8,042	5,595	59,752	13,756
	(58.2)	(19.0)	(13.5)	(9.4)		

Note : Figures within parentheses are percentage shares in total.
Sources : Banking Statistics 1972 for data for the year 1969 & Handbook of Statistics on the Indian Economy 2006-07 for other years.

Table 3.23: Region-wise Distribution of Bank Branches in India

As at End	Northern	North Eastern	Eastern	Central	Western	Southern	Total
1	2	3	4	5	6	7	8
June 1975	3,174 (17.1)	275 (1.5)	2,189 (11.8)	2,795 (15.0)	3,873 (20.9)	6,269 (33.7)	18,575 (100.0)
June 1980	5,409 (16.7)	703 (2.2)	4,778 (14.7)	5,588 (17.2)	5,790 (17.9)	10,144 (31.3)	32,412 (100.0)
June 1985	8,239 (15.7)	1,363 (2.6)	8,987 (17.1)	10,935 (20.8)	8,259 (15.7)	14,855 (28.2)	52,638 (100.0)
March 1990	9,312 (15.4)	1,772 (2.9)	10,879 (18.0)	12,747 (21.1)	9,417 (15.6)	16,388 (27.1)	60,515 (100.0)
March 1991	9,426 (15.3)	1,870 (3.0)	11,362 (18.4)	13,005 (21.1)	9,526 (15.4)	16,535 (26.8)	61,724 (100.0)

Note : 1. Figures within parentheses represent the percentage shares in total.
2. Northern Region: Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, Chandigarh, Delhi.
3. North Eastern Region : Assam, Meghalaya, Manipur, Nagaland, Tripura, Arunachal Pradesh, Mizoram.
4. Eastern Region : Bihar, Orissa, W. Bengal, Andaman & Nicobar Islands.
5. Central Region : Madhya Pradesh, Uttar Pradesh.
6. Western Region: Gujarat, Maharashtra, Goa Daman & Diu and Dadra & Nagar Haveli.
7. Southern Region: Andhra Pradesh, Kerala, Karnataka, Tamil Nadu, Puducherry, Lakshadweep.

Source : Basic Statistical Returns, various issues.

commercial operations like food procurement and buffer stock operations. Another important step was that of arriving at aggregate estimates for certain key sectors. Separate estimates were made for the busy and slack seasons, particularly in respect of sectors susceptible to seasonal changes. Against the background of this broad credit plan for the system as a whole, the individual credit plan of each bank was framed. Banks were asked to explore the scope for redeployment of existing credit and linking it to genuine productive purposes.

3.90 After the initiation of planned economic development in India, particularly in the 1960s, a high degree of emphasis was placed on deposit mobilisation by banks as one of the main ways through which the resources for the development of the economy could be enlarged. While the importance of deposit mobilisation in a resource scarce economy could hardly be overemphasised, it received a fresh impetus after nationalisation of banks. Immediately after the nationalisation, confidence in the banking sector increased, which was reflected in the sharp increase in the share of bank deposits in household savings and financial savings of households in their total saving. Conscious efforts were made to keep the deposit rates attractive. The period of nationalisation also coincided with the period of the Green Revolution and its benefits started flowing to the rural sector in terms of higher income. Rapid expansion of the branch network in rural areas, special emphasis on deposit mobilisation and rise in income levels propelled the growth of bank deposits (Table 3.24). The spread of banking and deposit mobilisation were the two most significant achievements of the nationalisation.

3.91 The growth of deposit, in turn, was led by an increase in the savings rate (Table 3.25).

3.92 Nationalisation was also visualised as a process that would entail large scale reorganisation of the nationalised banks with only one or two major banks acting as all-India banks catering to the wholesale market for credit and with a monopoly of foreign exchange business. All other banks were expected to be reorganised, merged, and re-packaged to create several entities which would work in specific regions and concentrate on agriculture, small industry and trade and the then credit-starved areas. However, such a restructuring did not take place and the *status quo* was maintained (Patel, 2002).

Table 3.24: Scheduled Commercial Banks - Average Annual Growth Rates of Deposits

(Per cent)

Period	Growth Rates of Demand Deposits	Growth Rates of Time Deposits	Growth Rates of Aggregate Deposits
1	2	3	4
1960-65	15.1	7.0	10.5
1965-70	12.6	15.8	14.3
1970-75	17.3	19.7	18.7
1975-80	8.1	30.6	21.9

Source : Handbook of Statistics on the Indian Economy, 2006-07 (RBI).

Table 3.25: Domestic Household Sector Savings

(Amount in Rupees crore)

Year (April-March)	Household sector Financial savings	Household sector Physical savings	Total Household Savings (2+3)	Household Savings as percentage of GDP
1	2	3	4	5
1968-69	795	2,327	3,122	8.5
1970-71	1,371	3,000	4,371	10.2
1974-75	2,374	5,294	7,668	10.6
1979-80	6,081	9,747	15,828	14.3

Source : Handbook of Statistics on the Indian Economy, 2006-07 (RBI).

Institution of Directed Credit and the Setting up of Regional Rural Banks

3.93 Directed credit programme involving loans on preferential terms and conditions to priority sectors was a major tool of development policy in both developed and developing countries in the 1960s. An enunciation of the need to channel the flow of credit to certain sectors of the economy, known as the priority sectors with the social objectives in mind, was first discussed in India in July 1961. However, this was merely to indicate the preference to the banks as it was felt that if the banks on their own volition addressed this issue, there would be no need of stipulation of any target. Banks were expected to play a more active and positive role in aiding sectors such as agriculture and small scale industries. Once the main constraint of credit was resolved, these sectors were expected to do reasonably well. However, the bulk of bank advances continued to be directed to large and established business houses, while agriculture, SSI and exports did not receive adequate attention. As a result, the need was felt for imposing lending stipulations.

3.94 The formal directives to channel the flow of credit to certain sectors of the economy in the larger interests of the country could be traced to the slack season 1967 when the severe imbalances, which had developed in the economy in agricultural output in 1965-66 and 1966-67, had resulted in a shortfall in agricultural output and slowing down of industrial production. At a meeting of the National Credit Council held in July 1968, it was emphasised that commercial banks should increase their involvement in the financing of priority sectors, *viz*., agriculture and small scale industries. One of the objectives of nationalisation of banks was also to ensure that no productive endeavour fell short of credit support. Beginning the early 1970s, banking policy was used as an active instrument of growth and for securing a progressive reduction in inequalities in income, concentration of economic power and regional disparities in banking facilities. A major reason for the interventionist policies for commercial banks was the conviction that some sections could not obtain credit and afford market rates of interest and should, therefore, be provided credit on a preferential basis at concessional rates of interest. As a result, the promotional aspects of banking policy came into greater prominence.

3.95 The definition of the priority sector was formalised in the 1972, although initially there were no specific targets in priority sector lending. However, in November 1974, public sector banks were advised that their priority sector lending should reach a level of not less than one-third of the outstanding credit by March 1979. National targets for advances to priority sectors as a whole, with sub-targets for weaker sections of the society were laid down. In November 1978, private sector banks were also advised to maintain one-third of their total advances to the priority sectors by the end of March 1980. Subsequently, the target was enhanced to 40 per cent of aggregate advances. A larger proportion of the banking sector's funds went to larger borrowers leaving little for the smaller ones. In the case of scheduled commercial banks, for instance, 81 per cent of total borrowing accounts were for amounts up to Rs.10,000, but they accounted for less than 4 per cent of bank credit. In order to correct for this situation, two pronged measures were taken. First, special emphasis was laid on the economic upliftment of the weaker sections of society in rural areas by stipulating specific targets (10 per cent within the overall target) . Second, to mitigate the default risk that was innate to the smaller borrowers, the Reserve Bank promoted the establishment of the Credit Guarantee Corporation of India Ltd. in 1971 for providing guarantees against the risk of default in payment. This policy encouraged the commercial banks and other institutions to grant loans to various categories of small borrowers. At a broader level, given that the incidence of poverty and lack of access to credit was more in the remote unbanked areas, the branch expansion policy was designed to reduce inter-regional disparities in deployment of credit.

3.96 The Differential Rate of Interest (DRI) Scheme was also instituted in 1972 to cater to the needs of the weaker sections of the society and for their upliftment. The scheme targeted low income people in rural areas and gave them credit at concessional rate. The target group of this scheme was landless labourers, physically handicapped persons, orphanages, women's homes, scheduled castes and scheduled tribes who did not have any tangible security to offer and to the lending institutions. The minimum quantum of lending

under this scheme for each bank was one per cent of its total advances of the previous year. The major problem faced by banks in administering this scheme as agents of the Government was proper identification of beneficiaries from among a large number of eligible borrowers so that the weakest among the eligible borrowers could benefit from the scheme.

3.97 Various measures initiated had a positive impact on lending to agriculture as the share of agricultural credit in total bank credit increased from 2.2 per cent in 1967 to 8.0 per cent in 1970-71 and further to 9.1 per cent in 1974-75 (Table 3.26). However, the improvement fell short of expectations.

3.98 It was felt that this was mainly because commercial banks were not tuned to the needs and requirements of small and marginal farmers, while the co-operatives lacked resources to meet the expected demand. The need, therefore, was felt of a separate banking structure, capable of combining the local feel and familiarity of rural problems characteristic of co-operatives and the professionalism and large resource base of commercial banks. While the idea of starting rural banks was first suggested by the Banking Commission (1972), action along these lines was initiated after the 'Twenty Point Programme' or 'New Economic Programme' of the Government of India launched in the mid-1970s. The Regional Rural Banks Ordinance was promulgated on September 26, 1975, which was subsequently replaced by the Regional Rural Banks Act on February 9, 1976. Regional Rural Banks (RRBs) were set up with a view to developing the rural economy by providing credit for the purpose of development of agriculture, trade, commerce, industry and other facilities, particularly to the small and marginal farmers, agricultural labourers, artisans and small entrepreneurs. They were expected to 'combine the rural touch and local feel with the modern business organisation'.

3.99 The Differential Rate of Interest (DRI) Scheme was modified to allow sponsor banks to route the DRI advances through RRBs on a refinance basis, in addition to the routing of such advances on an agency basis. The refinance to RRBs carried a rate of interest at 2 per cent per annum and the amount of refinance so provided was taken into account by sponsoring banks for the purpose of the target of 1 per cent of the lendings under the scheme.

3.100 In 1978, commercial banks and RRBs were directed to charge a flat rate of 9 per cent on all priority sector loans, irrespective of size. It was recognised that cost of credit, rather than access, was the key constraint facing the rural poor. The policy was to free the vulnerable rural population from the local moneylenders by enhancing the spread of organised credit. The results of nationalisation of banks and introduction of directed credit programmes and other initiatives were extremely encouraging. The share of rural branches increased sharply from 17.6 per cent in 1969 to 58.2 per cent in 1990. The share of the non-institutional sources (professional moneylenders, landlords and agriculturist moneylenders) in rural credit declined with the rise in the spread of institutional banking to rural areas. The share of rural credit in total credit outstanding and rural deposits in total deposits also increased significantly. The credit-deposit ratio in rural areas increased from 37.6 per cent in 1969 to 60.6 per cent in 1981 and remained at that level in 1990 (Table 3.27).

3.101 On the whole, scheduled commercial banks' advances to agriculture, exports and small scale

Table 3.26: Scheduled Commercial Banks' Advances to Agriculture

(Amount in Rupees crore)

Year (April-March)	Direct Finance to Agriculture		Indirect Finance to Agriculture		Total Direct & Indirect Finance to Agriculture		Bank Credit
	Amount	Share in Total (Per cent)	Amount	Share in Total (Per cent)	Amount	Share in Total (Per cent)	
1	2	3	4	5	6	7	8
1966-67	–	–	–	–	57#	2.2#	2,717
1970-71	235	5.0	143	3.0	378	8.0	4,684
1971-72	259	4.9	135	2.6	394	7.5	5,263
1972-73	313	5.1	172	2.9	485	7.9	6,115
1973-74	418	5.7	197	2.7	615	8.3	7,399
1974-75	543	6.2	255	2.9	798	9.1	8,762

: Break-up on direct and indirect finance to agriculture not available.
'-' : Not available.
Source: 1. Handbook of Statistics on the Indian Economy, 2006-07 (RBI).
2. Report on Trend and Progress of Banking of India, 1967-68.

Table 3.27: Growth of Rural Banking in India - 1969-1990

As at End	Number of Bank Offices		Credit -Outstanding		Deposits - Outstanding		Credit-Deposit Ratio (per cent)	
	Rural	% of Total	Rural (Rs. crore)	% of Total	Rural (Rs. crore)	% of Total	Rural	All India
1	2	3	4	5	6	7	8	9
June 1969	1,443	17.6	115	3.3	306	6.3	37.6	71.9
December 1981	19,453	51.2	3,600	11.9	5,939	13.4	60.6	68.1
March 1990	34,867	58.2	17,352	14.2	28,609	15.5	60.7	66.0

Source : Basic Statistical Returns, RBI, various issues.

industries showed a significant rise, while those to industry declined (Table 3.28).

Further Strengthening of the Micro Controls

3.102 The need to direct credit according to the plan priorities led to various micro controls which took the form of specifications regarding sectoral deployment of credit and setting of interest rates for deposits and loans. In order to garner resources for growth, it was felt that the banking system should play a key role in mobilising deposits. While the spread of bank branch network helped to some extent, the deposit interest rate, it was believed, had to be attractive for such effort to be successful. However, higher deposit rates meant a higher cost of credit to the borrower. While the lending rate for the priority borrowers was at a concessional rate, the rates to the non-priority borrowers increased due to cross-subsidisation. A ceiling rate on export credit was also prescribed in March 1968 to encourage the flow of credit to the sector. Effective March 1969, floors/ceiling was also used to provide sufficient funds to certain economic activities/borrowers. The basic idea was to provide sufficient funds for productive activities to promote growth. The need for resources for planned development gradually increased the Government borrowing and with this, interest rate flexibility became an issue as it affected the cost of borrowing.

3.103 The oil shock in the early 1970s led to severe inflationary pressures. In order to combat the situation, effective June 1, 1973, the Reserve Bank imposed a minimum lending rate of 10 per cent on all loans, except for the priority sector. The oil shock led to a rise in the import bill and tremendous pressure on the balance of payments. Therefore, it was considered desirable to provide a boost to the exports. Export credit was, therefore, moved into the priority list (outside the purview of quantitative restrictions on credit). With a view to enhancing the resources with the banking system, an upward adjustment in the term deposit rates of longer maturities was undertaken between the years 1973 to 1974. In April 1974, interest rates on deposits were increased for various categories pushing up the cost of funds for the banking sector. In view of the inflationary situation, the minimum rate chargeable against selective credit controls was also raised in July 1974.

3.104 The commercial banks charged very high rates in some cases and the incidence of such high rates fell even on the small borrowers. To address this issue, the Reserve Bank in 1976 prescribed the *maximum* rate for bank loans in addition to the minimum lending rates. Smaller banks with demand and time liabilities of Rs.25 crore to Rs.50 crore, were given some flexibility.

3.105 In June 1977, the structure of interest rates on deposits was rationalised and the spread between short and long-term rates widened. A distinction was made

Table 3.28: Distribution of Bank Credit to Various Sectors - Outstanding

(Rupees crore)

As at End	Industry	Small-scale Industry	Exports	Agriculture	Gross Bank Credit
1	2	3	4	5	6
March 1968	2068	–	–	67	2135
	(67.5)	–	–	(2.2)	(100)
March 1980	8269	2635	1640	2767	21235
	(38.9)	(12.4)	(7.7)	(13.0)	(100)
June 1989	33625	13697	6556	14146	89654
	(37.5)	(15.3)	(7.3)	(15.8)	(100)

Note : Figures in parentheses are percentage shares in total.
Source : Report on Trend and Progress of Banking in India, various issues.

between saving accounts, which were functionally savings oriented, and others which were transaction oriented, by bifurcating the savings accounts into two categories. From July 1977, savings accounts without cheque facilities were paid 5 per cent interest, while those with cheque facilities earned a lower rate of 3 per cent. However, on March 1978, these two accounts were merged into a single saving deposit account with limited cheque facilities and interest was allowed at 4.5 per cent. Significant modifications were brought about in the interest rates structure on March 2, 1981, reflecting in part the response to the persistent inflationary pressures. This was because the structure of lending rates then prevalent offered inadequate gradation in the rates charged to various categories of beneficiaries in the priority sectors, although a plethora of rates prevailed. A series of anomalies developed and these were addressed by further regulation. For instance, several categories of advances to the priority sectors, only ceiling rates of interest were indicated. This allowed different banks to charge different rates for the same kind of advances in a particular area causing substantial horizontal inequity. The alterations in lending rates brought in further controls, as the earlier specification was a permissible range which was replaced by specific fixed rates. Four distinct rate categories relating to the lending to priority sectors were specified, *viz.,* 12.5 per cent, 15 per cent, 17.5 per cent and 19.5 per cent, in order to ensure uniformity of rates among banks for the same category of advances particularly in the case of the priority sectors. Earlier, small banks were permitted to charge higher rates of interest. Some rationalisation was achieved in lending rates from 1991 when the maximum lending rate was made applicable uniformly to all the scheduled commercial banks, irrespective of their size.

3.106 With the increased proliferation of directed credit arrangements, multiple interest rate prescriptions based on a variety of criteria (such as, economic activity, commodity, location and specific group of borrower, among others) and the resultant cross subsidisation created a very complex administered interest rate structure with virtually no role for market forces to play in pricing and allocation of credit.

3.107 The need to contain inflationary pressures also made the Reserve Bank to use some of the existing qualitative instruments such as selective credit control. This complicated bank lending activity as there were a large number of stipulations to be adhered to. The banking sector also had to operate within the constraints imposed by restrictions on the credit-deposit ratio imposed by the Reserve Bank to contain banks' lending activities to their own resources. This was supplemented by the instrument of moral suasion. The requirements of various schemes and detailed provisions complicated the banks' job. For instance, differential interest rates were set by the central bank for various purposes and according to the needs of borrowers in an effort to align the Reserve Bank's policies to the Government's developmental goals. Micro allocation of credit and credit subsidies to preferred sectors were undertaken in order to support the Government's growth initiatives. The result was multiplication of the constraints within which the banks had to operate. Some help was provided in terms of the discretionary support by the Reserve Bank, like in most developing countries, through the use of instruments such as refinance on preferred activities, including credit to agriculture, co-operative banks and export credit, among others. Such refinancing had two effects, a direct credit effect and an announcement effect. They were useful in helping the banks to cover their costs for the preferred activity. However, like all subsidy-based quasi-fiscal regulations, such measures further distorted the markets. Such measures enlarged the monetary base, altered the credit multiplier and complicated monetary management. The plethora of compulsions on the banking sector translated into a complex set of micro regulations and led to financial repression. This dirigiste approach to economic management led to crowding out of private enterprises as the increasing share of credit flows was mopped up by the Government and public enterprises. Moreover, these quasi-fiscal policies gradually affected commercial banks' balance sheets by affecting their profitability. Besides, non-performing assets of banks increased sharply. Decline in profitability and increase in NPLs also impacted the soundness of the banking sector as banks were unable to plough back their profits as detailed in the subsequent sections.

Inventory Norms for Industry

3.108 The administered interest rate structure perpetuated the excess demand for credit. There was also a growing concern regarding the lack of financial planning by the corporates and their excessive reliance on bank funds. There was a conflict of interest between corporate policy and planned objectives. During periods of rising prices, corporates tended to maximise their profits by speculative hoardings of finished goods as the costs of such hoarding (in terms of interest paid for holding inventories) was more than offset by the sharp rise in prices of finished goods.[28]

[28] Tandon Committee (1975)

The Reserve Bank, in view of the plan priorities, had to curb any tendency towards speculative hoarding by using banks' funds. There was also an issue of building up an information system to provide the Reserve Bank with requisite information about the operations of the banks and the borrowers. It was also felt necessary to have a channel of communication between the Reserve Bank and the banking sector so as to serve as a devise of credit supervision and improvement in the responsiveness of the banking system to policy changes introduced from time to time. These omnibus issues relating to credit to industry needed to be addressed in an integrated manner. Accordingly, it was decided to refer these issues to a committee (Chairman: Shri Prakash Tandon) to take an integrated view of the several problems in framing the guidelines for supervision and follow-up of bank credit. Based on the recommendations of the Tandon Committee, various parameters/norms were prescribed in 1975 for inventory and receivables, approach to lending, style of credit and follow up. The three methods of lending proposed by the committee envisaged different levels of contribution from the long-term funds of the borrowing units with a view to progressively reducing the dependence of the corporates on short-term bank borrowings.[29] Banks were asked to initiate immediate action and to place all borrowers with aggregate credit limit from the banking system in excess of Rs.10 lakh on the first method of lending, whereby 25 per cent of the working capital gap, *i.e.*, the difference between current assets and current liabilities, excluding bank finance, was required to be funded from long-term sources. Maximum permissible bank finance (MPBF) also became the basis of consortium arrangement, which was in existence from 1972. Guidelines were also issued to commercial banks for supervision of credit for ensuring its proper use.

3.109 The system of working of the cash credit system, especially the gap between sanctioned credit limits and utilisation was reviewed in 1980.[30] It was decided to continue the system of lending by way of cash credit, loans and bills. However, the cash credit system was streamlined. Periodic review of limits (at least once a year) fixed under the system was made compulsory in respect of all borrowal accounts enjoying working capital limit of Rs.10 lakh and over. The contribution from borrowers towards working capital out of their long-term sources was to be in the second method of lending suggested by the Tandon Group, *i.e.,* not less than 25 per cent of the current assets required for the estimated level of production, which would give a minimum current ratio of 1.33:1 (as against 25 per cent of working capital gap, *i.e.,* total current assets minus current liabilities other than bank borrowing). In case a borrower was not in a position to comply with this requirement immediately, the existing need-based credit limits already enjoyed by the borrower was not to be curtailed. The excess over the credit limit permissible to the borrower was to be segregated and treated as working capital term loan (WCTL), which was to be repayable in half-yearly instalments within a definite period not exceeding 5 years. The WCTL was to carry interest rate not less than the rate charged for the relative cash credit, and banks could, at their discretion, charge a higher rate of interest not exceeding the ceiling. In addition, suitable provisions were required to be made for charging the penal rate of interest in the event of any defaults in the timely repayment of WCTL. If additional limits became necessary on account of increased production, banks were asked to ensure that the WCTL component was not enhanced and additional limits were allowed on the basis of an incremental current ratio of 1.33:1. Separate limits were to be fixed, wherever feasible, for normal and peak level credit requirements indicating the periods during which the relative limits were to be utilised by borrowers. After introduction of these norms, inventories held declined due to careful inventory management by firms (Singh *et al.*, 1982) . On a broader level, company finance data also suggested a sectoral shift in bank lending in favour of small scale industries.

Nationalisation of Banks in the 1980

3.110 Some private banks were observed to suffer from some governance problems. Further, there was a need to address the need of credit delivery in greater measure. Accordingly, six banks, *viz*, Andhra Bank, Corporation Bank, New Bank of India, Oriental Bank of Commerce, Punjab and Sind Bank, and Vijaya Bank with deposit liabilities of Rs.200 crore and above, were

[29] Method I: 25 per cent of the working capital gap, *i.e.*, difference between current assets and current liabilities excluding bank finance to be funded from long terms resources. The minimum current ratio under this method was to be 1:1. Method II: 25 per cent of current assets to be funded from long term resources. The remaining 75 per cent of current assets less current liabilities to be funded by bank finance. The minimum current ratio under this method was stipulated at 1.33:1. Method III: 25 per cent of current assets less core current assets being funded from long term resources. The current ratio under this method would be greater than 1.33.

[30] A committee was set up for reviewing the system of Cash Credit (Chairman: Shri K.B. Chore).

nationalised in April 1980. With the nationalisation of these six banks by the Government, the number of public sector banks, including the State Bank of India and its associate banks rose to 28 in April 1980, constituting 91 per cent deposits of the banking sector.

Increase in Statutory Pre-emptions and their Impact on the Banking Sector

3.111 One of the outcomes of the substantial expansionary plan expenditure during the 1970s and the 1980s was that the Government's budget expanded and the banking sector was increasingly used for financing fiscal deficits. The fiscal deficit to GDP ratio increased steadily from 3.1 per cent of GDP in 1970-71 to 5.8 per cent in 1980-81 and further to 7.9 in 1990-91 (Table III.29)

3.112 The growth inflation trade-off was more evident during this phase as the high investment that was made as a part of the Five Year Plans was supported by deficit financing that was inflationary. The Government borrowed from the Reserve Bank by way of automatic monetisation of deficit by *adhoc* Treasury Bills, which resulted in an increase in reserve money and money supply. In order to counter the impact of deficit financing that fuelled excess money growth, the Reserve Bank was required to raise the cash reserve ratio (CRR) frequently. The CRR was gradually raised from 5.0 per cent in June 1973 to 15.0 per cent by July 1989 (Table 3.30). Besides, an additional CRR of 10.0 per cent was also introduced effective November 1983. The idea was to reduce the capacity of the banks to create credit by affecting the credit multiplier. At the macro level, credit rather than money supply was viewed as the factor affecting demand.

3.113 The banking sector also became a captive source of funds by means of the statutory liquidity ratio (SLR), the proportion of net demand and time deposits that banks were required to maintain in India in cash, gold and unencumbered approved securities. Between 1970 and 1991 the SLR was revised by 12.5 percentage points. Although the SLR was introduced in 1949 as a prudential requirement, it became an instrument of financing the deficit of the central and state Governments as also certain public sector entities (Table 3.31). Thus, by 1991, 63.5 per cent resources of the banking sector were pre-empted in the form of SLR and CRR.

Table 3.29: Select Fiscal Indicators of the Central Government

(Percentage of GDP)

Year (April-March)	Gross fiscal deficit	Gross primary deficit	Revenue deficit	Primary revenue deficit	Net RBI credit to Centre
1	2	3	4	5	6
1970-71	3.1	1.8	-0.4	-1.7	0.5
1975-76	3.6	2.2	-1.1	-2.5	-0.4
1980-81	5.8	4.0	1.4	-0.4	2.5
1985-86	7.9	5.2	2.1	-0.6	2.2
1990-91	7.9	4.1	3.3	-0.5	2.6

Note : Negative (-) sign indicates surplus.
Source : Handbook of Statistics on the Indian Economy 2006-07.

Table 3.30: Changes in Cash Reserve Ratio – 1973-1989

Effective Date	Cash Reserve Ratio *	Effective Date	Cash Reserve Ratio *
June 29, 1973	5.00	June 11, 1982	7.00
September 08, 1973	6.00	May 27, 1983	7.50
September 22, 1973	7.00	July 29, 1983	8.00
July 01, 1974	5.00	August 27, 1983	8.50
December 14, 1974	4.50	November 12, 1983	8.50
December 28, 1974	4.00	February 04, 1984	9.00
September 04, 1976	5.00	October 27, 1984	9.00
November 13, 1976	6.00	December 01, 1984	9.00
January 14, 1977	6.00	October 26, 1985	9.00
July 01,1978	6.00	November 22, 1986	9.00
June 05, 1979	6.00	February 28, 1987	9.50
July 31,1981	6.50	May 23, 1987	9.50
August 21, 1981	7.00	October 24, 1987	10.00
November 27, 1981	7.25	April 23, 1988	10.00
December 25, 1981	7.50	July 2, 1988	10.50
January 29, 1982	7.75	July 30, 1988	11.00
April 09, 1982	7.25	July 1, 1989	15.00

*: Data for CRR are as percentage of domestic net demand and time liabilities (NDTL)
Source : Handbook of Statistics on the Indian Economy, 2006-07.

Table 3.31: Changes in Statutory Liquidity Ratio – 1970-1990

Effective Date	Statutory Liquidity Ratio *
February 05, 1970	26.00
April 24, 1970	27.00
August 28, 1970	28.00
August 04, 1972	29.00
November 17, 1972	30.00
December 08, 1973	32.00
July 01, 1974	33.00
December 01, 1978	34.00
September 25, 1981	34.50
October 30, 1981	35.00
July 28, 1984	35.50
September 01, 1984	36.00
June 08, 1985	36.50
July 06, 1985	37.00
April 25, 1987	37.50
January 2, 1988	38.00
September 22, 1990	38.50

* : As percentage of domestic net demand and time liabilities (NDTL).
Source : Handbook of Statistics on the Indian Economy, 2006-07.

3.114 The increase in CRR/SLR *per se* might not have affected the banking sector, had the requirements been adequately remunerative. However, banks earned less than market rate of interest on eligible CRR balances (over the then statutory minimum of 3 per cent), while the yield on Government securities was far below the saving deposit interest rates, let alone the lending interest rates. For instance, up to 1981-82, yield on Government Securities was lower than the interest rate paid by banks on deposits of 1 to 3 years maturity. Although the yield on Government securities thereafter was raised, it remained significantly lower than the lending interest rates of banks (Table 3.32).

3.115 This phase was marked by several controls (Box III.1).

3.116 The proliferation of directed credit arrangements, administered structure of interest rates and increase in statutory pre-emptions all had an adverse impact on banks' profitability. The return on assets (RoA) of banks declined sharply between 1975 and 1985 before improving marginally in the second half of the 1980s as a result of several measures initiated towards liberalisation as detailed subsequently in this section. The deterioration in profitability was observed across all bank groups, although it was more pronounced in respect of SBI group (Table 3.33).

Table 3.32: Structure of Interest Rates – Commercial Banks

(per cent per annum)

(End-March)	Commercial Bank Rates							Central Government Securities Primary Yield
	Deposit Interest Rates			Lending Interest Rates Key Lending rates as prescribed by RBI (All commercial banks including SBI)				
	1 to 3 yrs.	3 to 5 yrs.	More than 5 yrs	SBI Advance Rate **	Ceiling Rate General	Minimum Rate General	Minimum Rate Selective Credit Control	Weighted average*
1	2	3	4	5	6	7	8	9
1971	6.00-6.5	7.0	7.25	7.0-8.5	–	–	–	–
1972	6.0	6.5	7.25	8.5	–	–	12.0	–
1973	6.0	6.5	7.25	8.5	–	–	12.0	–
1974	6.0	7.0	7.25	8.5-9.0	–	10.0-11.0	12.00-13.0	5.18
1975	6.75-8.0	7.75-9.0	8.00-10.00	9.0-13.5	–	11.0-13.0	14.00-15.0	5.67
1976	8.0	9.0	10.00	14.0	16.50	12.5	14.00-15.0	5.79
1977	8.0	9.0	10.00	14.0	16.50	12.5	14.00-15.0	5.73
1978	6.0	8.0	9.00	13.0	15.00	12.5	14.00-15.0	5.85
1979	6.0	7.5	9.00	13.0	15.00	12.5	14.00-15.0	5.84
1980	7.0	8.5	10.00	16.5	18.00	12.5	15.50-18.0	–
1981	7.50-8.5	10.0	10.00	16.5	19.40-19.50	13.5	16.70-19.5	7.03
1982	8.00-9.0	10.0	10.00	16.5	19.50	–	17.50-19.5	7.29
1983	8.00-9.0	10.0	11.00	16.5	19.50	–	17.50-19.5	8.36
1984	8.00-9.0	10.0	11.00	16.5	18.00	–	16.50-18.0	9.29
1985	8.00-9.0	10.0	11.00	16.5	18.00	–	16.50-18.0	9.98
1986	8.50-9.0	10.0	11.00	16.5	17.50	–	16.50-17.5	11.08
1987	8.50-9.0	10.0	11.00	16.5	17.50	–	16.50-17.5	11.38
1988	9.00-10.0	10.0	10.00	16.5	16.50	–	16.5	11.25
1989	9.00-10.0	10.0	10.00	16.5	–	16.0	16.0	11.40
1990	9.00-10.0	10.0	10.00	16.5	–	16.0	16.0	11.49

'–' : Not available.

* : Data for the period 1974 to 1979 relate to redemption yield.

** : Relates to State Bank's lending rate, which was the benchmark interest rate for the various categories and classes of advances granted by the bank.

Source : Handbook of Statistics for the Indian Economy, 2006-07 and Report on Currency and Finance Volume II, Various issues.

Box III.1
Major Controls Introduced: 1967 to 1991

1967 Social control over banks announced in December 1967 with a view to securing a better alignment of the banking system to the needs of economic policy.

1968 National Credit Council (NCC) was set up in February 1968 to assist the Reserve Bank and the Government to allocate credit according to plan priorities.

1969 Fourteen banks with deposits of over Rs.50 crore were nationalised.

1969 The Lead Bank Scheme was introduced with a view to mobilising deposits on a massive scale throughout the country and also for stepping up lending to the weaker sections.

1972 Concept of priority sector was formalised. Specific targets were set out in November 1974 for public sector banks and in November 1978 for private sector banks.

1972 The Differential Rate of Interest (DRI) Scheme was instituted in 1972 to cater to the needs of the weaker sections of the society and for their upliftment.

1973 A minimum lending rate was prescribed on all loans, except for the priority sector.

1973 The District Credit Plans were initiated.

1975 Banks were required to place all borrowers with aggregate credit limit from the banking system in excess of Rs.10 lakh on the first method of lending, whereby 25 per cent of the working capital gap, *i.e.*, the difference between current assets and current liabilities, excluding bank finance, was required to be funded from long-term sources.

1976 The maximum rate for bank loans was prescribed in addition to the minimum lending rates.

1980 The contribution from borrowers towards working capital out of their long-term sources was placed in the second method of lending, *i.e.,* not less than 25 per cent of the current assets required for the estimated level of production, which would give a minimum current ratio of 1.33:1 (as against 25 per cent of working capital gap stipulated under the norms prescribed in 1975).

1980 Six Banks with demand and time liabilities greater than Rs.200 crore as on March 14, 1980, were nationalised on April 15, 1980.

1988 Service Area Approach (SAA) was introduced, modifying the Lead Bank Scheme.

1989 The CRR was gradually raised from 5.0 per cent in June 1973 to 15.0 per cent by July 1989.

1991 The SLR was raised by 12.5 percentage points from 26 per cent in February 1970 to 38.5 per cent in September 1990.

Reduction in Micro Controls, Early Steps towards Liberalisation and Strengthening of Banks

3.117 A series of small steps were initiated towards liberalisation in several sectors of the economy in the mid-1980s. For instance, quota and ceilings were relaxed and there was liberalisation of imports. In many ways the first wave of financial liberalisation also took place in the second half of the 1980s. As part of this process, the Reserve Bank took a number of initiatives towards liberalisation. With a view to providing some relief to borrowers with a good credit record and at the same time to provide flexibility to banks in the matter of interest rates charged to their borrowers, the ceiling on all lending interest rate was removed, subject to a minimum rate. Banks were given discretion to charge differential rates judiciously to categories other than those being provided credit at concessional lending rates. A number of measures were also taken to bring short-term interest rates in better alignment with other interest rates in the system. In the Government securities market, coupon rates on government bonds were gradually increased to reflect demand and supply conditions.

Table 3.33: Return on Assets of Commercial Banks*

(per cent)

Year (January-December)	SBI	Nationalised Banks	Other Indian Scheduled Commercial Banks	Return on Assets
1970	0.48	0.64	0.65	0.59
1975	1.19	0.57	0.59	0.77
1980	0.86	0.56	0.59	0.66
1985	0.08	0.06	0.13	0.07
1989-90 @	0.12	0.15	0.23	0.15

* : Net Profit before tax as percentage of total assets.
@ : April-March.
Source : Statistical Tables Relating to Banks in India, various issues.

3.118 The process of expansion in the banking network in terms of geographical coverage and heightened controls affected the quality of banks assets and strained their profitability. In response to these developments, a number of measures were undertaken in the mid 1980s for consolidation and diversification and, to some extent, deregulation of the financial sector. The consolidation measures were aimed at strengthening banks' structures, training, house-keeping, customer services, internal procedures and systems, credit management, loan

recovery, staff productivity and profitability. Certain initiatives were also taken to impart operational flexibility to banks.

3.119 The Indian banking sector in the early 1980s faced competition from the stock and bond markets, non-banking financial companies and mutual fund schemes. Many companies made successful forays in the equity market and floated bonds with remunerative yields with and without tax incentives. The small saving instruments (like the National Savings Certificates VI issue) also became popular as they offered tax benefits. This turned savers away from the bank deposits that offered no such features and offered very low or negative real interest rate to the depositors. The banking sector was largely constrained as the Banking Regulation Act did not permit it to undertake non-banking activities. As a result, the share of deposits in household sector's savings declined while that of deposits with non-banking companies and in small savings instruments floated by the Government increased. The variety in investment opportunities available to individual as well as corporate depositors was the main reason of this process of disintermediation of the banking industry (see Chapter IV for details). Like in most other countries, banks in India were not allowed to undertake activities that traditionally did not pertain to banking *per se*. The Banking Regulation Act, 1949 defined "banking" as the "accepting, for the purpose of lending or investment, of deposits of money from the public, repayable on demand or otherwise, and withdrawable by cheque, draft, order or otherwise". It prohibited banks from investing in non-banking assets. Banks, thus, historically operated in areas such as banking services, provision of remittance service, collection of cheques and bills of exchange, issue of guarantees, opening letters of credit and leasing safe deposit lockers.

3.120 In a definitive step towards liberalisation, the Banking Regulation Act was amended in 1984 with a view to addressing the decline in the role of banks due to financial disintermediation. Banks were permitted to undertake merchant banking activities through subsidiaries. Many banks accordingly set up subsidiaries for undertaking merchant banking and securities market related activities, equipment leasing, hire purchase, mutual funds, housing finance, and venture capital. Diversification of banking activities helped the banks to widen their business activities and raise their profitability through the opportunity to gain non-interest income. This was a symbiotic process, as the industrial sector was also more comfortable with their banks handling these activities. As a result of this deregulation, there were some distinct risks that had to be countered. The Reserve Bank addressed these by encouraging banks to engage in securities business through subsidiaries, thereby putting in place firewalls between traditional banking and non-traditional activities. The Reserve Bank also prohibited cross-holdings with industrial groups to minimise connected lending.

3.121 The health of the banks also became a primary concern to the Reserve Bank. Most of the nationalised banks had a weak capital base. In order to strengthen the capital base of banks, a scheme was evolved by the Reserve Bank in consultation with the Government to augment the capital base of nationalised banks. The Government decided to contribute a sum of Rs.2,000 crore for allocation among 20 nationalised banks during the Seventh Five Year Plan (April 1985-March 1990). The objective behind this scheme of augmentation of capital base was to strengthen the owned funds to deposit ratio with the aim of reaching a level of 2.5 per cent. The amount allocated was simultaneously invested in non-negotiable special securities bearing interest rate of 7.75 per cent per annum.

3.122 With a view to strengthening the banking system, the Health Code System was introduced in 1985, which classified bank loans according to their performance. Under the Health Code System, the commercial banks were required to classify their advances portfolio under the uniform grading system based on the quality or health of individual advances in eight categories. This system consisted of 8 codes. Of these, nos. 5 to 8 were deemed as non-performing assets. These comprised (a) debts recalled; (b) suit-filed accounts, *i.e.*, where legal action or recovery proceedings had been initiated; (c) decreed debts, *i.e.*, where suits had been filed and decree obtained; and (d) debts classified as bad and doubtful. As a prudent accounting practice of cessation of interest application on non-performing loans, banks were advised in May 1989 not to charge and take to their income account interest on loans classified under the health code classification 6, 7 and 8 from the quarter in which the individual accounts were classified under their categories. As a further step towards greater transparency in bank accounts and with a view to ensuring that recognition of income was done on a more prudential basis, banks were advised in October 1990 that from the accounting year 1990-91, they should not charge and take to their income account, interest on advances classified under the Health Code

classification 5 also from the quarter in which individual accounts were so classified. Application of interest under the Health Code classification 4 was left to the discretion of banks based on the availability of adequate security and prospects of realisability of security.

3.123 To sum up, major issues faced at the beginning of this phase were the strong nexus between banks and industry, as a result of which agriculture was ignored. The focus in this phase was to break the nexus and improve the flow of credit to agriculture. The main instruments used for this purpose were nationalisation of major banks in the country and institution of directed credit in the form of priority sector lending. The achievements during the nationalisation phase were extensive, varied and widely acknowledged. The nationalisation of banks in 1969 and again in 1980 brought a large segment of the banking business under government ownership. In the post-nationalisation phase, the country was able to build up financial infrastructure geographically wide and financially diverse to accelerate the process of resource mobilisation to meet the growing needs of the economy. The nationalisation of banks in 1969 was a major step to ensure timely and adequate credit to all the productive activities of the economy. It was designed to make the system reach out to the small man and the rural and semi-urban areas and to extend credit coverage to sectors then neglected by the banking system, in place of what was regarded as a somewhat oligopolistic structure where the system served mainly the urban and the industrial sectors and where the grant of credit was seen as an act of patronage and receiving it as an act of privilege.[31] As at end-December 1990, there were 59,752 branches of commercial banks (including RRBs) in the country, of which 34,791 (58.2 per cent) were in rural areas. As a result of rapid branch expansion witnessed beginning from 1969, the average population per bank office, which was 65,000 in 1969, declined to 14,000 at end-December 1990. This reflected substantial efforts made towards spread of banking, particularly in unbanked rural areas.[32] A notable feature of this expansion was that there was a strong convergence across regions. Bank branches in unbanked locations really accelerated after the 1:4 licensing rule of 1977, as between 1977 and 1990 more than three-fourths of the bank branches that were opened were in unbanked locations.

3.124 Large branch expansion also resulted in increase in deposits and credit of the banking system from 13 and 10 per cent of GDP, respectively, in 1969 to 38 per cent and 24 per cent, respectively, by 1991. New branches opened helped considerably in deposit mobilisation and the evidence suggested that of the incremental deposits a large proportion was from the branches opened after 1969. The share of rural deposits in total deposits increased from 3 per cent in 1969 to 16 per cent in 1990. The share of credit to the rural sector in total bank credit increased from 3.3 per cent in 1969 to 14.2 per cent in 1990. The banking sector met the credit needs of the economy subject to the requirements of sectoral allocation and rendered support to the planning authority in efficient and productive deployment of investible funds so as to maximise growth with stability and social justice.

3.125 In the 1970s and the 1980s, the growing fiscal deficit and increased automatic monetisation, whereby the Government could borrow from the Reserve Bank with the help of *ad hoc* Treasury Bills, resulted in a rise in reserve money and money supply. To counter reserve money growth, the Reserve Bank was required to raise the cash reserve ratio (CRR). Although resource mobilisation by the banking system increased sharply, the demands made on the banking system also increased. In order to finance the increase in fiscal deficit of the Government, the Reserve Bank was forced to increase the SLR of banks. At one point of time, 63.5 per cent of the resources of the banking sector were pre-empted by way of CRR and SLR and such deployments were not adequately remunerated. In view of increased demand for funds from various quarters, attempts were made to bring some financial discipline on the part of corporates. However, norms stipulated for the purpose were found to be too rigid. The traditional sectors, in particular, faced overall credit restrictions during periods of tight monetary policy. As a result, the traditional sectors started seeking funds from sources other than the banking system such as capital market and raising deposits directly from the public, leading to disintermediation. On the other hand, in order to meet the priority sector targets, credit appraisal standards were lowered. During this period, the deposit and lending rate structure became very complex. Low return on Government securities and priority sector loans meant that other sectors had to be charged high interest rates. Interest rates differed

[31] Narasimham Committee Report, 1991.

[32] Ibid.

as per type, size and location of borrowers. Interest rates specified were cheaper for certain activities such as food procurement, oil companies and certain key units in the public sector. Various controls combined with the absence of adequate competition resulted in decline in productivity and efficiency of the banking system and seriously eroded its profitability. Banks' capital position deteriorated and they were saddled with large non-performing assets.

3.126 In the mid-1980s, some efforts were made to liberalise and improve the profitability, health and soundness of the banking sector, which by then had transformed from a largely private owned system to the one dominated by the public sector. However, these were small steps considering the kind and extent of controls/regulations that came to prevail. Major reforms occurred in the next phase following structural reforms initiated by the Government in the early 1990s.

V. PHASE OF FINANCIAL SECTOR REFORMS – 1991-92 ONWARDS

3.127 The banking sector in this phase evolved to a significant extent in response to financial sector reforms initiated as a part of structural reforms encompassing trade, industry, investment and external sector, launched by the Central Government in the early 1990s in the backdrop of a serious balance of payments problem. In order to realise the full potential of reforms in the real economy, the need was felt for a vibrant and competitive financial sector, particularly, banking sector. A high-powered Committee on the Financial System (CFS) was constituted by the Government of India in August 1991 to examine all aspects relating to the structure, organisation, functions and procedures of the financial system (Chairman: Shri M. Narasimham). The Committee, which submitted its report in November 1991, made wide-ranging recommendations, which formed the basis of financial sector reforms relating to banks, development financial institutions(DFIs) and the capital market in the years to come. The Committee underscored the commendable progress made by the banking sector in extending its geographical spread and its functions/operations and thereby promoting financial intermediation and growth in the economy. However, at the same time, the Committee noted with concern the poor health of the banking sector. The Committee cautioned that unless the deterioration in the financial health of the system was treated quickly, it could further erode the real value of and return on the savings entrusted to it and even have an adverse impact on depositor's and investor's confidence. Accordingly, financial sector reforms were initiated as part of overall structural reforms to impart efficiency and dynamism to the financial sector. The country's approach to reform in the banking and financial sector was guided by '*Pancha Sutra'* or five principles: (i) cautious and sequencing of reform measures; (ii) introduction of norms that were mainly reinforcing; (iii) introduction of complementary reforms across sectors (monetary, fiscal, external and financial sectors); (iv) development of financial institutions; and (v) development and integration of financial markets. The evolution of the banking sector in this phase could be further divided into two sub-phases, *i.e*., from 1991-92 to 1997-98 and 1997-98 onwards.

First Phase of Reforms: 1991-92 to 1997-98

Financial Health and Soundness

3.128 A major issue faced by the banking sector in the early 1990s was its fragile health, low profitability and weak capital base. A related issue was also to assess the true health of the banking sector as the health code system being followed then was based on subjective considerations and lacked consistency. In order to address these issues, several mutually reinforcing measures were initiated. With a view to improving the health of the banking sector, internationally accepted prudential norms relating to income recognition, asset classification and provisioning, and capital adequacy were introduced in April 1992 in a phased manner. Banks were advised that they should not charge and take to income account, interest on any non-performing asset. For this purpose, non-performing assets were clearly defined based on objective criteria. As compared with the then existing system of eight health codes, banks were required to classify their advances into four broad groups, *viz.,* (i) standard assets, (ii) sub-standard assets, (iii) doubtful assets, and (iv) loss assets.

3.129 In the old eight category health code system, four categories were deemed as non-performing assets, *viz*., debts recalled, suit filed accounts, decreed debts, and debts classified as bad and doubtful and banks could not recognise interest income on these categories. However, there was no clear definition of problem credits and in actual practice banks could recognise interest income on all non-performing assets. The revised norms revealed a true position of banks' health. Aggregate domestic non-performing advances of all public sector banks, which constituted 14.5 per cent of total outstanding advances at end-March 1992 based on the old health

code system, worked out to 23.2 per cent as on March 31, 1993 based on the revised classification. This implied that about one-fourth of banks' advances were locked in unproductive assets. This not only adversely affected banks' profitability but also prevented recycling of funds, thereby constraining the growth of their balance sheets.

3.130 Banks were also required to make provisioning to the extent of 10 per cent on sub-standard assets and 20 per cent to 50 per cent on secured portion of advances classified as 'doubtful', depending on the period for which the assets had remained doubtful. On unsecured portion of 'doubtful' assets and on 'loss' assets, 100 per cent provisioning was required to be made. Banks, however, were asked to continue to follow the health code system of classification of assets as a management information tool.

3.131 In order to strengthen the capital base of banks, capital to risk-weighted assets ratio (CRAR) system was also introduced for banks (including foreign banks) in India in a phased manner. Indian banks having branches abroad were required to achieve a capital adequacy norm of 8 per cent as early as possible and in any case by March 31, 1994. Foreign banks operating in India were to achieve this norm of 8 per cent by March 31, 1993. Other banks were required to achieve a capital adequacy norm of 4 per cent by March 31, 1993 and the 8 per cent norm by March 31, 1996.

3.132 The tentative provisioning required by banks was estimated at around Rs.10,000 crore by the Reserve Bank. Further, banks also required additional resources to meet the capital adequacy norms. The total resources required by the banks were close to Rs.14,000 crore. Of this, the banks were able to provide about Rs.4,000 crore from their own surplus generation over a two-year period and about Rs.10,000 crore were required by the system as additional resources.

3.133 With a view to restoring and maintaining financial soundness of banks, as also enabling them to meet the gap created by the application of the first stage of prudential accounting standards and capital adequacy norms, the Government embarked on a recapitalisation programme of nationalised banks beginning from the financial year 1993-94. The total capital contribution by the Government to nationalised banks up to March 1998 aggregated Rs.20,046 crore. Besides, the Government provided a sum of Rs.1,532 crore during the year ended March 1997 to write-off the losses of two banks against their capital to cleanse their balance sheets so that they could make early public issues.

3.134 Since capital infusion by the Government was inadequate to enable banks to fulfill further provisioning norms and take care of additional capital needs as capital adequacy guidelines were fully implemented, the Government decided to allow public sector banks to approach the capital market directly to mobilise equity funds from the public by amending the relevant acts. However, it was prescribed that the Government ownership would remain at least at 51 per cent of equity of nationalised bank. However, in view of the oversized equity base, as against the projected stream of earnings coming in the way of tapping the capital market by quite a few nationalised banks, the Government allowed the banks to reduce the paid-up capital. The paid-up capital could, in no case, was to be reduced below 25 per cent of the paid-up capital of the nationalised bank as on the date of the amendment. The aggregate capital allowed to be written off by nationalised banks till March 31, 1997 was Rs.3,038 crore. However, four banks returned to the Government the paid-up capital aggregating Rs.842 crore during 1996-97 to improve their earning per share.

3.135 By end-March 1998, nine PSBs raised capital (including premium) aggregating Rs.6,015 crore from the market, including proceeds from the GDR issue of SBI aggregating Rs.1,270 crore raised during 1996-97. Besides, some banks also raised subordinated debt for inclusion in their Tier II capital. Raising of capital by banks led to diversification of ownership of PSBs, which made a significant qualitative difference to their functioning due to induction of private shareholding and attendant issues of shareholder's value and representation of private shareholders on boards (see also Chapter V).

3.136 In order to contain fresh NPAs from arising on account of adverse selection, banks were put on guard against the defaulters to other lending institutions. For this purpose, the Reserve Bank put in place a scheme on sharing credit data in April 1994. Apart from containing the fresh NPAs from arising, the issue was also to recover the NPAs which had already accumulated. In this context, commercial banks were advised to make the increasing use of *Lok Adalats* (people's court), which were conferred a judicial status and emerged as a convenient and low cost method of settlement of dispute between banks and small borrowers. Further,'The Recovery of Debts Due to Banks and Financial Institutions Act' was enacted in 1993, which provided for the establishment of tribunals for expeditious adjudication and recovery of such debts. Following the enactment of the Act, 29 Debt Recovery Tribunals (DRTs) and 5 Debt Recovery

Appellate Tribunals (DRATs) were established at a number of places in the country.

3.137 The various measures initiated had a favourable impact on the quality of banks' balance-sheets. In a short span, banks were able to bring down their non-performing assets significantly. Gross NPAs of public sector banks as percentage of gross advances, which were 23.2 per cent at end-March 1993, declined to 16.0 per cent by end-March 1998. Despite increased provisioning, overall profitability of the banking sector, in general, and public sector banks, in particular, improved as detailed in the subsequent section. The soundness of the banking sector also improved significantly. Of the 75 banks, 58 banks could achieve the stipulated CRAR of eight per cent by end-March 2006. Eight nationalised banks, six old private sector banks and three foreign banks could not attain the prescribed capital to risk weighted assets ratio of eight per cent by end-March 1996. They, therefore, were given one year extension to reach the prescribed ratio, subject to certain restrictions such as modest growth in risk-weighted assets and containment of capital expenditure and branch expansion, among others. At end-March 1998, out of the 27 PSBs, 26 banks attained the stipulated 8 per cent capital adequacy requirement. All banks, other than five banks (one public sector bank and four old private sector banks) were able to achieve the stipulated CRAR of eight per cent (Table 3.34).

Removal of External Constraints on Banks

3.138 One of the major factors that affected banks' profitability was high pre-emptions in the form of cash reserve ratio (CRR) and statutory liquidity ratio (SLR), which had reached at the historically high level of 63.5 per cent in the early 1990s. Besides, the administered structure of interest rates did not allow banks to charge the interest rates depending on the credit worthiness of the borrower and, thus, impinged on the allocative efficiency of resources. A phased reduction in the SLR and the CRR was undertaken beginning January 1993 and April 1993, respectively. The SLR was progressively brought down from the peak rate of 38.5 per cent in February 1992 to the then statutory minimum of 25.0 per cent by October 1997. There was a sharp reduction in the Central Government's fiscal deficit in the initial years of reforms. Accordingly, there was less of a need to use the banking sector as a captive source of funds. Interest rates on Government securities were also made more or less market determined. The CRR of scheduled commercial banks (SCBs), which was 15 per cent of net demand and time liabilities (NDTL) between July 1, 1989 and October 8, 1992, was brought down in phases to 9.5 per cent by November 22, 1997. Between November 1995 and January 1997, the CRR was reduced by as much as 5 percentage points. The incremental CRR of 10 per cent was also withdrawn.

3.139 The reduction in statutory pre-emptions not only removed the external constraints on banks having a bearing on their profitability, but also augmented the lendable resources of banks. Further, with the more normal liquidity conditions in the money market, there was further significant enhancement in the proportion of bank funds that was made available for financing growth and employment in the private sector. However, despite augmentation of lendable resources of banks, credit growth slowed down from 1996-97 both on account of demand and supply side factors. In view of application of prudential norms, banks became wary of enlarging their loan portfolio. The relatively high level of NPAs, in particular, had a severe impact on weak banks. Banks' capacity to extend credit was also impaired due to little headroom available in the capital adequacy ratio (8.7 per cent at end-March 1996). At individual bank level, some banks, as indicated earlier, were not able to meet the capital adequacy requirements at end-March 1998.

Table 3.34: CRAR Position – End-March 1998

Bank Group	1996		1997		1998	
	No. of Banks with CRAR 8 per cent and above	No. of Banks with CRAR less than 8 per cent	No. of Banks with CRAR 8 per cent and above	No. of Banks with CRAR less than 8 per cent	No. of Banks with CRAR 8 per cent and above	No. of Banks with CRAR less than 8 per cent
1	2	3	4	5	6	7
Public Sector Banks	19	8	25	2	26	1
Private Sector Banks	28	6	30	4	30	4
Foreign Banks	28	3	39	–	42	–
Total	**75**	**17**	**94**	**6**	**98**	**5**

The demand for funds by the corporate sector also slowed down. In the wake of increased competition in the product market, the corporate sector shifted its focus from expanding capacity to restructuring. Increased competition also forced the corporates to restructure their balance sheets, whereby they increased their reliance on retained earnings and reduced their borrowings. Rise in real interest rates caused by downward stickiness of nominal interest rates coupled with falling inflation rate also contributed to slackness in credit expansion (Mohan, 2005). Hence, despite lowering of statutory pre-emption in the form of CRR and SLR, banks continued to invest in government securities, far in excess of the requirements. Banks' investment in SLR securities at end-March 1996 was 36.9 per cent of net demand and time liabilities as against the statutory requirement of 31.5 per cent (see also Chapter VI).

3.140 Banks were also provided with freedom to fix their own deposit and lending rates. The structure of interest rates, which had become extremely complex, was first rationalised and then deregulated, barring a few rates both on the deposits and lending sides. The structure of interest rates on domestic term deposits, except for saving bank accounts, was made more flexible beginning October 1, 1995 (Box III.2). Prescriptions of interest rates on all term deposits, including conditions of premature withdrawal, and offering of the uniform rate irrespective of size of deposits, were dispensed with. Banks were allowed to determine their own deposit rates, depending on commercial judgment, subject to the approval of their boards. Banks were also given the freedom to decide the rates on various non-resident deposits, subject to the ceiling prescribed by the Reserve Bank. Interest rate ceilings prescribed for foreign currency denominated deposits and rupee deposits from non-resident Indians (NRIs) were continued as part of managing external debt flows, especially short-term flows.

3.141 Lending rates were rationalised from six to four categories in 1992-93 and further to three categories in 1993-94. The process of rationalising the interest rate structure received a major impetus with the abolition of the minimum lending rate (MLR) for credit limits of over Rs.2 lakh, effective October 18, 1994 (Box III.2). The only lending rates that continued to be regulated were those pertaining to exports, small loans of up to Rs.2 lakh, and the differential rate of interest (DRI) scheme. Banks were required to announce a prime lending rate (PLR) for advances for over Rs.2 lakh uniformly applicable at all the branches taking into account the cost of funds and transaction cost with the approval of their boards. Interest rates were deregulated to a significant degree not only to aid movement of monetary policy, but also because administered interest rate regime proved to be inefficient and costly, without necessarily ensuring the flow of credit to the needy. While deregulating interest rates, care was taken to ensure that banks did not have incentives, which tempted them to lend at high rates of interest assuming higher risks, *i.e.*, the problem of adverse selection. A major safeguard in this regard was the prescription of provisioning and capital adequacy norms which compelled banks not to accept risk beyond a point.

3.142 Deregulation of interest rates implied that banks were able to fix the interest rates on deposits and loans, depending on the overall liquidity conditions and their risk perceptions (for lending rates). Banks, over the years, developed a set of criteria for determining the rate charged on individual borrowers. The deregulation of interest rates led to innovations of various types, including fixed, floating and partly fixed and partly floating interest rates, among others.

3.143 Lending interest rates of scheduled commercial banks had reached a peak of 20 per cent in October 1991. However, with abundant liquidity, resulting from large capital flows, interest rates after deregulation showed a distinct downward decline. By October 1997-98, lending interest rates declined to 14 per cent. Deposit interest rate also softened significantly from 13 per cent per annum (with maturity over 3 years and up to 5 years) in 1991-92 to 11.5-12.0 per cent (Table 3.35).

3.144 Reduction in NPAs together with reduction in CRR/SLR and deregulation of interest rates had a significant positive impact on the profitability of the banking sector. With the application of objective prudential norms, 14 banks (12 public sector banks) had reported net losses for the year ended March 1993. In 1996-97, the number of loss making SCBs declined to eight (of which 3 were public sector banks). Although in the next year, the number of loss making banks increased to 11, the number of loss making PSBs declined further to two. On the whole, the banking sector had turned around by 1994-95 as the financial results of 27 public sector banks during 1994-95 indicated a net profit of Rs.1,116 crore in contrast to a net loss of Rs.4,349 crore in 1993-94. The performance of nationalised banks was particularly significant as they registered a net profit of Rs.270 crore during 1994-95 as compared with a net loss of Rs.4,705 crore in 1993-94. As a result, the profitability

Box III.2
Deregulation of Interest Rates

A. Deposit Interest Rates

October, 1989	Interest rates were rationalised on domestic short term deposits by merging two categories 46 days to 90 days and 90 days to one year. Interest rate on both these were made payable at a uniform rate, effective October 11, 1989. A similar simplification for NRE deposit rate was introduced effective April 16,1990.
April 1992	The ceilings on deposit rates were simplified by replacing the existing maturity-wise ceiling prescriptions by a single ceiling rate of 13 per cent on all deposits above 46 days.
April 1993	A new Foreign Currency Non-Resident Deposits (Banks) [FCNR(B)] Scheme was introduced, under which the exchange risk was to be borne by the banks and interest rates prescribed by the Reserve Bank. The earlier scheme Foreign Currency Non-Resident Accounts, FCNR(A) was phased out by August 1994.
October 1995	To give flexibility to banks, deposits of maturity of over two years exempted from stipulation of ceilings.
April 1996	Interest rates on NRE term deposits of over 2 years were freed effective April 4, 1996.
July 1996	Banks were given freedom to fix deposit rates for term deposits above one year maturity. For better short term management of funds, the minimum period of term deposit was brought down from 46 days to 30 days. For the maturity bucket of 30 days to 1 year, the banks could fix interest rates subject to a ceiling stipulated by the Reserve Bank.
April 1997	The ceiling interest rate on domestic term deposits of maturity of 30 days and up to 1 year was linked to Bank Rate. The interest rates on term deposits under NRE accounts of over 1 year were freed.
September 1997	Banks made free to fix their own interest rates on NRE term deposits of 6 months and over.
October 1997	Deposit rates, other than those on savings deposits and FCNR(B), were fully deregulated.
April 1998	Banks were given freedom to offer differential rate of interest for bulk deposits above Rs.15 lakh and over and to set their own penal rates of interest on premature withdrawal of domestic term deposits and NRE deposits. Minimum period of maturity of term deposits reduced from 30 days to 15 days.
April 2001	Minimum maturity period of 15 days reduced to 7 days for wholesale deposits of Rs.15 lakh and above.
July 2003	Interest rate ceilings on NRE deposits were linked to LIBOR / SWAP rates.
November 2004	Minimum maturity period of 15 days reduced to 7 days for all deposits.

B. Lending Interest Rates

October 1988	The existing fixed rate stipulations were converted into minimum (floors) rates giving banks the option of raising the rates.
September 1990	Sector-specific and programme specific prescriptions were discontinued, barring a few areas like agriculture, small industries, differential rate of interest (DRI) scheme and export credit.
April 1992	The interest rates for advances of SCBs (except DRI advances and export credit) was rationalised by bringing the six slabs of advances to four slabs according to size of credit.
April 1993	Lending rates were further rationalised as the number of slabs were brought down from four categories to three categories by merging the first two slabs.
October 1994	Lending interest rates of scheduled commercial banks for credit limits of over Rs.2 lakh were deregulated effective October 18, 1994.
October 1995	Banks were given freedom to decide interest rate of advances against term deposits of Rs.2 lakh and above for both domestic and NRE deposits and to fix their own interest rates. The interest rate structure on post shipment credit in foreign currency (PSCFC) was rationalised.
February 1997	Banks allowed to prescribe separate PLRs and spreads separately for loan and cash credit components of loans.
April 1998	Banks were allowed to charge interest rate on loans against fixed deposits equal to or less than their Prime Lending Rate (PLR).
April 1999	Banks were provided freedom to operate tenor linked PLR.
April 2003	With a view to ensuring transparency in banks' lending rates as also for reducing the complexity involved in pricing of loans, a scheme of benchmark PLRs(BPLRs) was introduced. Concurrently the tenor linked PLR system was discontinued.

Table 3.35: Movements of Interest Rates of Commercial Banks

Year (April-March)	Deposit Rates			Lending Rates
	1 to 3 yrs.	Over 3 yrs. and up to 5 yrs.	Above 5 yrs.	Minimum rate (General)
1	2	3	4	5
1990-91	9.00-10.00	11.00	11.00	16.00*
1991-92	12.00	13.00	13.00	19.00*
1992-93	11.00	11.00	11.00	17.00*
1993-94	10.00	10.00	10.00	14.00*
1994-95	11.00	11.00	11.00	15.00@
1995-96	12.00	13.00+	13.00+	16.50@
1996-97	11.00-12.00+	12.00-13.00+	12.50-13.00+	14.50-15.00@
1997-98	10.50-11.00+	11.50-12.00+	11.50-12.00+	14.00@

+ : Refers to the deposit rates of 5 major public sector banks as at end-March.

@ : Lending interest rates were deregulated from October 1994. The rate indicated refers to the prime lending rates of 5 major public sector banks.

* : Key lending rate as prescribed by the Reserve Bank for commercial banks.

Source : Handbook of Statistics on the Indian Economy 2006-07.

of the banking sector (scheduled commercial banks), measured by return on assets, which had declined from 0.4 per cent in 1991-92 to (-)1.1 per cent in 1992-93, improved to 0.8 per cent by 1997-98 (Table 3.36) (see Chapter IX for details).

Table 3.36: Profitability Indicators of Scheduled Commercial Banks

Year (April-March)	No. of profit making SCBs	No. of loss making SCBs	Overall profit/ loss (-) (Rs. crore)	Return on Assets (per cent)	
				SCBs	PSBs
1	2	3	4	5	6
1992-93	59 (15)	14 (12)	-4,150	-1.08	-0.99
1993-94	60 (15)	14 (12)	-3,625	-0.85	-1.15
1994-95	73 (19)	13 (8)	2,154	0.41	0.25
1995-96	80 (19)	14 (8)	939	0.16	-0.07
1996-97	92 (24)	8 (3)	4,504	0.67	0.57
1997-98	92 (25)	11 (2)	6,502	0.82	0.77

SCBs – Scheduled Commercial Banks.

PSBs – Public Sector Banks

Note : Figures in parantheses indicate number of public sector banks.

3.145 Though the medium-term policy objective was to gradually reduce the CRR to the then statutory minimum of 3 per cent, the CRR has been gradually raised since September 2004 from 4.50 per cent to 9 per cent in view of prevailing monetary conditions. Similarly, the policy objective was to reduce the SLR below 25 per cent for which enabling legal provisions were also made. However, in view of prevailing monetary conditions, it has not been possible to reduce the SLR either. In the wake of inflation and tighter monetary policy, interest rates have also hardened. Banks were, therefore, urged to review their business strategies so that they would be in a position to combine longer-term viable financing with profitability in operations, recognising the reality of business cycles and counter-cyclical monetary policy responses.

Creating a Competitive Environment

3.146 The Indian banking sector over the years had become less competitive as no new bank was allowed to be set up in the private sector after nationalisation of 14 banks in 1969. Although a large number of players existed, there was no threat of entry of new players. The lack of threat of entry of new players led to inefficiency in the banking sector. Some other restrictions such as regulation of interest rates and the system of financing working capital requirements also had an adverse impact on the competitive environment. Banks were also constrained in their operations due to restrictions on opening or closing of branches on the basis of their commercial judgment. One of the major objectives of reforms was to bring in greater efficiency by permitting entry of private sector banks, liberalise licensing of more branches of foreign banks and the entry of new foreign banks and increased operational flexibility to banks. Keeping these in view, several measures were initiated to infuse competition in the banking sector.

3.147 First, the Reserve Bank allowed entry of new banks in the private sector. In January 1993, norms for the entry of new private sector banks were announced. Second, in the context of the steps towards deregulation and the changed banking scenario in the country, it was decided in May 1992 to give greater freedom to banks in the matter of opening of branches. While banks could not close down branches in rural areas, in order to enable them to rationalise their branch network in rural/semi-urban areas, they were allowed to rationalise their existing

branch network by relocating branches within the same block and service area of the branch, shift their branches in urban/metropolitan/port town centres within the same locality/municipal ward, opening of specialised branches, spinning-off of business, setting up of controlling offices/administrative units and opening of extension counters. It was decided in December 1994 that banks need not obtain the Reserve Bank's prior permission for installation of automated teller machines (ATMs) at licensed branches and extension counters. Banks, however, were required to report such installation, if any, to the Reserve Bank. Banks were also given the freedom to install ATMs at other places, in which case they should obtain a licence from the concerned regional office of the Reserve Bank before operationalisation of off-site ATMs. Third, a commitment was made in the Uruguay Round to allow 12 licences a year for new entrants and existing banks. However, India adopted a more liberal policy in permitting branches of foreign banks in India. Fourth, the administered interest rate structure reduced the scope of price competition among banks and marginalised their incentive to efficiently allocate resources, as alluded to before. Deregulation of interest rates was, thus, a major element in the process of infusing competition as detailed earlier. Fifth, consistent with the policy of liberalisation, it was decided to allow full operational freedom to banks in assessing the working capital requirements of borrowers. Accordingly, all instructions relating to maximum permissible bank finance (MPBF) were withdrawn in April 1997. Banks were given the total freedom to decide on the methodology of assessing working capital requirements. It was for corporates to convince banks about their working capital needs. Corporates could choose to go through a single bank, consortium arrangement or take a syndicate route. Sixth, all restrictions relating to project loans by commercial banks were withdrawn. Traditionally, project finance was a domain of term-lending institutions.

3.148 Although the competitive conditions were created, the competition within the banking sector during this phase did not penetrate enough. Following liberalisation of entry of new private sector banks, 10 new banks were set up in the private sector by 1998. Besides, 22 foreign banks were also set up. The number of foreign bank branches increased from 140 at end-March 1993 to 186 at end-March 1998. The share of new private sector banks in total assets of scheduled commercial banks increased to 3.2 per cent by end-March 1998. The share of foreign banks at 8.2 per cent at end-March 1998 was the same as at end-March 1993. That the impact on competition remained muted was also evident from the limited number of mergers (four). Normally when competition intensifies, it inevitably leads to increased mergers and acquisitions activity (see Chapter VIII for details). The lack of enough competition was also reflected in the net interest margins (NIM) of banks, which increased during this phase from 2.51 per cent in 1992-93 to 2.95 per cent in 1997-98 (refer Chapter IX for details). This was despite the fact that banks during this phase were in a disadvantageous position as interest rates during this phase declined significantly as detailed earlier. It may be noted that the effect of reduction in interest rates on lending is mostly instantaneous, while on deposit rates, it comes into operation after existing deposits mature.

Strengthening of Institutions

3.149 The need for a strong system of supervision was felt early in the reform phase for several reasons such as (i) to ensure effective implementation of prudential regulations; (ii) the blurring of the traditional distinctions among the financial intermediaries; and (iii) increased risks faced by banks in a liberalised environment. Keeping these considerations in view, the Board for Financial Supervision (BFS) was set up within the Reserve Bank to attend exclusively to supervisory functions and provide effective oversight in an integrated manner over the banking system, financial institutions and non-banking financial companies. The scope of supervisory oversight by the BFS was initially restricted to banks, financial institutions and non-banking financial companies. Subsequently, its scope was enlarged to include UCBs, RRBs and primary dealers. The BFS initiated several measures to strengthen the supervisory systems. In order to have in place 'an early warning system' to take prompt corrective action, a computerised Off-site Monitoring and Surveillance (OSMOS) system for banks was instituted in November 1995.

3.150 A fresh review of the bank's inspection system was undertaken and a new approach to on-site inspection of banks was adopted from the cycle of inspections commencing from July 1997. The focus shifted to the evaluation of total operations and performance of the banks under the CAMELS system (Capital Adequacy, Asset Quality, Management, Earnings, Liquidity System and Controls) for domestic commercial banks and CALCS (Capital Adequacy, Asset Quality, Liquidity Compliance and Systems) for foreign banks. The role of internal and external audit was also strengthened. Besides auditing the annual accounts, external auditors were required to verify and

certify certain other aspects such as adherence to statutory liquidity requirements, prudential norms relating to income recognition, asset classification and provisioning as also financial ratios to be disclosed in the balance sheets of banks. Thus, supervision, now apart from covering the supervisory process of the Reserve Bank also focused on external audit and internal audit.

3.151 Another significant institutional development was in the field of customer service. The Reserve Bank, as the regulator of the banking sector, was actively engaged, from the very beginning, in the review, examination and evaluation of customer service in the banks. The Reserve Bank's enduring and abiding concern for the quality of services extended to the bank customers was reflected in its regulatory initiatives taken from time to time. It was expected that competition in the banking sector through deregulation and entry of new private sector banks would lead to provision of high-quality customer service to meet the long-standing aspirations of the bank customers. However, there was an increasing realisation, both in India and several other countries, that the forces of competition alone did not ensure the fair treatment of the customer or adequate quality of customer service, at a justifiable price, determined in a transparent manner. This, therefore, necessitated interventions from the regulators to institutionalise a mechanism for securing better customer service for the public at large (Leeladhar, 2007). Accordingly, for expeditious and inexpensive resolution of customer complaints against deficiency in banking services, the Reserve Bank announced in June 1995, the Banking Ombudsman Scheme, 1995 under the provisions of the Banking Regulation Act, 1949. The Scheme covered all scheduled commercial banks having business in India, except RRBs and scheduled primary co-operative banks. Any person whose grievance pertaining to any of the matters specified in the scheme was not resolved to his satisfaction by the bank within a period of two months could approach the Banking Ombudsman within a period of one year.

3.152 The Banking Ombudsman Scheme was revised during the years 2002 and 2006. The Banking Ombudsman Scheme (BOS) 2006 covers all Commercial Banks, Regional Rural Banks and Scheduled Primary Co-operative Banks under its scope. Banking Ombudsman have been authorised to look into complaints concerning deficiency in banking service and sanction of loans and advances, in so far as they relate to non-observance of the Bank directives on interest rates etc. BOS 2006 included new areas like credit card issues, failure in providing the promised facilities, non-adherence to fair practices code and levying of excessive charges without prior notice etc. In order to facilitate easy complaint submission, the application format though prescribed is not made mandatory for filing a complaint and complaints can be filed online as well as by sending an email or in hard copy. As per the BOS 2006, in order to have more control over the functioning of the Scheme, the entire expenditure involved in running the Scheme is now borne by the Reserve Bank and not shared by participating banks as was prevalent till then and the Offices of the Banking Ombudsman are now fully manned by the Bank's staff as against staff from SLBC convenor banks earlier. Any bank, against whom and Award was passed can with the approval of its Chief Executive, file an appeal with Appellate Authority who is the Deputy Governor, Reserve Bank of India in charge of the Banking Ombudsman Scheme. In terms of an amendment made in May 2007 complainants can also appeal against the decisions of Banking Ombudsman in respect of matters falling within the grounds of complaint specified under the Scheme.

Improving the Rural Credit Delivery System

3.153 Notwithstanding the impressive geographical spread, functional reach, improved credit flow to agriculture and consequent decline in the influence of informal sources of credit, rural financial institutions were characterised by several weaknesses, *viz*., decline in productivity and efficiency; erosion of repayment ethics and profitability. On the eve of the 1991 reforms, the rural credit delivery system was again found to be in a poor shape[33]. While the question of imparting viability to the total credit structure had engaged the attention of the authorities/ committees, a viable structure did not evolve. It was, thus, imperative to devise a rural credit delivery system which did not require large subvention. In this context, it was felt that there was a need for better alignment of interest rates and mix of target and non-target lending. There were also various other areas where the rural credit delivery system was quite clearly unsatisfactory and it was felt imperative that early measures needed to be taken to bring about an enduring improvement in the credit delivery system.

[33] R.V. Gupta Committee (1998).

3.154 The Committee on Financial System, 1991 had recommended that there was a need for re-examination of the continued relevance of directed credit programme and that it should be phased out. It also recommended that the priority sector be redefined to comprise small and marginal farmers, tiny sector of industry, small business and transport operators, village and cottage industries, rural artisans and other weaker sections and the credit target for this redefined priority sector should be fixed at 10 per cent of aggregate credit. For ensuring the flow of credit to sectors excluded from the redefined priority sector, the Committee on Financial System recommended the introduction of a refinance facility from the Reserve Bank.

3.155 A detailed assessment by the Reserve Bank indicated that the redefined priority sector would account for significantly larger than 10 per cent of total credit and as such acceptance of the Committee's recommendation would put a severe squeeze on the sectors within the redefined priority sector. It was also felt that there was little merit in a drastic reduction in the target for the priority sector and then meeting the requirements of these sectors through refinance from the Reserve Bank as this would result in increasing the amount of created money, thereby fuelling inflationary pressures. From a pragmatic viewpoint, it was essential to ensure that any changes in the policy on priority sector credit did not result in a disruption in the flow of credit for productive purposes. It was felt that while there was a case of reviewing the coverage and targets for the priority sector lending, the experience of a number of countries was that some direction of credit was necessary (RBI, 1992). However, after the micro-regulation of credit delivery was given up and banks were given freedom in matters relating to credit, there were apprehensions on two counts, *viz*., the discipline of priority sector lending and flow of credit to the needy and deserving, on a timely basis. The activities eligible for priority sector lending, therefore, were enlarged, interest rates deregulated and alternative avenues of investment were permitted, thereby making the priority sector lending far more flexible than before.

3.156 Many banks, both in the public and private sectors, were not able to meet the priority sector targets. Therefore, those public and private sector banks which had shortfalls in lending to the priority sector or to agriculture were required to contribute specified allocations to the Rural Infrastructure Development Fund (RIDF). The first RIDF was established with NABARD in 1995-96 to provide loans to the State Governments for financing rural infrastructure projects. The RIDF became the main instrument to channelise bank funds for financing rural infrastructure. By 1998, four tranches of RIDF were set with a total corpus of Rs.10,000 crore. Total amount disbursed from all the four RIDF combined together aggregated Rs.9,095 crore.

3.157 In the wake of introduction of financial sector reforms in 1991-92, the commercial viability of RRBs, an important element in the rural credit delivery system, emerged as the most crucial factor in deciding about their desired role in the emerging economic scenario. The financial health of RRBs turned weak due to their limited business opportunities with less scope of expansion/diversification, smaller size of loans with higher exposure to risk-prone advances and professional inefficiency in financial deployment. The non-viability of RRBs was a matter of concern. A number of policy initiatives, therefore, were taken to improve the viability of RRBs. Considering that most of the RRBs were weak and incurring losses and that their target groups for credit comprised weaker sections, the Reserve Bank exempted all the RRBs from the proviso to Sub-sections 1 and 1(A) of Section 42 of the Reserve Bank of India Act, 1934 for a period of two years, up to December 31, 1994 allowing them to maintain the cash reserve ratio at 3 per cent of their net demand and time liabilities. Later, on December 22, 1993, the Reserve Bank, in consultation with the Government and the National Bank for Agriculture and Rural Development (NABARD), announced a package of measures for RRBs with a view to giving them greater freedom to rationalise their existing branch network and bringing in operational efficiency. These included freeing RRBs whose disbursals were below Rs.2 crore during 1992-93 from their service area obligations and allowing them to function on the same basis as co-operative institutions within the area of operation. In order to be able to cross subsidise their advances, RRBs were permitted to increase their non-target group financing from 40 per cent to 60 per cent of fresh loans.

3.158 Action was also initiated on the managerial, operational and organisational restructuring of RRBs and cleansing of their balance sheets. Forty nine RRBs were identified for comprehensive restructuring. During 1994-95, the Government of India provided a sum of Rs.150 crore for comprehensive restructuring of 49 RRBs as identified. The branch licensing policy for RRBs was rationalised in June 1995. Seventy RRBs, freed from the service area obligations, were allowed to relocate their loss-making branches at taluka/block headquarters, village markets, *mandis* and agricultural produce centres preferably within the same block. Alternatively, they could convert their

loss-making branches into satellite/mobile offices. The Union Budget for 1995-96 provided Rs.300 crore for taking up some more RRBs for restructuring during 1995-96 in the second phase. Sixty eight more RRBs were identified for restructuring in phase II by the NABARD in addition to the two RRBs identified by the Government for the purpose. The Union Government provided for Rs.500 crore for restructuring of RRBs in the phase II restructuring (Rs.300 crore in 1995-96 budget and Rs.200 crore in 1996-97 budget). The restructuring process was sought to be made durable by extending to the RRBs prudential norms of income recognition and asset classification from 1995-96 and provisioning norms from 1996-97.

3.159 These measures had a desired impact on the financial performance of RRBs. The number of profit making RRBs increased sharply to 109 during 1997-98 from 34 in the previous year. RRBs, as a group, also earned net profits of Rs.43 crore during 1997-98 as against net losses of Rs.589 crore incurred during the previous year.

3.160 Apart from strengthening commercial banks and RRBs, several measures were initiated for ameliorating the problems in the flow of agricultural credit. First, the coverage of rural credit was extended to include facilities such as storage as well as credit through NBFCs. Second, procedural and transactional bottlenecks were sought to be removed, reducing margins, redefining overdues to coincide with crop-cycles, new debt restructuring policies, one-time settlement and relief measures for farmers indebted to non-institutional lenders. Third, the Kisan Card Scheme was improved and widened in its coverage, while some banks popularised General Credit Cards (GCCs) which was in the nature of clean overdraft for multipurpose use, including consumption. Fourth, public and private sector banks were encouraged to enhance credit delivery while strengthening disincentives for shortfall in priority sector lending. Fifth, the banks were urged to price the credit to farmers based on actual assessment of individual risk rather than on a flat rate, depending on category of borrower or end-use while ensuring that interest-rates charged were justifiable as well as reasonable. Some other measures were also initiated, which covered delegation of more powers to branch managers, simplification of applications, opening more SSI specialised branches, enhancement in the limit for composite loans and strengthening of the recovery mechanism. In brief, the thrust was on improving credit delivery in a regime of reasonable prices within the existing legal and institutional constraints.

3.161 Notwithstanding various measures, credit flow to agriculture decelerated to 17.3 per cent during the 6-year period from 1992-93 to 1997-98 as compared with 18.1 per cent during 1980s. Credit to agriculture as percentage to total credit, credit intensity and priority sector advances to agriculture as percentage of gross non-food bank credit also declined between end-March 1993 and end-March 1998 (Table 3.37) (see Chapter VI for details).

3.162 To sum up, the main issues faced at the beginning of this sub-phase (1991-92 to 1997-98) were the poor financial performance, low asset quality, weak capital position of banks and the absence of adequate competition. Several measures, therefore, were initiated by the Government, the Reserve Bank and the banks themselves to improve their profitability, financial health and capital position. Major measures initiated included the introduction of objective prudential norms, reduction in statutory pre-emptions and operational flexibility and functional autonomy to public sector banks. In view of various risks faced by the banking sector in a liberalised environment, a special emphasis was also placed on strengthening the supervisory processes. Various measures initiated had a profound impact. A significant improvement was observed in the financial performance, asset quality and capital position by the end of this sub-phase. The improvement in the financial performance was indeed remarkable as the banks were subjected to the objective accounting norms. This, among others, was on account of improvement in asset quality and widening of net interest margins. One of the objectives of reforms was to create competitive conditions. Although several measures were initiated to create competitive environment, competition remained muted. A major contribution of various reform measures in this phase was that it led to a change in the behaviour

Table 3.37: Scheduled Commercial Bank Credit to Agriculture

(End-March)

Item	1993	1998
1	2	3
1. Credit to agriculture as percentage of total credit	13.6	10.7
2. Agricultural credit as percentage of total GDP	3.2	2.5
3. Agricultural credit as percentage of agricultural GDP	11.2	9.6
4. Priority sector advances as percentage of gross non-food bank credit	35.5	34.6
5. Priority sector advances to agriculture as percentage of gross non-food bank credit	14.2	12.1

Source : 1. Basic Statistical Returns, March 1993 and March 1998.
2. Handbook of Statistics on the Indian Economy, 2006-07.

of banks in that they began to focus increasingly on improving their financial health and profitability. Despite significant improvement, however, there were still some concerns at the end of this sub-phase. First, the NPA level of public sector banks was still very high by international standards. Second, some banks were not able to achieve the stipulated capital adequacy ratio even after two years of the stipulated time period. Third, although the banking sector, on the whole, turned around during 1994-95 and made profits, some banks (including two public sector banks) continued to incur losses at the end of this phase. Fourth, competition did not penetrate enough and banks continued to enjoy high net interest margins. Notwithstanding the improved credit flow to agriculture before the onset of reforms, rural financial institutions such as RRBs suffered from serious weaknesses. Efforts, therefore, were made to restructure them, which had a desired impact on their financial health. In this phase, however, credit to the agricultural sector decelerated.

Second Phase of Reforms: 1998-99 and Onwards

Strengthening of Prudential Norms and NPA Management

3.163 Although the prudential norms relating to income regulation, asset classification and provisioning introduced early in the reforms phase was a major step towards objective assessment of the profitability and financial health of the banking system, in several respects these norms fell short of international best practices. The need, therefore, was felt to strengthen them further and bring them on par with the international best practices. The East Asian crisis in June 1997 also suggested the risks a weak banking system could pose to the real economy. The framework for further strengthening the banking sector was provided by the Committee on Banking Sector Reforms - CBSR (Chairman: Shri M. Narasimham), which submitted its report in April 1998. However, while strengthening the prudential norms, it was also necessary to ensure that some risk aversion by banks, which had surfaced after application of prudential norms, did not aggravate.

3.164 In October 1998, the stipulated minimum capital to risk-weighted assets ratio (CRAR) of scheduled commercial banks was raised by one percentage point to 9 per cent from the year ended March 31, 2000. Risk-weights were also prescribed for Government and other approved securities, investments in securities outside the SLR and State Government guaranteed securities issued by defaulting entities. The experience of banks facing asset-liability mismatches in the South East Asian countries underlined the need for putting in place necessary asset liability management (ALM) practices. Banks were, therefore, subjected to asset liability management (ALM) framework. The increased complexity in banking operations, and the need to prevent financial crises of the type witnessed in East Asia, also necessitated continuous efforts towards strengthening the soundness of financial entities, and in particular, upgradation of risk management practices and procedures. The ALM framework was, therefore, complemented with guidelines on risk management.

3.165 Income recognition, asset classification and provisioning norms were also tightened. Banks were required to make a general provision on standard assets of a minimum of 0.25 per cent for the year ended March 31, 2000, which was subsequently raised steadily to one per cent. This measure was envisaged to mitigate the procyclical behaviour of banks. The concept of 'past due' in the identification of non-performing assets (NPAs) was dispensed with effect from March 2001. According to the revised norms, an asset was to be treated as doubtful, if it remained in sub-standard category for 18 months instead of 24 months, by March 31, 2001. Asset classification norms were tightened further in May 2002, when banks were advised that from the year ended March 2005, an asset would be classified as doubtful if it remained in the sub-standard category for 12 months as against the earlier norm of 18 months.

3.166 Income recognition norms were tightened further from March 2004, whereby an asset was classified as NPA if it remained unpaid for a period of 90 days instead of six months earlier. In June 2004, the Reserve Bank advised banks further to adopt graded higher provisioning in respect of (a) secured portion of NPAs included in 'doubtful' for more than three years category; and (b) NPAs which remained in 'doubtful' category for more than three years as on March 31, 2004. Provisioning was also increased ranging from 60 per cent to 100 per cent over a period of three years in a phased manner from the year ended March 31, 2005. Asset classification and provisioning requirements in respect of State Government guaranteed exposures were delinked from the invocation of State Government guarantee.

3.167 The Basel Committee on Banking Supervision (BCBS) of BIS had issued the 'Amendment to the Capital Accord to Incorporate Market Risks' containing comprehensive guidelines to provide explicit capital charge for market risks. Pending implementation of

BCBS' norms on capital charge for market risk, banks were advised in January 2002 to build up investment fluctuation reserve (IFR) which should be at least 5 per cent of their investments in 'held for trading' (HFT) and `available for sale' (AFS) categories within five years so that they were in a better position to meet the market risk. Subsequently, in June 2004, banks were required to maintain capital charge for market risks on the lines of Basel norms in a phased manner over a two-year period.

3.168 A serious consequence of application of prudential norms and pressurising banks to reduce NPAs without strengthening the debt recovery system led to risk aversion by banks as detailed earlier. While large corporates had the recourse to alternative sources such as debentures or commercial paper, other borrowers, especially medium and smaller corporates faced credit squeeze and hence the pace of introduction of measures needed to be carefully modulated. Also, steps needed to be taken to make the norms more effective and quick in producing the desired results. Although some measures were initiated to recover the past dues of the banks, they did not produce the desired results. The pace at which debt recovery tribunals (DRTs) performed was painfully slow due to legal and other structural factors. After examining the various proposals, it was decided to set up an asset reconstruction company. Also, instead of a single centralised ARC, it was decided that there should be multiple ARCs. To provide the necessary legal underpinnings for ARCs, the Government of India enacted the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002 which, *inter alia,* provided, for enforcement of security interest for realisation of dues without the intervention of courts or tribunals. The Act also provided for sale of financial assets by banks/FIs to securitisation companies (SCs)/reconstruction companies (RCs). The Central Government, in consultation with the Reserve Bank, also decided to increase the monetary ceiling of cases to be referred to the *Lok Adalats* organised by Civil Courts to Rs.20 lakh as against the earlier ceiling of Rs.5 lakh. Earlier in 2001, a scheme of corporate debt restructuring (CDR) was also introduced with a view to putting in place a mechanism for timely and transparent restructuring of corporate debts of viable entities facing problems, outside the purview of BIFR, DRT and other legal proceedings.

3.169 Apart from addressing the problem of accumulated NPAs, the need was also felt to contain fresh NPAs, which in many cases arose from adverse selection. This needed the establishment of credit information bureau/s to obtain and share data on borrowers in a systematic manner for sound credit decisions. Accordingly, the Union Budget 2000-01 announced the establishment of a Credit Information Bureau (India) Ltd. (CIBIL). With a view to strengthening the legal mechanism and facilitating credit information bureaus to collect, process and share credit information on borrowers of bank/FIs, the Credit Information Act was enacted in May 2005, and rules and regulations thereunder were also notified. The Act empowered the Credit Information Companies to collect information relating to all borrowers and conferred upon the Reserve Bank the power to determine policy in relation to the functioning of credit information companies and also give directions to such companies.

3.170 Various measures initiated to recover past due of banks had a favourable impact as banks recovered as much as Rs.25,520 crore between 2003-04 and 2006-07 locked in NPAs using various mechanisms (Table 3.38). Although the asset quality had been improving after introduction of prudential norms, it showed a distinct improvement in this phase as both gross and net NPLs declined sharply to around global levels (Table 3.39).

3.171 As the asset quality began to improve, credit growth, which had decelerated significantly between 1996-97 and 2003-04 partly on account of risk aversion, began to pick-up from 2004-05. Credit growth, which was initially concentrated in retail segment, soon turned broad-based encompassing agriculture, industry and small scale sector. Credit growth accelerated to over 30 per cent in 2004-05 and remained more or less at that level in the following two years. Banks deposit growth rate, however, was not able to keep pace with the rapid credit growth. Banks, which had made large investments in SLR securities in excess of SLR requirements on account of risk aversion, first restricted incremental investments in Government securities (2004-05) and then even liquidated investments in SLR securities (2005-06). In 2006-07, although banks made incremental investments in Government securities, SLR portfolio as percentage of NDTL continued to decline. As a result, investment in SLR securities, which had reached an all-time high level of 41.5 at end-March 2003, declined gradually to 28.0 per cent by end-March 2007.

3.172 An important feature of the rapid credit growth was the sharp increase in bank credit to the household

Table 3.38: NPAs Recovered by SCBs through various Channels

(Amount in Rupees crore)

Item/Year (April-March)	2003-04			2004-05			2005-06			2006-07		
	Amt. involved	Amt. recovered	Amt. recovered as percentage of amt. Involved	Amt. involved	Amt. recovered	Amt. recovered as percentage of amt. Involved	Amt. involved	Amt. recovered	Amt. recovered as percentage of amt. Involved	Amt. involved	Amt. recovered	Amt. recovered as percentage of amt. Involved
1	2	3	4	5	6	7	8	9	10	11	12	13
i) One-time settlement/ compromise schemes*	1,510	617	40.9	–	–	–	772	608	78.8	–	–	–
ii) Lok Adalats	1,063	149	14.0	801	113	14.1	2,144	265	12.4	758	106	14.0
iii) DRTs	12,305	2,117	17.2	14,317	2,688	18.8	6,273	4,735	75.5	9,156	3,463	37.8
iv) SARFAESI Act	7,847	1,156	14.7	13,224	2,391	18.1	8,517	3,363	39.5	9,058	3,749	41.4
Total	**22,725**	**4,039**	**17.8**	**28,342**	**5,192**	**18.3**	**17,706**	**8,971**	**50.7**	**18,972**	**7,318**	**38.6**

* : The scheme for OTS for SME accounts by public sector banks was closed on June 30,2006.

sector. As a result, the share of retail credit in total bank credit increased from 10 per cent at end-March 1996 to 25 per cent at end-March 2007. Within household credit, housing loans constituted about a little over one-half of total loans. In view of sharp increase in growth of advances to the real estate sector, banks were advised to put in place a proper risk management system to contain the risks involved.

Table 3.39: Gross and Net Non-performing Assets

End-March	Gross NPAs as percentage to Gross Advances		Net NPAs as percentage to Net Advances	
	SCBs	PSBs	SCBs	PSBs
1	2	3	4	5
1993	–	23.2	–	–
1994	–	24.8	–	–
1995	–	19.5	–	10.7
1996	–	18.0	–	8.9
1997	15.7	17.8	8.1	9.2
1998	14.4	16.0	7.3	8.2
1999	14.7	15.9	7.6	8.1
2000	12.7	14.0	6.8	7.4
2001	11.4	12.4	6.2	6.7
2002	10.4	11.1	5.5	5.8
2003	8.8	9.4	4.0	4.5
2004	7.2	7.8	2.8	3.1
2005	5.2	5.5	2.0	2.1
2006	3.3	3.6	1.2	1.3
2007	2.5	2.7	1.0	1.1

'–' : Not available.
SCBs - Scheduled commercial banks.
PSBs - Public sector banks.

In view of rapid credit expansion, the Reserve Bank in April 2006 indicated that growth of non-food bank credit, including investments in bonds/debentures/ shares of public sector undertakings and private corporate sector and commercial paper, would be calibrated to decelerate to around 20 per cent during 2006-07 from a growth of above 30 per cent. The general provisioning requirement on standard advances in specific sectors, *i.e.*, personal loans, loans and advances qualifying as capital market exposures, residential housing loans beyond Rs.20 lakh and commercial real estate loans was increased from 0.40 per cent to one per cent in April 2006 and further to two per cent on January 31, 2007.

3.173 The Reserve Bank used prudential measures in combination with increase in the policy rates. Keeping in view the persistent growth of credit to the retail sector and also keeping in view the general inflationary conditions, the repo rate was increased by 175 basis points in stages to 7.75 per cent by March 31, 2007 from 6.0 per cent in March 2004.[34] The CRR, which was reduced to 4.5 per cent in March 2004, was gradually raised to 7.5 per cent effective March 31, 2007.[35] These measures had a desired impact and the credit growth moderated to 21.6 per cent in 2007-08 (see also Chapter VI). A sharp increase in credit between 2004-05 and 2006-07 resulted in sharp increase in the risk weighted assets. Despite this increase, however, banks were able to maintain their CRAR significantly above the stipulated norm

[34] The repo rate was subsequently raised in phases to 9.0 per cent effective July 29, 2008.

[35] The CRR was subsequently raised in stages to 8.75 per cent effective July 19, 2008, (to be 9.0 per cent effective August 30, 2008).

Table 3.40: CRAR of Scheduled Commercial Banks – 2007

(End-March)

Bank Group	Distribution of Scheduled Commercial Banks by CRAR				CRAR
	Below 4 per cent	Between 4-9 per cent	Between 9-10 per cent	Above 10 per cent	
1	2	3	4	5	6
Nationalised Banks*	–	–	–	20	12.4
State Bank Group	–	–	–	8	12.3
Old Private Sector Banks	1	–	2	14	12.1
New Private Sector Banks	–	–	–	8	12.0
Foreign Banks	–	–	–	29	12.4
Scheduled Commercial Banks - Total	1 @	–	2	79	12.3

* : Includes data for other public sector banks.
@ : The Sangli Bank could not meet the CRAR. The bank was amalgamated with ICICI Bank with effect from April 19, 2007.
CRAR : Capital to Risk-weighted Assets Ratio.

(Table 3.40). This, to a large extent was facilitated by improved profitability as it allowed banks to increase their retained earnings (see Chapter V for details).

Competition Intensified

3.174 Although the competitive conditions were created in the early 1990s, their impact remained muted, as alluded to before. However, competition began to intensify in the early 2000s, which, was reflected in the increased mergers and acquisitions activity. In this phase, two large development finance institutions (DFIs) merged/converted into banks. After concessional sources of funding in the form of Long-Term Operation (LTO) Fund of the Reserve Bank and Government guaranteed bonds were withdrawn in the early 1990s, DFIs found it difficult to sustain their operations. In January 2001, the Reserve Bank permitted the reverse merger of ICICI with its commercial bank subsidiary. ICICI Ltd. became the first DFI to convert itself into bank. The ICICI was the second largest DFI, after Industrial Development Bank of India, and its reverse merger led to a sharp increase in the market share of new private sector banks in total assets of the banking sector. On October 1, 2004, Industrial Development Bank of India, another large DFI, was converted into a banking company. In April 2005, it merged its banking subsidiary (IDBI Bank Ltd.) with itself. In all, during this phase, four new private sector banks and one new public sector bank came into existence (including conversion of two major DFIs, *viz.*, ICICI and IDBI into banks). Besides, 16 foreign banks were also set up. However, despite emergence of new domestic and foreign banks, the number of banks gradually declined beginning from 100 at end-March 2000 to 82 by end-March 2007, reflecting the increased competitive pressures as detailed in Chapter VIII. The number of branches set up by foreign banks increased from 181 in June 1997 to 273 by March 2007. Increased competition was also reflected in the sharp increase in the sub-BPLR lending by banks. With a view to addressing the downward stickiness of PLRs and the wide disparity in charging interest to different category of borrowers, a scheme of benchmark PLRs (BPLRs) was introduced by the Reserve Bank in 2003-04 for ensuring transparency in banks' lending rates as also for reducing the complexity involved in pricing of loans. However, owing to increased competition, many banks introduced sub-BPLR lending and the spreads between the minimum and maximum lending rates increased significantly. The sub-BPLR lending enabled the corporates to raise funds at competitive rates from banks. The share of sub-BPLR lending in total lending increased gradually from 43 per cent in 2003-04 to 79 per cent by end-March 2007. As a result, net interest margins came under pressure, especially during the last few years as detailed in Chapter IX.

3.175 During this phase, some more measures were undertaken to strengthen the competitive environment. With liberalisation of the FDI regime, FDI in the banking sector was brought under the automatic route. With a view to further liberalising foreign investment in the banking sector, the Government announced (vide GOI press note of March 5, 2004) an increase in the FDI limit in private sector banks from 49 per cent to 74 per cent under the automatic route, including investment by FIIs, subject to guidelines issued by the Reserve Bank from time to time. However, the FII investment limit could not exceed 49 per cent within the aggregate foreign investment ceiling of 74 per cent of the paid up capital and at all times, at least 26 per cent of the paid-up capital, was required to be held by residents. In several old and new private sector banks, non-residents now hold majority equity (Table III.41).

Table 3.41 : Majority Equity Held by Non-Residents in Private Sector Banks in India
(End-March 2007)

Name of the Bank	Equity Held (per cent)
1	2
Federal Bank Ltd.	57.2
ING Vysya Bank Ltd.	73.3
Centurion Bank of Punjab Ltd.*	69.9
Development Credit Bank Ltd.	64.1
HDFC Bank Ltd.	51.5
ICICI Bank Ltd.	72.0
IndusInd Bank Ltd.	59.3
Yes Bank Ltd.	50.8

* : Merged with HDFC Bank Ltd. with effect from May 23, 2008.

3.176 In consultation with the Government of India, the Reserve Bank released the roadmap for the presence of foreign banks in India on February 28, 2005. In terms of the two stages envisaged in the roadmap, the roadmap in the second stage is due for review in April 2009. A policy for merger/amalgamation of private sector banks was also formulated covering details of the process of merger proposal, determination of swap ratios, disclosures, and norms for buying/selling of shares by the promoters before and during the process of merger (see Chapter VIII for details).

3.177 The branch authorisation policy was also liberalised and rationalised in September 2005 in order to give reasonable freedom to banks and rationalise the policy for opening of new branches in India. The system of granting authorisation for opening individual branches from time to time was replaced by a system of giving aggregated approvals, on an annual basis, through a consultative and interactive process. The revised branch authorisation policy granted reasonable flexibility and freedom to banks in matters relating to shifting, conversion of branches and upgradation of extension counters (see Chapter X for details).

Diversification and Emergence of Universal Banks/ Financial Conglomerates[36]

3.178 Increased competitive pressures within the banking sector and also from non-banks and the capital market, made banks to seek new sources of income by offering a variety of services either within the organisation or by setting up subsidiaries. Prior to initiation of reforms, banks were mostly engaged in traditional non-fund based business, *viz.*, opening letters of credit, acceptances, issuing guarantees, remittance business and foreign exchange business such as offering forward contracts to exporters/ importers. Although banks had started diversifying in the mid-1980s after the necessary enabling provisions were incorporated in the Banking Regulation Act, 1949, diversification gained momentum in the late 1990s. Apart from offering merchant banking activities and services connected with the activity of primary issue, banks started rendering project appraisal, capital structure, fund raising and loan syndication services under one roof. Banks also started rendering advisory services to corporates, including on mergers and acquisitions, and custodial and depository services for both domestic and foreign customers. Banks were also allowed to undertake insurance business (without underwriting). Diversification of business led to gradual increase in non-interest income, the share of which in total income increased significantly between 1999-2000 and 2004-05. The decline in the share in the subsequent years was mainly on account of decline in the share of trading income/losses (Table 3.42).

Table 3.42: Share of Non-Interest Income in Total Income of Scheduled Commercial Banks

(Amount in Rupees crore)

Year	Non-Interest Income	Total Income	Share of Non-interest Income in Total Income (per cent)
1	2	3	4
1998-99	12,750	1,00,062	12.7
1999-2000	15,747	1,14,930	13.7
2000-01	16,985	1,32,076	12.9
2001-02	24,074	1,51,032	15.9
2002-03	31,603	1,72,345	18.3
2003-04	39,528	1,83,861	21.5
2004-05	34,435	1,90,236	18.1
2005-06	35,368	2,20,756	16.0
2006-07	38,929	2,76,201	14.1

[36] Universal banks are referred to as those entities which apart from banking also combine insurance and/or investment banking either within the same organisation or through separately capitalised subsidiaries. Financial conglomerates, on the other hand, combine two of the three major activities, *viz*., banking, insurance and securities market within the organisation or through separately capitalised subsidiaries or holding company structure (see Chapter X for details).

3.179 Banks also became active in setting up subsidiaries to undertake various non-traditional activities such as insurance. The number of subsidiaries set up by banks increased from 37 at end-March 1998 to 131 by end-March 2008. A few non-banking financial intermediaries had also become large enough to cause systemic impact. The number of cross-border financial conglomerates operating in and out of India also emerged. From a regulatory perspective, the above developments led to an appreciation of the limitations of the segmented approach to supervision in addressing the potential risks arising out of operations of bank-led groups and financial conglomerates. The Reserve Bank, therefore, mandated consolidated supervision for all groups where the controlling entity was a bank. All banks that came under the purview of consolidated supervision of the Reserve Bank were advised to prepare and disclose consolidated financial statements (CFS) from the financial year ended March 2003, in addition to their single financial statements. For the purpose of application of prudential norms on a group-wide basis, the prudential norms/limits such as capital to risk-weighted asset ratio (CRAR), single/group borrower exposure limits, liquidity ratios, mismatches limits and capital market exposure limits were prescribed for compliance by the consolidated bank.

3.180 Keeping in view the systemic risks posed by the emergence of financial conglomerates, a monitoring mechanism was also put in place in consultation with other regulators, *viz.,* Securities and Exchange Board of India and Insurance Regulatory Authority. A nodal cell was established at the Reserve Bank for smooth implementation of the monitoring mechanism (see Chapter X for details).

Ownership and Governance

3.181 Ownership and governance of banks assume special significance as they accept and deploy large amount of uncollateralised public funds and leverage such funds through credit creation. Banks also participate in the payment mechanism. However, the two major concerns arose in the Indian context regarding corporate governance in banks. These were concentration of ownership and the quality of management that controlled the bank. Regulation of private banks was crucial in view of the fact that the owner shareholders of the banks had only a minor stake and considering the leveraging capacity of banks, it put them in control of a very large volume of public funds of which their own stake was miniscule (Mohan, 2004b). This required a set of norms that adequately addressed the issues that arose from the concentrated shareholding in banks controlling huge public funds in the form of concentration of ownership and the associated moral hazard problem and linkages of owners with businesses. A diversification of ownership was considered desirable, as also ensuring 'fit and proper' status of such owners and directors.

3.182 Legal prescriptions relating to ownership and governance are laid down in the Banking Regulation Act, 1949. These were supplemented by regulatory prescriptions issued from time to time. According to one such stipulation, for private sector banks, all shareholders with holdings of 5 per cent and above were required to meet the 'fit and proper' tests of competence, reputation, track record, integrity, satisfactory outcome of financial vetting, source of funds and so on. Where the applicant was a corporate, 'fit and proper' test was to include good corporate governance, financial strength and integrity in addition to the assessment of individuals and other entities associated with the body corporate, as indicated above. The allotment transfer of shares to the extent of five per cent and above of the paid-up capital of a private sector bank to an entity / group required the prior acknowledgement of the Reserve Bank. However, detailed guideline were issued in this regard on February 3, 2004. The objective was to ensure that shareholders with aggregate holdings above the specified thresholds met the fitness and propriety tests before grant of acknowledgement of transfer of shares. In June 2004, the Reserve Bank also directed the banks in the private sector that they should undertake a process of due diligence to determine the suitability of the person for appointment/continuing to hold appointment as a director on the Board, based upon qualification, expertise, track record, integrity and other 'fit and proper' criteria.

3.183 Further, the Reserve Bank after a detailed consultative process released a comprehensive policy framework of ownership and governance in private sector banks in February 2005. The broad principles underlying the framework were to ensure that (i) ultimate ownership and control was well diversified; (ii) important shareholders were 'fit and proper'; (iii) directors and CEO were 'fit and proper' and observed sound corporate governance principles; (iv) private sector banks maintained minimum net worth of Rs.300 crore for optimal operations and for systemic stability; and (v) policy and processes were transparent and fair.

3.184 In order to attain a well-diversified ownership structure, it was prescribed that no single entity or a

group of related entities should have shareholding or control, directly or indirectly, in excess of 10 per cent of the paid-up capital of a private sector bank. Any bank having shareholding in excess of 5 per cent in any other bank in India was required to indicate a time bound plan for reduction of such holding to the permissible limit of 5 per cent. The parent of any foreign bank having presence in India having shareholding directly or indirectly through any other entity in the banking group in excess of 5 per cent in any other bank in India was similarly required to indicate a time bound plan for reduction of such holding to 5 per cent. In the case of restructuring of problem/weak banks or in the interest of consolidation in the banking sector, the Reserve Bank could permit a higher level of shareholding, including by a bank. A minimum of Rs.300 crore of net worth was perceived as being desirable on grounds of optimal operations and systemic stability. Banks with net worth lower than Rs.300 crore were advised to increase it to this level within a reasonable period. The commitments made as part of the licensing process were also to be taken into account as also to be continuing compliance with 'fit and proper' and sound governance.

3.185 Keeping in view the importance of corporate governance even in public sector banks, the Government of India at the Reserve Bank's initiative, carried out amendments to the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970/ 1980 and the State Bank of India (Subsidiary Banks) Act, 1959 to include new sections providing for applicability of 'fit and proper' criteria for elected directors on the boards of public sector banks. Necessary guidelines were issued to nationalised banks in November 2007.

Credit Delivery – SMEs

3.186 Unlike large industries, which have access to various domestic and international sources of finance, small and medium enterprises (SMEs) are dependent largely on bank finance. Consequent upon the deregulation of interest rates, there was an expectation that credit flow to the needy will increase. However, credit to the SME sector decelerated in the 1990s (8.1 per cent as compared with 20.7 per cent in the 1980s) and the first four years of the current decade. Realising the critical role of small industries in the economy, the Reserve Bank initiated several measures with a view to increasing the flow of credit to Small Scale Industry (SSI) units. These included refining the definition of small scale and tiny enterprises; broadening the scope for indirect finance to these industries; making investments in several avenues such as securitised assets, lines of credit, bills-discounting and leasing and hire purchase eligible for priority sector advances. Besides, in pursuance of the recommendations made by several working groups and high powered committees appointed by the Central Government and the Reserve Bank, a set of comprehensive guidelines to be followed for advances to all categories of borrowers in the SSI sector was evolved.

3.187 To give the benefit of the soft interest rate policy of the Reserve Bank to SSI, banks were advised to set the interest rate on advances to SSI units keeping in view general downward movement in interest rates. Further, as per the announcement made in the Union Budget 2003-04, the Indian Banks' Association advised the banks to adopt the interest rate band of two per cent above and below its BPLR for secured advances. To mitigate the problem of delayed payment, banks were further advised to fix sub-limits within the overall working capital limits to the large borrowers specifically for meeting the payment obligation in respect of purchases from SSI. To make available timely credit to the sector, a timeframe was fixed for disposal of loan applications. In the Mid-term Review of Monetary and Credit Policy for 2003-04, banks were allowed to increase the loan limit from Rs.15 lakh to Rs.25 lakh (with the approval of their boards) for dispensation of collateral requirement, on the basis of good track record and the financial position of the SSI units. Moreover, all new loans granted by banks to NBFCs for the purpose of on-lending to the SSI were also allowed to be reckoned as priority sector lending.

3.188 Several other measures were also initiated to increase the flow of credit to the SSI sector. These included identification of new clusters and adopting cluster-based approach for financing the small and medium enterprises (SME) sector; sponsoring specific projects as well as widely publicising the successful working models of NGOs; sanctioning higher working capital limits to SSIs in the North Eastern region for maintaining higher levels of inventory; and exploring new instruments for promoting rural industry. Interest rates on deposits placed by foreign banks with SIDBI in lieu of shortfall in their priority sector lending obligations were restructured and the tenor of deposits was increased from one year to three years with effect from financial year 2005-06.

3.189 Various measures had a positive impact on the credit flow to the SME sector, which accelerated

from 2004-05. The average growth rate of lending to the SME sector during last three years (2004-05 to 2006-07) accelerated to 37.3 per cent from 8.1 per cent in the 1990s. Notwithstanding this acceleration, the share of the SSI sector in total bank credit declined to 16.9 per cent at end-March 2007 (from 27.9 per cent at end-March 1991) and in total credit to industry to 38.7 per cent (from 54.3 per cent). Credit intensity of the SSI sector in 2006-07 was less than that in 1990-91, which itself was quite low due to decelerated growth in that year (see Chapter VI for details).

Improving Credit Delivery – Rural Sector

3.190 Several concerns were expressed in relation to rural credit from time to time in terms of inadequacy, constraints on timely availability, high cost, neglect of small and marginal farmers, low credit-deposit ratios in several States and continued presence of informal markets. It was held that while the commercial banks were more focused in improving efficiency and profitability, they tended to give comparatively less priority to rural credit. In spite of a series of actions, there was some element of dissatisfaction that overall situation with regard to rural credit did not improve to the desired level. In fact, credit growth to agriculture during the 1990s slowed down to almost one-half as compared with the 1980s. The decline in the share of agriculture in capital formation relative to its share in real GDP in the late 1990s and the early 2000 was a cause of concern exacerbated by the decline in credit-deposit ratio of the rural branches of SCBs. Additionally, several SCBs reported shortfalls in lending to the priority sector, including agriculture. The Government and the Reserve Bank, therefore, took several measures to increase the flow of credit to agriculture.

3.191 The Government announced a package of measures on June 18, 2004 aimed at doubling agricultural credit in three years with a credit growth of 30 per cent for 2004-05. Pursuant to the announcement, necessary measures were initiated by the Reserve Bank and the IBA in respect of commercial banks, and by NABARD in respect of co-operative banks and the RRBs. These measures included (i) debt restructuring and provision of fresh loans to farmers affected by natural calamities; (ii) one-time settlement for small and marginal farmers; (iii) fresh finance for farmers whose earlier debts were settled through compromise or write-offs; and (iv) relief measures for farmers indebted to non-institutional lenders. The actual disbursement of credit to agriculture by banks exceeded the targets during all the three years up to 2006-07. Carrying forward this measure, the Union Finance Minister fixed a target of Rs.2,25,000 crore for disbursements by banks for 2007-08 and a target of Rs.2,80,000 crore was fixed for 2008-09. Several other measures were also initiated by the Reserve Bank to simplify the procedures and process for obtaining agricultural loans to assist distressed farmers and persons affected by natural calamities.

3.192 The Reserve Bank initiated several other measures to increase the flow of credit to the agriculture sector. These included (i) treating loans to storage units designed to store agricultural products, irrespective of location, as indirect credit to agriculture; (ii) treating investment by banks in securitised assets representing direct (indirect) lending to agriculture as direct (indirect) lending to agriculture; and (iii) waiver of margin/security requirement for agricultural loans up to Rs.50,000 and in case of agri-business and agri-clinics for loans up to Rs.5 lakh. In addition, the Reserve Bank also aligned repayment dates with harvesting of crops by treating loans granted for short duration crops as an NPA, if the instalment of the principal or interest thereon remained unpaid for two crop seasons beyond the due date. Loans granted for long duration crops were treated as NPAs only if the instalment of the principal or interest thereon remained unpaid for one crop season beyond the due date.

3.193 In order to further promote the outreach of the banking sector, banks have been permitted to use the services of non-Governmental organisations/self-help groups (NGOs)/(SHGs), micro finance institutions (MFIs) and other civil society organisations (CSOs) as intermediaries in providing financial and banking services through the use of business facilitator and business correspondent models. These intermediaries can take banking to the doorstep of the people. This step will facilitate banks to offer competition to the informal sector, which had been thriving due its accessibility, flexibility and ease in conducting transactions.

3.194 In view of decline in credit to agriculture, the need was felt to reposition the RRBs as an effective instrument for the rural credit delivery system, improve their operational viability and take advantage of the economies of scale (by reducing transaction cost). Accordingly, the route of merger/amalgamation of RRBs was suggested by an Advisory Committee (Chairman: Shri V.S. Vyas) after taking into account the views of various stakeholders. The merged entities, according to the Group, would have a larger

area of operation and the merger process would help in strengthening some of the weak RRBs. A two-phase restructuring was suggested (i) merger between RRBs of the same sponsor bank in the same State; and (ii) merger of RRBs sponsored by different banks in the same State.

3.195 The Government of India initiated the first phase of amalgamation of RRBs sponsor bank-wise at the State level in September 2005. As on March 31, 2005, 196 RRBs were operating in 26 States across 523 districts (525 at end-March 2006) with a network of 14,484 branches (14,489 at end-March 2006). Consequent upon the amalgamation of 154 RRBs into 45 new RRBs, sponsored by 20 banks in 17 States, effected by the Government of India beginning September 12, 2005, and creation of one new RRB in the Union Territory of Puducherry the total number of RRBs declined from 196 to 88 as on May 2008. Total districts covered by the 45 amalgamated RRBs were 357 as on March 31, 2007. Each of the RRBs covered districts ranging from 2 to 25. The number of branches of amalgamated RRBs as on March 31, 2007 was 10,563. The branch network of these amalgamated RRBs was quite large, varying from 50 to 677 branches. The revised guidelines regarding organisational set-up, appointment of chairmen and fixation of seniority of staff were issued by NABARD to sponsor banks for implementation in their respective RRBs in the post-amalgamation period. NABARD provided full guidance and support to smoothen the process of amalgamation. In the second phase, the Advisory Committee had recommended that mergers of RRBs sponsored by different banks in the same State be undertaken. Merger of RRBs with the sponsor bank has not been provided for in the RRBs Act, 1976. Further, such mergers would have gone against the spirit of setting up of RRBs as local entities and for providing credit primarily to weaker sections.

3.196 In order to make RRBs an important vehicle of credit delivery in rural areas, the Reserve Bank announced, in December 2005, a special package with the following salient features. First, sponsor banks were advised to provide lines of credit to RRBs at reasonable rates of interest to enhance their resource base. Further, RRBs were given access to inter-RRB term money/borrowings and also to the repo/CBLO markets. Second, RRBs were permitted to set up off-site ATMs, issue debit/credit cards and also to handle pension/Government business as sub-agents of banks authorised to conduct Government business. Third, the Reserve Bank indicated that taking into account their financial position, requests from RRBs could be considered for opening of currency chests. Fourth, the Reserve Bank reviewed the existing norms for conduct of various types of foreign exchange transactions by RRBs with a view to allowing them to undertake non-trade related current account transactions relating to release of foreign exchange for certain specified purposes such as overseas education, business travel, medical treatment and private visits.

3.197 A number of policy initiatives were also undertaken to facilitate the diversification of RRBs business operation into new areas. To give new directions to RRBs for becoming an important arm for financial inclusion in rural areas, the Government reviewed the performance of RRBs on January 25, 2007. Accordingly, RRBs were encouraged to enhance their deposit base and increase the credit-deposit ratio from the level of 56 per cent by exploiting the emerging potential under both priority and non-priority sector. For strengthening the RRBs and making them financially stronger and competitive, the Government further considered recapitalisation of RRBs having negative net worth. The Government of India issued a notification on May 17, 2007 specifying 'regional rural bank' as 'bank' for the purpose of the SARFAESI Act, 2002. With a view to improving their performance, RRBs were allowed to undertake, with prior permission of the Reserve Bank, insurance business as corporate agents without risk participation, subject to fulfilling certain terms and conditions such as positive net worth, compliance with prudential norms, NPAs not exceeding 10 per cent, continuous profits in the last 3 years and no accumulated losses.

3.198 Rural co-operatives also displayed several weaknesses over the years, which inhibited their ability to effectively compete with commercial banks. These weaknesses included low resource base, poor business diversification and recoveries, huge accumulated losses, lack of professionalism and skilled staff, weak MIS, poor internal check and control systems. As a result, the share of the co-operative banks in agricultural credit declined over the years. The financial health of co-operative banks also deteriorated. The Government, therefore, after extensively consulting the State Governments announced a 'revival package' together with reforms to be brought about for short-term credit co-operatives with a view to making them truly democratic, autonomous, vibrant, member driven, professionally managed and financially strong.

3.199 The 'revival package' envisaged provision of financial assistance aggregating Rs.13,596 crore to the short-term co-operative credit institutions to be shared by the Government of India, the State Governments and units of co-operative credit structure, subject to certain legal and institutional reforms to be initiated by the State Governments. Financial assistance to the short-term co-operative credit structure was to cover cleansing of the balance sheets as on March 31, 2004, support for achieving a minimum level of seven per cent of CRAR, developing uniform accounting and monitoring systems, capacity building and computerisation. Twenty-five states, *viz*., Andhra Pradesh, Assam, Arunachal Pradesh, Bihar, Chhattisgarh Gujarat, Haryana, Jammu and Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Meghalya, Mizoram, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal communicated their acceptance to the package and executed the MoUs with the Central Government and NABARD to implement the package. This covered 96 per cent of PACS and 87 per cent of the CCBs in the country. The Union Finance Minister in his Budget Speech 2008-09 stated that a sum of Rs.1,185 crore was released by the Central Government to four States. The Union Finance Minister in his Budget speech for 2008-09 also stated "the Central Government and the State Governments reached an agreement on the content of the package to implement the Prof. Vaidyanathan Committee's report on reviving the long-term co-operative credit structure. The cost of the package was estimated at Rs.3,074 crore, of which the Central Government's share was Rs.2,642 crore or 86 per cent of the total burden. The Government was in the process of formulating a package of measures in consultation with the State Governments".

3.200 Various measures initiated by the Government and the Reserve Bank had a desired impact as the credit growth to agriculture picked up significantly from 2003-04 onwards. As a result, the average credit growth rate to agriculture during 2003-04 to 2006-07 accelerated to 27.4 per cent from 10.6 per cent during the 1990s and 18.1 per cent during the 1980s. The share of credit to agriculture in total bank credit increased from 10.9 per cent at end-March 2004 to 12.2 per cent at end-March 2007. Credit intensity (agriculture credit/agriculture GDP) of the agriculture sector also increased from 17.0 per cent at end-March 2004 to 31.0 per cent at end-March 2007 (see Chapter VI for details).

3.201 The operations of RRBs improved significantly as a result of several measures that were initiated by the Government and the Reserve Bank. The financial performance of RRBs improved further with the number of loss making RRBs declining further to 15 during 2006-07 from 22 during 2004-05. Net NPLs of RRBs declined from 5.2 per cent at end-March 2005 to 3.4 per cent at end-March 2007. Credit growth of RRBs accelerated to 22.9, on an average, during the three-year period (2004-05 to 2006-07) from 17.8 per cent on an average during the preceding three years (2001-02 to 2003-04) and 17.7 per cent during the previous 10 years (1994-95 to 2003-04).

Financial Inclusion

3.202 Bank nationalisation in India marked a paradigm shift in the focus of banking as it was intended to shift the focus from class banking to mass banking. The rationale for creating regional rural banks was also to take the banking services to poor people. The banking industry witnessed tremendous growth in volume and complexity over the years. Despite making significant improvements in all the areas relating to financial viability, profitability and competitiveness since the early 1990s, there were concerns that banks had not been able to include vast segment of the population, especially the underprivileged sections of the society, into the fold of basic banking services. That is, notwithstanding the outreach of the banking sector, the formal credit system was not able to adequately penetrate into the informal financial markets. Internationally also, efforts were being made to study the causes of financial exclusion in order to design strategies to ensure financial inclusion of the poor and disadvantaged.

3.203 The Reserve Bank was also concerned with regard to the banking practices that tended to exclude vast sections of population. It was, therefore, felt necessary to bring them within the fold of the formal banking sector so that at least the basic banking services were made available equitably to all sections of the society, not only to promote financial inclusion[37] of the excluded class of people but also to expand their business. It was in this context that in the Annual Policy Statement for the year 2005-06,

[37] Financial inclusion refers to the delivery of financial services to the masses and the vast section of the disadvantage and low income groups.

the Reserve Bank stated that there were legitimate concerns with regard to the banking practices that tended to exclude rather than attract vast sections of population, in particular pensioners, self-employed and those employed in the unorganised sector. The Policy noted that while commercial considerations were no doubt important, banks were bestowed with several privileges, and consequently, they needed to be obliged to provide banking services to all segments of the population, on an equitable basis. Against this background, the Policy stated that the Reserve Bank would implement policies to encourage the banks which provided extensive services while disincentivising those which were not responsive to the banking needs of the community, including the underprivileged. Furthermore, the nature, scope and cost of services rendered by the banks were also to be monitored to assess whether there was any denial, implicit or explicit, of the basic banking services to the common person. Banks were, therefore, urged in the Policy Statement to review their existing practices to align them with the objective of financial inclusion.

3.204 It was recognised that in many banks, the requirement of minimum balance and charges levied, although accompanied by a number of free facilities, deterred a sizeable section of population from opening/maintaining bank accounts. The Reserve Bank, therefore, advised the banks in November 2005 to make available a basic banking 'no-frills' account either with 'nil' or very low minimum balances as well as charges that would make such accounts accessible to vast sections of population. This was aimed at achieving the objective of greater financial inclusion. The nature and number of transactions in such accounts could be restricted, but made known to the customer in advance in a transparent manner. Banks were also advised to give wide publicity to the facility of such a 'no-frills' account, including on their websites, indicating the facilities and charges in a transparent manner. Within two years of the introduction of the scheme, there was a significant progress. By end-December 2007, about 12.6 million `no frills' accounts were opened by scheduled commercial banks in India (see Chapter VII for details).

Urban Co-operative Banks

3.205 The initiation of financial sector reforms had posed new challenges for the urban co-operative banks. First, the reform measures had substantially increased competition in the banking sector. Second, the structural changes in the Indian banking sector beginning the early 1990s increased the inter-dependence among financial institutions, especially through inter-institutional exposures and payments and settlement channels. Deterioration in the financial position of the co-operative banks could therefore get easily transmitted to the other segments of the financial sector, which may lead to a systemic problem. Accordingly, after the introduction of a fairly deregulated regime set in 1993 and the more deregulated scenario of the commercial banking sector, the Reserve Bank felt that it should take stock of the performance of the urban co-operative banking sector. Lower entry level norms in the mid-1990s had contributed to a significant weakness in the UCBs. As the UCBs were part of the payment system, their weakness could have serious repercussions for the rest of the financial system. It was, therefore, necessary to put in place a regulatory framework so as to make the cooperative sector competitive and resilient. It was also felt necessary to find solutions to tackle problems created by dual control of UCBs by the Reserve Bank under Banking Regulation Act, and State Governments under the respective State Co-operative Societies Acts.

3.206 The urban co-operative banking sector, however, received a major setback in 2001 when a large multi-state bank, faced a 'run' on its branches, following rumours of its large exposure to a leading broker who had suffered huge losses in the share market. The failure of this co-operative bank had large scale ramifications for the UCBs sector. Even from the point of view of the banking sector, it posed a systemic risk as the bank also held about Rs.800 crore of inter-bank deposits from a large number of UCBs in the State and from other States. In order to protect the interests of the general public and also that of the other co-operative banks, the Reserve Bank had issued directions to the bank restricting certain operations (acceptance of fresh deposits, restricting payments to any single depositor to Rs.1000 and ban on fresh lending) and requisitioned the Central Registrar of Co-operative Societies, New Delhi to supersede the board of directors and appoint an administrator. An order of moratorium was also enforced on the bank by the Central Government for a short period. The bank was subsequently placed under a scheme of reconstruction with the approval of the Reserve Bank. The next episode of the failure of UCB was in the State of Andhra Pradesh in 2002, when one of the largest banks in the state faced a run, following a newspaper report regarding an inquiry instituted into the affairs of the bank by the State Registrar of Co-operative Societies.

3.207 Failures of co-operative banks brought to the fore the need to have appropriate supervision over the co-operative banking system. A supervisory reporting system was introduced for the scheduled UCBs in April 2001 as a first step towards setting up of OSS for all UCBs. With a view to strengthening the supervisory mechanism, the off-site surveillance system (OSS) was extended to cover all non-scheduled UCBs having deposit size of Rs.50 crore and above. Capital adequacy norms were introduced in a phased manner beginning March 2002.

3.208 The deposit growth in the UCBs sector decelerated sharply to 15.1 per cent during the year ended March 2002 as against the growth of about 25.7 per cent in the previous three years. The decline in public confidence in the UCB sector deepened in the aftermath of the crisis involving a few large UCBs in Gujarat and Andhra Pradesh and concomitantly, the position of UCBs generally deteriorated. The number of UCBs, which had steadily increased till 2003, declined in 2004 (to 1926 from 1941 in 2003). Their share in total deposits of the banking sector (scheduled commercial banks, RRBs and UCBs) also declined significantly (to 5.8 per cent in 2004 from 6.3 per cent in 2003). As on June 30, 2004, 732 out of 1919 UCBs were categorised in Grade III or IV, signifying weakness and sickness. Recognising the systemic risks and keeping in view the needs of UCBs' clientele, the Reserve Bank in the Annual Policy Statement for the Year 2004-05, announced a decision to stop granting fresh licenses for formation of new UCBs. It was, therefore, decided by the Reserve Bank not to grant any fresh branch license. It was made clear that this was necessitated pending a comprehensive review of the legislative and regulatory framework governing the sector. It was against this background that a decision was taken to draft a vision document for the sector to outline a framework that would facilitate the strengthening of the sector and enable it to play the assigned role of providing credit to the economically weaker sections. The Reserve Bank reviewed the entire gamut of legislative, regulatory and supervisory framework for these banks and brought out a draft 'Vision Document for UCBs' in March 2005.

3.209 The 'Vision Document' provided a fresh framework with practical and implementable arrangements to rejuvenate the urban co-operative banks. As proposed in the 'Vision Document', the Reserve Bank approached the State Governments/ Central Government (for multi state UCBs) for signing MOUs to ensure greater co-ordination between the two agencies responsible for regulation and supervision of UCBs. As part of the MOU, it was decided to set up State level Task Force for Co-operative Urban Banks (TAFCUBs) comprising representatives of the Reserve Bank, State Government and federation/association of UCBs. The TAFCUBs were entrusted to identify the potentially viable and non viable UCBs in the respective States and provide a revival path for the former and a non-disruptive exit route for the latter set of banks. The exit route could include merger/ amalgamation with stronger banks, conversion into societies or ultimately as a last resort, through liquidation. Since June 2005, MOUs were signed with 19 State Governments and Central Government (in respect of multi-State UCBs), which comprise 1,597 UCBs, i.e., 90 per cent of the banks representing 95 per cent of deposits of the sector. Taking into account the comfort of coordinated supervision and regulation in the States that signed MOU with the Reserve Bank, certain business opportunities were extended to the eligible banks in such States as also to the multi-State UCBs. Requests from eligible banks in such States for additional business opportunities like setting up currency chests, authorised dealer license for forex business, selling mutual funds and opening of new ATMs, among others, are also considered by the Reserve Bank. It was announced in the Annual Policy Statement for the year 2007-08 that financially sound banks in such States would also be permitted to open new branches, a facility which was not available to UCBs from 2004. Also, the consolidation of UCBs through the process of merger of weak entities with stronger ones was set in motion providing transparent and objective guidelines for granting 'no objection' to merger proposals. A total of 53 mergers were effected through the issue of statutory orders by the Central Registrar of Co-operative Societies/ Registrar of Co-operative Societies (CRCS/RCS) concerned.

3.210 Various measures initiated by the Reserve Bank helped in restoring the confidence in the UCB sector, which was reflected in the various business and financial health parameters of the UCB sector. Deposits and advances of UCBs, which had registered a negative growth of 4.7 per cent and 1.6 per cent, respectively, during the year ended March 2005, turned positive from the year ended March 2006 (Table 3.43).

Table 3.43 : Growth of Urban Co-operative Banks(UCBs)

(Amount in Rupees crore)

Year (April March)	Number of UCBs*	Deposits	Growth (per cent)	Advances	Growth (per cent)
1	2	3	4	5	6
1997-98	1,502	40,692	–	27,807	–
2000-01	1,618	80,840	25.7	54,389	25.1
2001-02	1,854	93,069	15.1	62,060	14.1
2002-03	1,941	1,01,546	9.1	64,880	4.5
2003-04	1,926	1,10,256	8.6	67,930	4.7
2004-05	1,872	1,05,021	-4.7	66,874	-1.6
2005-06	1,853	1,14,069	8.6	71,641	7.1
2006-07P	1,813	1,20,983	6.1	78,660	9.8

*: As at end-March of respective year.
P : Provisional.

3.211 Their asset quality also improved. Gross NPAs, which were 23.2 per cent of total advances at end-March 2005, declined to 17.0 per cent by end-March 2007. The share of UCBs in grade III and IV, implying weakness and sickness, in total UCBs also declined (Table 3.44).

Customer Service and Financial Literacy

3.212 The Reserve Bank initiated various measures to improve the customer service from time to time. A major policy initiated in this regard was the setting up of Banking Ombudsman at various offices of the Reserve Bank. Recognising the institutional gap in measuring the performance of the banks against codes and standards based on established best practices, the Reserve Bank in its Annual Policy Statement for 2005-06 announced the setting up of the Banking Codes and Standards Board of India (BCSBI). It was set up as an autonomous and independent body adopting the stance of a self-regulatory organisation. The BCSBI provided for voluntary registration of banks with the Board as its members and committing to provide customer services as per the agreed standards and codes. The Board, in turn, monitored and assessed the compliance with codes and standards which the banks agreed to. The Board released in July 2006, a Code of Bank's Commitment to Customers to provide a framework for a minimum standard of banking services. The Code was not only a commitment of the banks to their customers but, in a sense, was also a charter of rights of the common man *vis-à-vis* his bank. As at end-October 2007, out of 74 scheduled commercial banks registered with the BCSBI indicating their intention to become members, 70 banks, accounting for 98 per cent of the total domestic assets of the Indian banking system, enrolled as its members.

Table 3.44: Gradation of Urban Co-operative Banks

(End-March)

Type of UCBs	Number of UCBs			
	2004*	2005	2006	2007
1	2	3	4	5
Grade I	880	807	716	652
Grade II	307	340	460	598
Grade III	529	497	407	295
Grade IV	203	228	270	268
Total	1919	1872	1853	1813
Memo:				
Grade III and IV as Percentage of all UCBs	38.1	38.7	36.5	31.1

*: End-June

3.213 In order to appropriately signal the importance that the Reserve Bank attached to the customer service rendered, both by the Reserve Bank and by the banking sector as a whole, a new department called Customer Service Department was created in the Reserve Bank, on July 1, 2006 by regrouping various customer service related activities handled by different departments of the Reserve Bank under a single department. The functions of the department encompassed a variety of activities relating to customer service and grievance redressal in the Reserve Bank and the banking sector, including the aspects relating to the Banking Ombudsman Scheme and the Banking Codes and Standards Board of India. Such an oragnisational dispensation enabled a more focused policy attention to the customer service dimension of the banking sector.

3.214 The Reserve Bank, apart from safeguarding the interest of the bank depositors, also wanted to ensure that the borrowing community too got fair deal from the bankers. The Reserve Bank had, accordingly, formulated a Fair Practices Code for Lenders, which was communicated to the banks in 2003 to protect the rightful interests of the borrowers and guard against undue harassment by the lenders. The Code was revised in March 2007 to include the requirement that the banks should provide to the borrowers comprehensive details regarding the loans as also the reasons for rejection of the loan applications of the prospective borrowers, regardless of the amount or type of the loan involved. Similarly, the Indian Banks' Association (IBA) formulated a Fair Practices Code for Credit Card Operations, Model Code of Conduct

for the Direct Sales Agents, and Model Code for Collection of Dues and Repossession of Security.

3.215 In the context of increasing focus on financial inclusion, and the past episodes of financial distress observed in certain segments of the farming community, the need was also felt to provide a mechanism for improving the financial literacy and level of financial education among the consumers of banking services. Some urgency was lent to this issue in India by the rapid growth in consumer loans and housing loans. In such a situation, credit counselling, by providing sound advice to arrest the deterioration of incomes and to restructure their debt, could offer a meaningful solution for the borrowers and could enable them to gradually overcome their debt burden and improve their money management skills. The banks had a role to play in the area of providing financial education to their customers, as timely counselling of the borrowers could have positive impact on the asset quality of the banks. A few banks have since set up credit counselling centres. Various initiatives by the Reserve Bank led to qualitative improvement in customer service.

Technology

3.216 Technology was identified by banks as a crucial element in their strategy to improve productivity and render efficient customer service. The computerisation of bank operations in a big way began in the early 1990s following the agreement between the Indian Banks' Association (IBA) and employees. Over the years, the use of technology increased significantly. Two areas in which the use of technology was clearly visible was computerisation of branches and installation of ATMs. Most of the banking business of public sector banks gradually came to be captured through computerisation. However, most of these efforts were on a standalone basis. It, therefore, was felt that the pace of internal computerisation of branches of banks and their inter-connectivity, providing for core banking systems (CBS), needed to be expedited. All CBS branches are inter-connected with each other, which enables a customer to operate his accounts, and avail banking services from any branch of the bank on CBS networking, regardless of where he maintains his account. This improves the quality and efficiency of services. In 2002, therefore, banks were urged to bestow special attention to the computerisation and networking of branches on a time-bound basis. By end-March 2007, about 86 per cent branches were fully computerised, of which a little more than half the branches were under core banking solutions (Table 3.45).

Table 3.45: Computerisation in Public Sector Banks

(Per cent)

Category	2005	2006	2007
1	2	3	4
Fully Computerised Branches	71.0	77.5	85.6
i) Branches under Core Banking Solution	11.0	28.9	44.4
ii) Branches already Fully Computerised #	60.0	48.5	41.2
Partially Computerised Branches	21.8	18.2	13.4

: Other than branches under Core Banking Solution

3.217 The use of ATMs also increased significantly in recent years. The number of on-site ATMs almost doubled between end-March 2005 and end-March 2007. The number of off-site ATMs also increased. The ratio of ATMs to branches also improved significantly in recent years (Table 3.46).

Table 3.46: ATMs of Scheduled Commercial Banks (End-March)

Bank Group	2005			2006			2007		
	Number of ATMs			Number of ATMs			Number of ATMs		
	On-site	Off-site	Total	On-site	Off-site	Total	On-site	Off-site	Total
1	2	3	4	5	6	7	8	9	10
Nationalised Banks	3205	1567	4772	4812	2353	7165	6634	3254	9888
State Bank Group	1548	3672	5220	1775	3668	5443	3655	2786	6441
Old Private Sector Banks	800	441	1241	1054	493	1547	1104	503	1607
New Private Sector Banks	1883	3729	5612	2255	3857	6112	3154	5038	8192
Foreign Banks	218	579	797	232	648	880	249	711	960
Total	7654	9988	17642	10128	11019	21147	14796	12292	27088
Memo :									
ATMs as percentage of branches			32.8			38.6			47.5

3.218 Recognising the importance of the payment systems, a number of initiatives were undertaken for bringing about efficiency in the payment and settlement systems. To reduce risk in the electronic payment systems, the implementation of real time gross settlement(RTGS) and national electronic fund transfer(NEFT) enabled receipt of funds on a real time/near to real time basis on a credit-push basis. The share of electronic transactions, both in terms of volume and value has increased significantly in recent years (Table 3.47). In India, the spread of the RTGS system was very rapid in comparison with other countries.

3.219 Technology helped the banks to innovate in terms of developing new products and services such as phone banking and internet banking. IT also helped in handling large transactional volumes and adapting according to the changing customer expectations, apart from providing almost real time information processing capabilities for both the banks and the customers. Technology ensured a rapid transformation of the banking sector by ushering in competition, productivity and efficiency of operations, and better asset/liability management, among others. Effective funds movements through the RTGS platform also greatly helped the cash management by banks.

3.220 Technology also posed some challenges. The possibility of making online transactions through internet made the banks susceptible to misuse of this facility. These issues were addressed by banks by putting in place appropriate safeguards and mechanisms to establish the identity of customers based on guidelines issued by the Reserve Bank. Similarly, the technology posed challenges in terms of the business continuity. Therefore, regular and periodic disaster recovery drills(DR) were performed by banks. In this regard, the common minimum requirements were indicated by the Reserve Bank for banks to follow, which were applicable for all new IT-based systems and delivery channels.

3.221 During the last 15 years of reforms, some momentous changes have taken place in the Indian banking sector (Box III.3).

3.222 To sum up, after nearly 10 years of the second phase of reforms, the complexion of the Indian banking sector changed quite significantly. The main issues faced in this sub-phase were to (i) strengthen the prudential norms in line with the international best practices and at the same time ensure that the risk aversion did not aggravate; (ii) increase the flow of credit to agriculture and SMEs; (iii) bring a large segment of excluded population within the fold of the banking sector; (iv) strengthen the corporate governance practices; (v) strengthen the urban co-operative banks and resolve the issue of dual control; and (vi) improve the customer service. On almost all the fronts, there was a significant improvement. Although efforts to strengthen the banking sector had begun in the early 1990s, norms introduced were not in line with the international best practices. Also, with the application of prudential norms, banks had developed risk aversion. Therefore, while strengthening prudential norms, institutional arrangements were put in place to enable banks to expeditiously recover their past dues. Various measures initiated had a positive impact as banks were able to recover large amounts locked up in NPLs. Banks, therefore, gradually shed their risk aversion and credit began to grow sharply beginning from 2004-05. Banks' NPLs level gradually declined to global level; their gross NPAs declined from 15.4 per cent at end-March 1997 to 2.5 per cent at end-March 2007. This was the most important achievement of this phase. The profitability of scheduled commercial banks as reflected in their average return on asset improved further, *albeit* marginally, from 0.8 per cent in 1997-98 to 0.9 per cent in 2006-07. This was significant because competition intensified during this phase as reflected in the acceleration of mergers and acquisitions (M&As) activity and squeezing of net

Table 3.47: Paper based *versus* Electronic Transactions

(Volume in thousand and Value in Rupees crore)

Year	Volume				Value			
	Paper- based	Electronic	Total	Share of Electronic (%)	Paper- based	Electronic	Total	Share of Electronic (%)
1	2	3	4	5	6	7	8	9
2003-04	10,22,800	1,67,554	11,90,354	14.1	1,15,95,960	49,67,811	1,65,63,771	30.0
2004-05	11,66,848	2,30,045	13,96,893	16.5	1,04,58,895	1,18,86,254	2,23,45,149	53.2
2005-06	12,86,758	2,87,489	15,74,247	18.3	1,13,29,134	2,24,39,287	3,37,68,420	66.5
2006-07	13,67,280	3,83,443	17,50,723	21.9	1,20,42,426	3,50,50,234	4,70,92,660	74.4

Box III.3
Major Banking Sector Reforms – 1991-92 onwards

Policy Reforms

- Prudential norms relating to income recognition, asset classification, provisioning and capital adequacy were introduced in a phased manner in April 1992.
- Guidelines on entry of private sector banks were put in place in January 1993.
- The BFS instituted a computerised Off-site Monitoring and Surveillance (OSMOS) system for banks in November 1995 as a part of crisis management framework for 'early warning system' (EWS) and as a trigger for on-site inspections of vulnerable institutions.
- A phased reduction in the SLR was undertaken beginning January 1993. The SLR was progressively brought down from the peak rate of 38.5 per cent in February 1992 to the then statutory minimum of 25.0 per cent by October 1997.
- The CRR was progressively reduced effective April 1993 from the peak level of 15 per cent to 4.5 per cent by June 2003. The CRR was subsequently raised in stages to 9.0 per cent effective August 30, 2008.
- The Board for Financial Supervision (BFS) was set up in July 1994 within the Reserve Bank to attend exclusively to supervisory functions and provide effective supervision in an integrated manner over the banking system, financial institutions, non-banking financial companies and other para-banking financial institutions.
- Rationalisation of lending interest rates was undertaken begining April 1993, initially by simplifying the interest rate stipulations and the number of slabs and later by deregulation of interest rates. Deposit interest rates, other than those on savings deposits and FCNR(B) were fully deregulated (see Box III.2 for details).
- The Banking Ombudsman Scheme was introduced in June 1995 under the provisions of the BR Act, 1949.
- The maximum permissible bank finance (MPBF) was phased out from April 1997.
- In order to strengthen the capital base of banks, the capital to risk-weighted assets ratio for banks was raised to 9 per cent from 8 per cent, from year ended March 31, 2000.
- With a view to liberalising foreign investment in the banking sector, the Government announced an increase in the FDI limit in private sector banks under the automatic route to 49 per cent in 2001 and further to 74 per cent in March 2004, including investment by FIIs, subject to guidelines issued by the Reserve Bank.
- The Banking Codes and Standards Board of India (BCSBI) was set up by the Reserve Bank as an autonomous and independent body adopting the stance of a self-regulatory organisation in order to provide for voluntary registration of banks committing to provide customer services as per the agreed standards and codes.
- A comprehensive policy framework for governance in private sector banks was put in place in February 2005 in order to ensure that (i) ultimate ownership and control was well diversified; (ii) important shareholders were 'fit and proper'; (iii) directors and CEO were 'fit and proper' and observed sound corporate governance principles; (iv) private sector banks maintained minimum capital for optimal operations and for systemic stability; and (v) policy and processes were transparent and fair.
- The roadmap for the presence of foreign banks in India was drawn up in February 2005.
- A mechanism of State level Task Force for Co-operative Urban Banks (TAFCUBs) comprising representatives of the Reserve Bank, State Government and federation/ association of UCBs was instituted in March 2005 to overcome the problem of dual control over UCBs.
- A risk based supervision (RBS) approach that entails monitoring according to the risk profile of each institution was initiated on a pilot basis in April 2004.
- Banks were advised to introduce a facility of 'no frills' account with nil or low minimum balances in November 2005.
- In January 2006, banks were permitted to utilise the services of non-governmental organisations (NGOs/ SHGs), micro-finance institutions and other civil society organisations as intermediaries in providing financial and banking services through the use of business facilitator and business correspondent (BC) models.

Legal Reforms

- The Recovery of Debts Due to Banks and Financial Institutions Act was enacted in 1993, which provided for the establishment of tribunals for expeditious adjudication and recovery of non-performing loans. Following the enactment of the Act, debt recovery tribunals (DRTs) were established at a number of places.
- In order to allow public sector banks to approach the capital market directly to mobilise funds from the public, an Ordinance was promulgated in October 1993 to amend the State Bank of India Act, 1955 so as to enable the State Bank of India to enhance the scope of the provision for partial private shareholding.
- Amendments to the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970/80 were also carried out to allow nationalised banks to have access to the capital market, subject to the condition that the Government ownership would remain at least at 51 per cent of equity of nationalised bank.
- The Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002 was enacted in March, 2002.
- Section 42 of the RBI Act was amended in June 2006 to remove the ceiling (20 per cent) and floor (3 per cent) on the CRR.
- Section 24 of the BR Act was amended in January 2007 to remove the floor of 25 per cent on the SLR to be statutorily held by banks.

interest margins. The improved profitability, despite increased competition, was, among others, on account of (a) sharp decline in NPLs; and (b) increased credit volumes. In order to improve their profitability in a competitive environment, banks also increasingly diversified their activities. This, in turn, led to emergence of bank-led groups/financial conglomerates. The capital adequacy ratio of banks also improved from 8.7 per cent at end-March 1997 to 12.9 per cent at end-March 2007. At individual bank level, the CRAR of most banks was over 10 per cent, *i.e.,* higher than the stipulated target which itself was higher than the international norm. Thus, the impact of reforms initiated in the early 1990s became clearly visible in this phase as the Indian banking sector had become competitive, profitable and strong.

3.223 In this phase, two major concerns arose regarding corporate governance practices in banks in India. These were concentration of ownership and the quality of management that controlled the bank. Appropriate norms, therefore, were put in place to ensure diversification of ownership and that owners and directors satisfied the 'fit and proper' criteria.

3.224 Credit to the SME and agriculture sectors decelerated in the 1990s and early years of the current decade. Given the significance of both the sectors, concerted efforts were made by the Government and the Reserve Bank to increase the flow of credit to these sectors. As a result, the decelerating trend of lending to agriculture and SMEs by banks was reversed. Sharp increase in credit to agriculture led to sharp increase in credit intensity of agriculture. The restructuring of RRBs by merging them sponsor bank-wise at the state level made them larger and stronger to serve as a better instrument of rural credit delivery. Credit growth to SMEs also accelerated in recent years, although the share of credit to the SME sector in total bank credit and credit intensity of the SME sector in 2007 was significantly lower than that in 1991.

3.225 Notwithstanding the rapid progress made by the banking sector over the years, a large segment of population on low income continued to remain outside the banking system. Banks, therefore, were urged to open 'no frills' accounts with nil or minimum balances. This had a significant positive impact as banks brought a large number of financially excluded people (about 13 million) within their fold in a short span of two years. Another issue faced in this sub-phase was erosion of confidence in the UCB sector. The main challenge in respect of UCBs was, thus, to restore the confidence in the UCBs sector and resolve the problem of dual control. The mechanism of Task Force on Urban Co-operative Banks (TAFCUBs) comprising representative of the Reserve Bank, State Government and federation/association of UCBs was adopted to identify potentially viable and non-viable UCBs in the respective State to provide a revival path for the former and non-disruptive route for the latter set of UCBs. So far, MOUs constituting the TAFCUBs have been signed with the 19 State Governments. The confidence in the UCB sector was restored which was reflected in the positive growth of deposit rates in recent years, reversing the trend of negative growth in 2004-05. The overall quality of the UCB sector also improved, which was evident from the decline in the number of grade III and IV UCBs (signifying weakness/sickness) in total UCBs.

3.226 The use of technology increased significantly in this phase. A large number of branches of public sector banks (86 per cent of total branches) were computerised, of which nearly half were under core banking solutions. The number of ATMs installed also increased. This enabled banks to provide improved customer service. The use of electronic payment transactions also increased sharply. A specific mechanism was also put in place to benchmark the customer service against the international best codes and standards. On the whole, the banking sector by the end of this phase had undergone massive transformation from the one with low profitability, weak capital base, poor asset quality to profitable, strong capital position and high asset quality.

VI. SUMMING UP

3.227 The Indian banking sector has been evolving continuously. The initial phase (up to 1947) was a difficult period for the banking sector. A large number of banks sprang up as there were no entry norms for banks. The *Swadeshi* Movement during this phase saw the establishment of many Indian banks, most of which continue to operate even now. In this phase, which was marked by the two World Wars and the Great Depression, many banks failed. Most of the small banks were local in character and had low capital base. As a result, they were not resilient enough. Apart from the global factors, one of the major reasons for failures of small banks was fraudulent manipulation by directors and managers and inter-connected lending. Also, several banks that failed had combined trading functions with banking functions. Partly, in order to address the problem of bank failure, the Reserve Bank was set up in 1935. In fact, central banks in several other countries, including the US, were also set up to address the problem of

bank failure. However, the Reserve Bank had a limited control over banks and lack of an appropriate regulatory framework posed a problem of effective regulation of small banks. By the end of this phase, the country's financial requirements were still catered to, in a large measure, by the unorganised sector. The focus of the banking sector was on urban areas and the requirements of agriculture and the rural sector were neglected. Although the co-operative credit movement had a very encouraging beginning, it did not spread as expected despite Government patronage.

3.228 The period after independence could be categorised broadly in three phases: (i) 1947 to 1967; (ii) 1967 to 1991-92; and (iii) 1991-92 and beyond. The banking scenario that prevailed in the early independence phase faced three main issues. First, bank failures had raised the concerns regarding the soundness and stability of the banking system. Second, there was large concentration of resources from deposits mobilisation in a few hands of business families or groups. Banks raised funds and on-lent them largely to their controlling entities. Third, agriculture was neglected insofar as bank credit was concerned. In order to address the issue of bank failures, the Banking Companies Act (renamed as Banking Regulation Act in March 1966) was enacted in 1949 empowering the Reserve Bank to regulate and supervise the banking sector. Banks continued to fail even after the Independence and the enactment of the Banking Companies Act, although the number of banks that failed declined. It was, therefore, felt that it would be better to wind up insolvent banks. The Reserve Bank, therefore, was granted powers in the early 1960s for consolidation, compulsory amalgamation and liquidation of small banks. Although some banks had amalgamated before 1960s, the number of banks amalgamating rose sharply between 1960 and 1966. Several other small banks otherwise also ceased to function. The Reserve Bank was fairly successful in improving the safety and soundness of the banking sector as several weak banks (most of which were non-scheduled) were weeded out through amalgamations/liquidations. The deposit insurance was also introduced, which increased the trust of the depositors in the banking system and encouraged deposit mobilisation. In early years of banking in India there were thus several instances which suggest that the small and weak banks struggled to survive. Even in recent years, it is several small banks that have merged with the large banks. Another feature that emerges from the evolution of banking till the end of this phase was that despite the existence of small banks, a large segment of the population remained outside the banking system. In other words, the existence of small banks did not necessarily promote financial inclusion.

3.229 On the eve of independence, the banking system was concentrated primarily in the urban and metropolitan areas. Efforts, therefore, were made to spread banking to rural and unbanked areas, especially through the State Bank of India and through the branch licensing policy. The number of bank branches rose significantly between 1951 and 1967, as a result of which the average population per branch fell from 1,36,000 in 1951 to 65,000 in 1969. However, the pattern of bank branches in rural and urban areas remained broadly the same.

3.230 Although the Indian banking system had made considerable progress in the 1950s and the 1960s, the benefits of this did not percolate down to the general public in terms of access to credit. This was primarily due to the nexus between banks and industrial houses that cornered bulk of bank credit, leaving very little for agriculture and small industries. Efforts, therefore, were made to increase the flow of credit to agriculture. However, the share of agriculture in total bank credit remained broadly at the same level between 1951 and 1967. In this period, various objectives such as enhancing the deposit rates, while keeping the cost of credit for productive activities at a reasonably low level led to a complex structure of interest rates and other micro controls.

3.231 The second phase after independence (1967 to 1991-92) was characterised by several social controls over the banking sector. The major issue faced at the beginning of this phase was the strong nexus between banks and industry, as a result of which agriculture was ignored. The focus in this phase was, thus, to break the nexus and improve the flow of credit to agriculture. The main instruments used for this purpose were nationalisation of major banks in the country and priority sector lending. These initiatives had a positive impact in terms of spread of the bank-branch network across the country, which in turn, accelerated the process of resource mobilisation. As a result of rapid branch expansion witnessed from 1969, the average population per bank office, which was 65,000 at the time of nationalisation, declined to 14,000 by end-December 1990. Large branch expansion also resulted in increase in deposits and credit of the banking system, especially in rural areas. The share of credit to agriculture in total bank credit increased from 2.2 per cent in 1967 to 15.8 per cent in June 1989. However, these achievements extracted a price in terms of health of banking

institutions. Banks did not pay adequate attention to their profitability, asset quality and soundness. The increase in credit to the priority sector led to the reduction of credit to the other sectors. Attempts were, therefore, made to bring some financial discipline in respect of credit to the corporate sector. However, norms stipulated for the purpose were found to be too rigid. On the other hand, in order to meet the priority sector targets, credit appraisal standards were lowered. The high statutory pre-emptions eroded the profitability of the banking sector. Lack of enough competition resulted in decline in productivity and efficiency of the system. At the end of this phase, banks were saddled with large non-performing assets. Banks' capital position turned weak and they lacked the profit motive. During this period, the deposit and lending rate structure became very complex. By the early 1980s, the banking sector had transformed from a largely private owned system to the one dominated by the public sector. In the mid-1980s, some efforts were made to liberalise and improve the profitability, health and soundness of the banking sector. This phase also saw some diversification in banking activities.

3.232 The most significant phase in the evolution of banking was the phase of financial sector reforms that began in 1991-92, which had two sub-phases (1991-92 to 1997-98; and 1998-99 and beyond). The main issues faced in the first sub-phase (1991-92 to 1997-98) was the weak health of the banking sector, low profitability, weak capital base and lack of adequate competition. The reforms in the initial phase, thus, focused on strengthening the commercial banking sector by applying prudential norms, providing operational flexibility and functional autonomy and strengthening the supervisory practices. To infuse competition in the banking sector, several measures were initiated such as allowing the entry of private banks into the system. A major achievement of this phase was significant improvement in the profitability of the banking sector. Some improvement was also observed in the asset quality, capital position and competitive conditions, although there was still a significant scope for further improvement. However, banks in this phase developed risk aversion as a result of which credit expansions slowed down in general and to the agriculture in particular.

3.233 The focus in the second sub-phase (1998-99 and beyond) was on further strengthening of the prudential norms in line with the international best practices, improving credit delivery, strengthening corporate governance practices, promoting financial inclusion, strengthening the urban co-operative banking sector and improving the customer service. While strengthening the prudential norms, it was necessary to ensure that risk aversion, which had surfaced in the previous sub-phase, did not aggravate. Focused attention, therefore, was paid to put in place appropriate institutional measures to enable banks to recover their NPLs. The impact of these measures was encouraging as banks were able to bring down their non-performing assets sharply. This was the most important achievement of this phase. As the asset quality began to improve, banks also started expanding their credit portfolio. Capital position of banks also improved significantly. Competition intensified during this phase as was reflected in the narrowing down of margins. Despite this, however, banks slightly improved their profitability among others, due to increased volumes and improvement in asset quality. Two concerns arose with regard to corporate governance practices followed by banks. These related to concentrated ownership and quality of management that controlled the banks. The corporate governance practices were, therefore, strengthened. Another major achievement in this phase was the sharp increase in the flow of credit to the agriculture and SME sectors. With a view to bringing a larger segment of excluded population within the banking fold, banks were advised to introduce a facility of 'no frills' account. About 13 million `no frills' accounts were opened in a short span of two years. The confidence in the urban co-operative banking segment was eroded in the early 2000s following a run on a multi-state co-operative bank. In order to restore the confidence and overcome the problem of dual control over urban co-operative banks, a mechanism of the TAFCUBs was put in place, which helped restore the confidence in the urban co-operative banking segment. This phase also witnessed some significant changes in the use of technology by banks. Increased use of technology combined with some other specific initiatives helped improve the customer service by banks.

Annex III.1: Bank Failures, Liquidations and Amalgamations in India: 1913 - 2007

Panel A: Number of Failed Banks: 1913 to 1955

Year (Jan.-Dec.)	No. of Banks	Year (Jan.-Dec.)	No. of Banks	Year (Jan.-Dec.)	No. of Banks	Year (Jan.-Dec.)	No. of Banks
1	2	3	4	5	6	7	8
1913	12	1924	18	1935	51	1946	27
1914	42	1925	17	1936	88	1947	38
1915	11	1926	14	1937	65	1948	45
1916	13	1927	16	1938	73	1949	55
1917	9	1928	13	1939	117	1950	45
1918	7	1929	11	1940	107	1951	60
1919	4	1930	12	1941	94	1952	31
1920	3	1931	18	1942	50	1953	31
1921	7	1932	24	1943	59	1954	27
1922	15	1933	26	1944	28	1955	29
1923	20	1934	30	1945	27		

Panel B: Number of Banks Amalgamated and Liquidated: 1956-1979

Year (January–December)	Banks Compulsory Amalgamated*	Banks Voluntarily Amalgamated**	Banks otherwise Ceased to Function/ Transferred their Liabilities and Assets	Banks which went into Voluntary Liquidation	Banks which went into Compulsory Liquidation	Total (Col. 2 to Col 6)
1	2	3	4	5	6	7
1956	–	–	6	16	6	28
1957	–	1	10	16	3	30
1958	–	4	10	9	5	28
1959	–	4	20	7	7	38
1960	–	2	15	4	5	26
1961	30	–	9	5	3	47
1962	1	3	22	4	3	33
1963	1	2	15	1	1	20
1964	9	7	63	3	–	82
1965	4	5	24	6	3	42
1966	–	–	7	7	3	17
1967	–	–	9	4	2	15
1968	1		2	3	1	7
1969	2		1	2	1	6
1970	1		1	1	2	5
1971	–	–	–	2	1	3
1972	–	–	–	1	–	1
1973	–	–	1	2	–	3
1974	–	–	1	1	–	2
1975	–	1	1	–	–	2
1976	–	–	1	–	–	1
1977	–	–	–	–	–	–
1978	–	–	–	1	–	1
1979	–	–	–	1	–	1

(Contd...)

Annex III.1: Bank Failures, Liquidations and Amalgamations in India: 1913 - 2007 *(Concld.)*

Panel C: Banks Amalgamated: 1980-2007

Year (April-March)	Number of Banks Amalgamated	Year (April-March)	Number of Banks Amalgamated
1980@	–	1993-94	–
1981@	–	1994-95	–
1982@	–	1995-96	1
1983@	–	1996-97	1
1984@	–	1997-98	–
1985@	3	1998-99	2
1986@	1	1999-2000	1
1987@	–	2000-01	1
1988@	1	2001-02	1
1988-89	1	2002-03	1
1989-90	4	2003-04	2
1990-91	–	2004-05	2
1991-92	–	2005-06	2
1992-93	1	2006-07	2

'–' : Nil, negligible.
@ : On a January-December basis.
* : under section 45 of the BR Act, 1949.
** : Section 44 A of the BR Act, 1949.

Source : 1. Statistical Tables Relating to Banks in India, various issues .
2. Report on Trend and Progress of Banking in India, 2004-05, 2005-06 and 2006-07.

Annex III.2: Number of Banks

Panel A

End-December	Presidency/ Imperial Bank	Exchange Bank	Class A	Class B	Total Reporting Banks
1870	3	3	2	–	8
1880	3	4	3	–	10
1886	3	4	5	–	12
1887	3	4	5	–	12
1890	3	5	5	–	13
1900	3	8	9	–	20
1910	3	11	16	–	30
1913	3	12	18	23	56
1920	3	15	25	33	76
1930	1*	18	31	57	107
1934	1	17	36	69	123
1935	1	17	38	62	118

Panel B

	Scheduled Banks				Non- Scheduled Banks					
End-December	Presidency/ Imperial Bank	Exchange Bank	Class A1	Total	Class A2	Class B	Class C	Class D	Total	Total Banks
1936	1	19	27	47	9	71	–	–	80	127
1940	1	20	41	62	17	122	121	332	592	654
1945	1	15	75	91	67	188	137	254	646	737
1947	1	15	80	96	68	185	119	188	560	656
1950	1	16	74	91	73	189	123	124	509	600
1951	1	16	75	92	70	186	117	96	469	561
1952	1	15	75	91	70	194	114	60	438	529
1960	**			93#	38	143	69	1	251	344
1967	–	–	–	71#	–	–	–	–	20	91
1969	–	–	–	71#	–	–	–	–	14 £	85
1980 $	–	–	–	81#	–	–	–	–	3	84
1990 $	–	–	–	74#	–	–	–	–	3	77
2000 $	–	–	–	101#	–	–	–	–	0	101
2007 $	–	–	–	83#	–	–	–	–	0	83

\# : Including the State Bank of India, foreign banks and other scheduled banks.

* : Three presidency banks were amalgamated in 1921 and the Imperial Bank of India was formed.

** : The Imperial Bank of India was nationalised in 1955 and renamed as State Bank of India.

$: End-March.

£ : Effective 1964, classification of non-scheduled banks into A2, B,C and D banks, based on their paid-up capital and reserves, was discontinued and all non-scheduled commercial banks were treated as one group.

Note : 1. There has not been any non-scheduled bank since May 1997.
2. Class A were banks with capital and reserves greater than Rs 5 lakh.
3. Class A1 were banks with capital & reserves greater than Rs.5 lakh and included in the second schedule to the RBI Act 1934.
4. Class A2 were non-scheduled banks with capital and reserves of greater than Rs.5 lakh.
5. Class B were non-scheduled banks with capital and reserves greater than Rs.1 lakh but lower than Rs.5 lakh.
6. Class C were non-scheduled banks with capital and reserves of greater than Rs.50,000 and up to Rs.1 lakh .
7. Class D banks with capital and reserves of less than Rs.50,000.

Source : Banking and Monetary Statistics of India, RBI, 1954.
Statistical Tables Relating to Banks in India, various issues.

IV MANAGING RESOURCE MOBILISATION

4.1 The saving and investment process in an economy is organised around a financial framework that facilitates economic growth. A well designed financial system promotes growth through effective mobilisation of savings and their allocation to the most productive uses by either following a centralised approach or a decentralised approach or a combination of both. Typically, economies with underdeveloped capital markets adopt a centralised approach, whereby financial intermediaries mobilise resources from savers and allocate them to borrowers. Traditionally, banks have played a critical role in the financial intermediation process as they are able to deal more appropriately with transaction costs and information asymmetries in a financial system. As financial markets develop, transaction costs and information asymmetries reduce, the decentralised approach for guiding the saving-investment process also gains significance, and households with surplus resources increasingly invest in capital market instruments. The historical experience shows that virtually in all the economies, including the market-intermediated ones, banks have played a central role in resource mobilisation and supporting the growth process, and that the development of banks and other intermediaries has itself facilitated the development of financial markets.

4.2 The genesis of banks' role in the resource mobilisation process lies in firms relying critically on external sources of finance, especially in their formative stages. In particular, banks have played a key role in coordinating investment efforts in many economies such as Belgium, Germany, Italy and Japan in engineering 'take-offs' during their critical phases of development. Resource mobilisation by banks became a critical factor in their ability to act as 'catalysts' of economic development. During the 'take-off stages' of these economies, large and powerful banks initially relied on capital contributions from a small number of founders and thereafter as their industrial lending portfolio grew, they took recourse to deposits as a major source of funds. With the development of markets, borrowings also became an important source of funds for the banks.

4.3 Historically, financial intermediation by banks has played a central role in India in supporting the growth process by mobilising savings, particularly after the nationalisation of the 14 major private banks in the late 1960s. Banks have been particularly instrumental in mobilising deposits from the household sector, the major surplus sector of the economy, which, in turn, has helped raise the financial savings of the household sector and hence the overall saving rate. Notwithstanding the liberalisation of the financial sector and increased competition from various other saving instruments, banks continue to play a dominant role in the financial intermediation of the Indian economy. The deregulation of interest rates has opened up new avenues for banks to mobilise funds at competitive rates. Moreover, banks, by virtue of being the ultimate platform for clearing and settlement for all financial transactions, provide accounts and resources to other sectors as also other financial intermediaries.

4.4 The Indian economy has witnessed robust growth performance in recent years and banks have played a major role in providing the required amount of resources. In order to sustain the growth process, banks would have to continue to provide funding on a large scale. In India, there exists an enormous potential of savings in rural and semi-urban areas. Also, in India quite a large part of domestic savings is locked up in unproductive physical assets. The mobilisation of savings from hitherto untapped areas and conversion of physical savings into financial savings would necessitate introduction of appropriate products to suit the demand of savers. Banks are indeed in an ideal position to do so because of certain inherent characteristics of deposits such as safety and liquidity.

4.5 Apart from mobilisation of deposits, banks, for meeting their resource needs, also depend on non-deposit resources both at home and abroad. A part of non-deposit resources comes from borrowings, which help augment the funding needs of the banks instantly. However, they also pose a challenge in terms of their availability and management of borrowing costs, amidst potential interest rate and exchange rate risks. Thus, an effective use of borrowings requires a system of appropriate risk management by banks.

4.6 Against this backdrop, this chapter analyses various aspects of resource mobilisation and identifies the scope and challenges faced by banks in the process of financial intermediation and supporting

economic growth in India. The chapter is organised into six sections. Section II provides the theoretical underpinnings on the intermediation role of banks. Section III, after analysing the role played by financial intermediaries in mobilising resources based on the flow of funds of the Indian economy, examines in detail the various aspects of the deposit mobilisation process by banks in India. The significance of deposits in the liability structure of banks is also discussed in this section. Section IV covers the cross-country experiences regarding the role played by the banking sector in financially liberalised and globalised environment with a view to drawing appropriate lessons. Section V identifies the emerging issues and challenges faced by banks in India and makes suggestions, as the way forward, to meet effectively the challenge of resource mobilisation. Section VI concludes the chapter.

II. THEORETICAL UNDERPINNINGS

4.7 According to the traditional literature, the domestic financial system evolves through three different stages, *viz.*, (a) the bank-oriented phase, (b) market-oriented phase and (c) strongly market-oriented phase. In the bank-oriented phase, the bulk of an economy's savings is intermediated through banks in the form of deposits and transferred to the borrowers. Banks, thus, play a key role as financial intermediaries in reallocating the resources from surplus economic units (savers) to deficit economic units (borrowers). They perform this special role as they are perceived as intermediaries effective in ameliorating information asymmetries and inter-temporal transaction costs that form the central source of imperfections in a financial system. Risk capital is obtained from retained profits and direct recourse to promoters, who are fewer in number. In the market-oriented phase, firms increasingly rely on external funds, including risk capital raised from ultimate savers through capital markets rather than through financial intermediaries. In the strongly market-oriented phase, banks also rely increasingly on the funds raised through financial and capital markets and there come into existence new financial-risk-hedging markets (Rybczybski, 1985).

4.8 Advances in the recent literature show that the traditional debate, *i.e.*, whether bank-based or market-based financial structure was supportive of economic growth, may be misplaced in the current context (Levine, 2000). The bank-based view of growth, as propounded by development economists, notes that corporate financing for investment in the development phase is predominantly raised as debt from banks rather than from equity. This view is pessimistic about the role of markets as compared to banks in fostering growth. In turn, traditional corporate finance views banks, bond and equity financing as substitutes. Banks reduce costs of acquiring and processing information on behalf of investors and thereby avoid duplication and free rider problems. Banks also enable both cross-sectional as well as inter-temporal risk sharing. They also facilitate mobilisation of financial savings by economising on the transactions costs associated with mobilising savings from disparate agents and by overcoming the information asymmetries with making savers comfortable in offering their savings. By effectively mobilising savings, financial intermediaries not only ease capital accumulation but also improve resource allocation by allowing the benefits of economies of scale. According to this view, bank-based financial systems – especially in countries at early stages of economic development – are better at promoting economic growth. On the other hand, the market-based view stresses the importance of well-functioning securities markets in providing incentives for investors to acquire information, impose corporate control and custom design financial arrangements.

4.9 A third view emerging since the 1990s is that banks and markets may provide complementary or similar financial services. The financial services view, thus, places analytical importance on how both banks and markets build a sound system for effective provision of financial services so as to promote economic growth. Financial systems assess potential investment opportunities, exert corporate control after funding projects, facilitate risk management, including liquidity risk, and ease savings mobilisation. Another view, *i.e*., legal-based view, which emerged in the 1990s, extends the financial services view and unconditionally rejects the bank-based *versus* market-based debate and argues that finance is a set of contracts, which can be made more or less effective by legal rights and enforcement mechanisms. Accordingly, the overall level and quality of financial services – as determined by the legal system – improves the efficient allocation of resources and economic growth. Hence, it emphasises that focus should be on creating a sound legal environment, rather than debating on the merits of bank-based or market-based systems. Cross-country data also show that countries with greater degrees of financial development – as measured by aggregate measures of bank development and market development – are strongly linked with long run growth. Furthermore, the

component of financial development explained by legal rights of outside investors and the efficiency of legal system is strongly and positively linked with long-run growth. The legal system plays an important role in financial sector development and in turn influences long-run growth. Thus, improving functioning of markets and banks is critical for boosting long-run economic growth. Policymakers, therefore, need to focus on strengthening the legal rights of outside investors and the overall efficiency of contract enforcement. Policy tools should not tip the level playing field in favour of banks or markets and instead focus on strengthening the fundamentals in the form of property rights and enforcement of these rights.

4.10 A key variable influencing availability of funds for banks is the central bank policy that alters the total volume of reserves in the banking system. Studies in the traditional literature have shown that, under conditions of precommitment of households to a deposit position and prevalence of Keynesian-type 'sticky prices', a central bank can alter the volume of reserves in the banking system through unanticipated injection of non-borrowed reserves, thereby creating 'liquidity effects'. These models assume that households do not quickly adjust their liquid asset holdings, in particular their bank deposit position, in response to an unanticipated change in monetary policy. Subsequent models relaxed restrictions of this set up by introducing alternative instruments like bonds, whereby direct financing of firms/borrowers by households was allowed. This imparted the countercyclical character of working capital loans being financed through bank lending. These models were further developed by recognising that bonds and bank deposits are imperfect substitutes as not all firms have a quality rating to permit them to issue bonds and so they must have to take recourse to bank lending. However, continued restrictions in the form of deposits market clearing as well as deposit rate being determined prior to money shock produced persistence of liquidity effects. In the absence of the bond market, households are forced to absorb the monetary shock with liquid asset holdings in the form of bank deposits, thus, keeping the demand for real money balances relatively high and bringing about a slow price adjustment. The availability of the bond market provides households with a savings asset that helps to insulate their income from inflation. In response to a monetary shock, therefore, the demand for bonds increases, thereby mitigating the demand for real money balances and inducing an overshooting of prices relative to their long-run equilibrium path. Consequently, the sharper initial price adjustments result in lower expected inflation premia in nominal interest rates that dissipate slowly. Thus, information frictions in the form of precommitment by households to a deposit position as well as presetting of deposit rates by banks prior to monetary (reserves shock) commitment generate liquidity effects. However, when both the assumptions are operative, models yield excessive volatility in consumption and investment. However, when the precommitment of deposits by households is minimal, such that the principal restriction is a pre-set deposit rate, the liquidity effect is still present, bank intermediation remains countercyclical, and the behaviour of consumption and investment is cyclical in nature in tandem with the actual experience. This brings out three features of interest rate policy followed by banks. First, bank deposit rates on transaction accounts move quite sluggishly as they represent average rather than marginal rates. Second, interest rates paid on managed liabilities become more responsive to market rates. Managed liabilities, however, represent only a fraction of deposit funds. Third, interest rates on bank loans to firms are normally tied to lines of credit. All of these issues may significantly affect the cyclical properties of bank lending, and hence its role in transmitting monetary policy decisions to the real economy. Accordingly, interest rate policies, in particular, deposit rate policies followed by banks are receiving progressively greater attention in recent years (Einarsson and Marquis, 2003).

4.11 Traditionally, local market conditions play an important role in deposit pricing policy of banks. In this context, it was found that typically banks in more concentrated markets offer lower interest rates on deposits and higher rates on loans (Berger and Hannan, 1989). According to the traditional literature, bank deposit rates would not be affected from a rapid increase in average bank size, provided the local market concentration remains essentially unchanged. However, the experience of the recent banking consolidation shows that increase in the average size of banks, which have not impacted local market concentration, have changed local market conditions and influenced determination of deposit rates. Increase in bank size might affect deposit rates if regional or large nationwide organisations compete in different ways than small, local institutions, even when the different organisations have similar local market shares. Furthermore, although banking markets are generally local in nature, evidence from the development in recent years shows that multi-market banks compete differently than the banks that operate primarily in the local market. During the

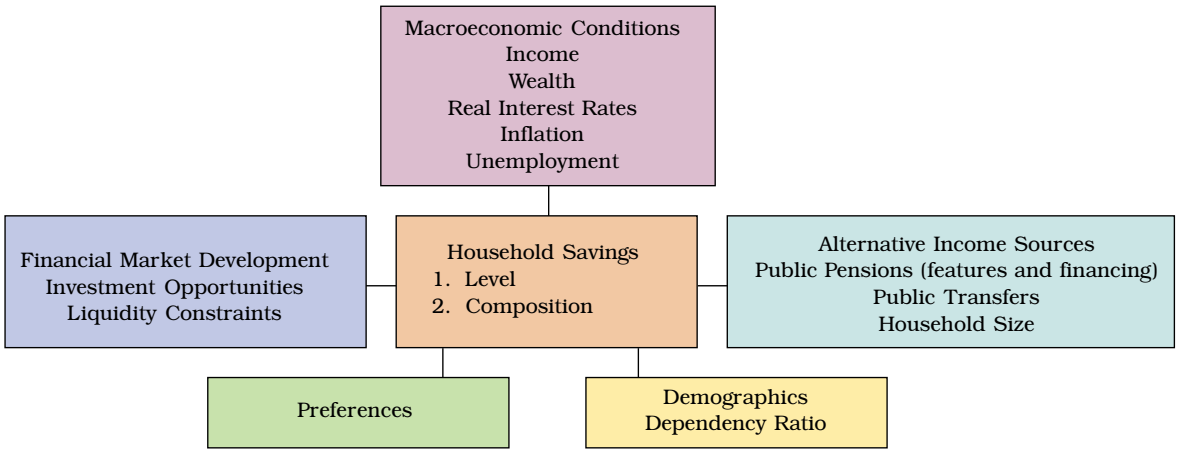
period of 1988 to 2004 in the US, as a result of the consolidation process, the effect of size structure on deposit rates followed typically an inverse-V shaped pattern. Up to the year 2000, bank mergers that moved deposits to mega banks pushed down the deposit rates as mega banks tended to be less aggressive competitors than small banks. This was partially, but not completely, offset by the fact that multi-market banks tended to be more aggressive competitors. During the subsequent period, the trend reversed, which reflected that mega banks became more aggressive competitors which led to an increase in deposit rates. These underlying trends bring to the fore several features of deposit pricing. First, as banks grow larger, they have access to more non-deposit liabilities. Typically, this reduces the desire for them to compete intensively for deposits. Second, as banks grow in size and operate in multiple markets, they become less sensitive to local market conditions. Third, since banks compete more intensively against other of similar size, the growing presence of multimarket mega-banks instills more aggressive competition among them leading to higher deposit rates (Rosen, R. J., 2007).

4.12 Finally, since household savings form a potential pool of resources for intermediation by banks, the evolving dynamics in determinants of household savings have a critical bearing on banks in their management of resource mobilisation. While the banks' accessibility of resources is expected to grow in tandem with the increasing level of household savings, the actual recourse of the same would depend upon the households' decisions on their portfolio composition of savings. The level and composition of household savings, in turn, are influenced by macroeconomic conditions, financial market development and regulation, alternative income sources, demographics and preferences of the household sector (Exhibit 1). Cross-country evidence on asset composition of household balance sheets reveals that non-financial assets constitute a major share in total assets in countries where developments in housing sectors have opened up new investment opportunities. On the other hand, the composition shifts in favour of financial assets in countries with well developed financial markets, partly facilitated by relatively cheap housing and extensive reliance on private pension plans. Within financial assets, the preference for liquid assets held mostly in the form of bank deposits is observed to be high in countries with a long history of public confidence in banking, which is also influenced, to an extent, by lack of confidence in the real estate and capital markets (Davies, *et. al*., 2007).

III. DEPOSIT MOBILISATION BY BANKS IN INDIA

4.13 Since the first episode of bank nationalisation in 1969, financial intermediaries, especially banks have been at the core of the financial intermediation process in India. They have mobilised a sizeable share of savings of the household sector and channelling them to the deficit sectors, *viz*., the private corporate and public, thereby supporting the growth process. The analysis of bank deposits in this section is attempted using the flow of funds data and the regular data on deposits of scheduled commercial banks (SCBs). The flow of funds data, though

Exhibit IV.1: Factors Affecting Household Savings



Source : Tuladhar, A. (2007).

available with a considerable time lag (*i.e.*, latest data available are for the period 2000-01), could provide useful insights into the relative position of the banking sector *vis-à-vis* the other sectors.

Flow of Funds

4.14 The channeling of resources from the surplus units to the deficit units was reflected in the flow of funds (FOF) accounts of the Indian economy across the six sectors, *viz.*, households, corporates, government, banks, other financial institutions (OFIs) and the rest of the world sector. Households, the consistent surplus sector, met to a large extent the deficits of the public and private corporate sectors, and to a limited extent of the rest of the world sector. Funds were provided to meet the requirements of the deficit sectors either directly (primary issues) or through the financial intermediaries such as banks and OFIs (secondary issues). A notable feature from the sectoral distribution of claims was a general rise in the share of secondary issues from 39.7 per cent in 1970-71 to 47.1 per cent in 1999-00 with a corresponding decline in the share of primary issues. This reflected an important role played by financial intermediaries in the flow of funds process in the Indian economy (Table 4.1). In this context, it may be noted that flow of funds data for the Indian economy, which require availability of comprehensive information on financial transactions across all the sectors and instruments of the economy, are released with a considerable lag. This section utilises the latest available data for 2000-01, which was published in the *RBI Bulletin* released in September 2007.

4.15 The relative significance of financial claims by the various sectors show year to year variations. The financial intermediation process has been dominated by the banking system. The share of claims by all financial institutions in total claims moved in the range of 36.3 per cent and 47.1 per cent; it averaged 42.2 per cent during the period 1994-95 to 2000-01. Financial flows through the banking sector increased from Rs.1,16,217 crore in 1994-95 to Rs.1,88,495 crore in 2000-01 with the share of financial flows through the banks in the flows through the financial intermediary sector, on the whole, increasing from around 62 per cent in 1994-95 to around 64 per cent in 2000-01. The share of the banking sector in total claims declined from 28.3 per cent to 24.2 per cent, while that of the OFIs declined from 17.2 per cent to 13.6 per cent during this period (Table 4.2). The share of non-financial institutions, led by the Government and to an extent by the private corporate sector, increased over this period.

Table 4.1: Primary and Secondary Issues

(Rupees crore)

Year	Secondary Issues	Primary Issues	*Of which*:		Total Issues
			Domestic Primary Issues	Issues of the Rest of the World	
1	2	3=4+5	4	5	6
1970-71	2,336	3,541	3,479	62	5,877
	(39.7)	(60.3)	(59.2)	(1.1)	(100.0)
1975-76	6,733	8,999	8,125	874	15,732
	(42.8)	(57.2)	(51.6)	(5.6)	(100.0)
1980-81	14,731	21,452	21,408	44	36,183
	(40.7)	(59.3)	(59.2)	(0.1)	(100.0)
1985-86	30,558	42,006	43,698	-1,692	72,564
	(42.1)	(57.9)	(60.2)	(-2.3)	(100.0)
1990-91	71,016	96,508	1,03,558	-7,050	1,67,524
	(42.4)	(57.6)	(61.8)	(-4.2)	(100.0)
1991-92	1,06,386	1,31,916	1,24,664	7,252	2,38,302
	(44.6)	(55.4)	(52.3)	(3.0)	(100.0)
1992-93	95,790	1,13,990	1,17,511	-3,521	2,09,780
	(45.7)	(54.3)	(56.0)	(-1.7)	(100.0)
1993-94	1,42,897	1,59,200	1,40,079	19,121	3,02,097
	(47.3)	(52.7)	(46.4)	(6.3)	(100.0)
1994-95	1,86,675	2,23,512	2,08,448	15,064	4,10,187
	(45.5)	(54.5)	(50.8)	(3.7)	(100.0)
1995-96	1,40,337	2,46,614	2,39,849	6,765	3,86,951
	(36.3)	(63.7)	(62.0)	(1.7)	(100.0)
1996-97	1,85,638	2,22,351	193,502	28,849	407,989
	(45.5)	(54.5)	(47.4)	(7.1)	(100.0)
1997-98	2,40,884	3,62,009	3,42,359	19,650	6,02,893
	(40.0)	(60.0)	(56.8)	(3.3)	(100.0)
1998-99	2,77,498	3,67,061	3,50,075	16,986	6,44,559
	(43.1)	(56.9)	(54.3)	(2.6)	(100.0)
1999-00	2,73,759	3,07,956	2,93,354	14,602	5,81,715
	(47.1)	(52.9)	(50.4)	(2.5)	(100.0)
2000-01	2,94,765	4,84,461	4,34,573	49,888	7,79,226
	(37.8)	(62.2)	(55.8)	(6.4)	(100.0)

Note : Figures in parentheses represent percentage shares in total claims.

Source : Flow of Funds Accounts of the Indian Economy, RBI Bulletin, September 2007.

4.16 The various sources of funds for the banks, as reflected in the flow of funds accounts of the Indian economy, showed large fluctuations. A notable feature, however, was that the deposits continued to constitute the largest source of funds for the banks. The share of deposits in total sources for the commercial banks increased steadily from 85 per cent in 1994-95 to around 97 per cent in 2000-01. The shares of paid-up capital and borrowings declined sharply between 1994-95 and 2000-01 (Table 4.3). While deposits were mobilised primarily from households, the share of the corporate sector in bank deposits increased. The share of households in total commercial bank deposits remained around 70 per cent over the period 1994-95 to 2000-01, while that of the private corporate sector increased from 0.6 per cent to 3.8 per cent. The share of rest of world rose from 8.3 per cent to 11.3 per cent. On the other hand,

Table 4.2: Financial Flows by Sectors

(Rupees crore)

Sector	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
1	2	3	4	5	6	7	8
1. Banking	1,16,217	73,495	87,585	1,40,616	1,77,055	1,54,433	1,88,495
	(28.3)	(19.0)	(21.5)	(23.3)	(27.5)	(26.5)	(24.2)
2. Other Financial Institutions	70,458	66,842	98,054	1,00,268	1,00,443	1,19,327	1,06,270
	(17.2)	(17.3)	(24.0)	(16.6)	(15.6)	(20.5)	(13.6)
3. All Financial Institutions (1+2)	**1,86,675**	**1,40,337**	**1,85,638**	**2,40,884**	**2,77,498**	**2,73,759**	**2,94,765**
	(45.5)	**(36.3)**	**(45.5)**	**(40.0)**	**(43.1)**	**(47.1)**	**(37.8)**
4. Private Corporate Business	1,11,876	1,36,244	91,633	1,06,850	1,32,745	79,674	1,82,126
	(27.3)	(35.2)	(22.5)	(17.7)	(20.6)	(13.7)	(23.4)
5. Government	71,801	84,985	83,675	2,10,145	1,89,962	1,77,612	2,20,669
	(17.5)	(22.0)	(20.5)	(34.9)	(29.5)	(30.5)	(28.3)
6. Rest of the World	15,064	6,765	28,849	19,650	16,986	14,602	49,888
	(3.7)	(1.7)	(7.1)	(3.3)	(2.6)	(2.5)	(6.4)
7. Households	24,771	18,620	18,194	25,365	27,367	36,067	31,778
	(6.0)	(4.8)	(4.5)	(4.2)	(4.2)	(6.2)	(4.1)
8. All Non-Financial Institutions (4 to 7)	**2,23,512**	**2,46,614**	**2,22,351**	**3,62,009**	**3,67,061**	**3,07,956**	**4,84,461**
	(54.5)	**(63.7)**	**(54.5)**	**(60.0)**	**(56.9)**	**(52.9)**	**(62.2)**
9. Total Claims Issued (3+8)	**4,10,187**	**3,86,951**	**4,07,990**	**6,02,893**	**6,44,558**	**5,81,715**	**7,79,225**
	(100.0)	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**

Note : Figures in parantheses represent the share in total claims.
Source : Flow of Funds Accounts of the Indian Economy, RBI Bulletin, September 2007.

the share of financial institutions in commercial bank deposits declined from 6.9 per cent to 2.7 per cent during the same period. Bank deposits from the government sector include deposits held by the local authorities and public sector commercial undertakings apart from the Central and State

Table 4.3: Flow of Funds Accounts for Commercial Banks

(Rupees crore)

	Sources	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
	1	2	3	4	5	6	7	8
1	**Paid-up Capital**	**5,195**	**708**	**-777**	**3,530**	**-568**	**611**	**1,133**
		(6.1)	**(1.3)**	**(-1.2)**	**(3.4)**	**(-0.5)**	**(0.5)**	**(0.9)**
2	**Deposits**	**72,651**	**46,859**	**49,347**	**98,187**	**1,03,181**	**1,03,816**	**1,15,441**
		(85.0)	**(84.4)**	**(73.7)**	**(94.3)**	**(94.1)**	**(91.1)**	**(96.6)**
	a) Co-operative Banks	2,331	-131	5,109	2,831	2,156	2,445	2,253
	b) Other Financial Institutions	5,024	85	4,166	134	260	3,499	3,079
	c) Private Corporate Business	416	-222	4,594	4,469	4,595	5,040	4,387
	d) Government	7,433	4,715	4,906	16,258	11,494	12,925	11,771
	Of which: Central and State Govts.	2,897	3,898	-544	5,122	3,552	3,969	3,579
	Local Authorities	2,533	1,855	2,755	7,337	4,809	5,447	5,018
	Commercial Undertakings	2,003	-1,038	2,695	3,799	3,133	3,509	3,174
	e) Rest of the World	6,047	9,694	-10,137	9,570	14,876	7,076	13,071
	f) Households	51,400	32,718	40,709	64,925	69,800	72,831	80,880
3	**Borrowings**	**7,249**	**9,893**	**10,773**	**-7,159**	**4,697**	**8,553**	**854**
		(8.5)	**(17.8)**	**(16.1)**	**(-6.9)**	**(4.3)**	**(7.5)**	**(0.7)**
	a) Banking	5,839	6,956	3,509	-6,681	4,048	4,457	-313
	i) Reserve Bank of India	5,785	6,979	3,150	-6,435	3,755	4,228	-36
	ii) Co-operatives	54	-23	359	-246	293	229	-277
	b) Other Financial Institutions	790	3,107	2,637	220	1,938	3,738	957
	c) Rest of the World	620	-170	4,627	-698	-1,289	358	210
4	**Bills Payable**	**1,712**	**-1,713**	**5,566**	**4,177**	**7,201**	**19**	**3,572**
		(2.0)	**(-3.1)**	**(8.3)**	**(4.0)**	**(6.6)**	**(0.0)**	**(3.0)**
5	**Others**	**-1,372**	**-235**	**2,010**	**5,427**	**-4,889**	**965**	**-1,444**
		(-1.6)	**(-0.4)**	**(3.1)**	**(5.2)**	**(-4.5)**	**(0.8)**	**(-1.2)**
	TOTAL	**85,435**	**55,512**	**66,919**	**1,04,162**	**1,09,622**	**1,13,964**	**1,19,556**
		(100.0)	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**

Note : Figures in parentheses are percentages to total sources of funds for the commercial banks.
Source : Flow of Funds Accounts of the Indian Economy, RBI Bulletin, September 2007.

Governments. A notable feature was the increase in the holdings of deposits by the local authorities with banks. Borrowings, as a source of funds for the commercial banks, were driven by the borrowings from the Reserve Bank, other financial institutions and from the rest of the world sector. The rationalisation of the refinance facilities from the Reserve Bank, whereby refinance facilities other than export credit refinance facility was withdrawn, led to lower recourse of borrowings by banks from the Reserve Bank. Financial institutions constituted the main source of funds in the form of borrowings for banks, followed by the rest of the world sector in 2000-01.

Bank Deposits

4.17 The banking sector has played an increasingly important role in the financial intermediation process by mobilising savings in the form of deposits. Yearly aggregate deposit growth of scheduled commercial banks, which remained highly volatile during the period 1951-52 to 1960-61, stabilised thereafter (Chart IV.1).

4.18 A major turning point in the post-independence history of the banking sector was nationalisation of 14 major private sector commercial banks in July 1969. Bank deposit growth of SCBs in the post-nationalisation period could be broadly divided into four phases, *viz.*, Phase I (1969-1984); Phase II (1984-1995); Phase III (1995-2005); and Phase IV (2005-2008) (Table 4.4).

4.19 In the first phase, the aggregate deposit growth of SCBs increased sharply averaging 19.2 per cent during 1969-1984 as compared with 9.5 per cent during

Chart IV.1: Bank Deposit Growth Rate

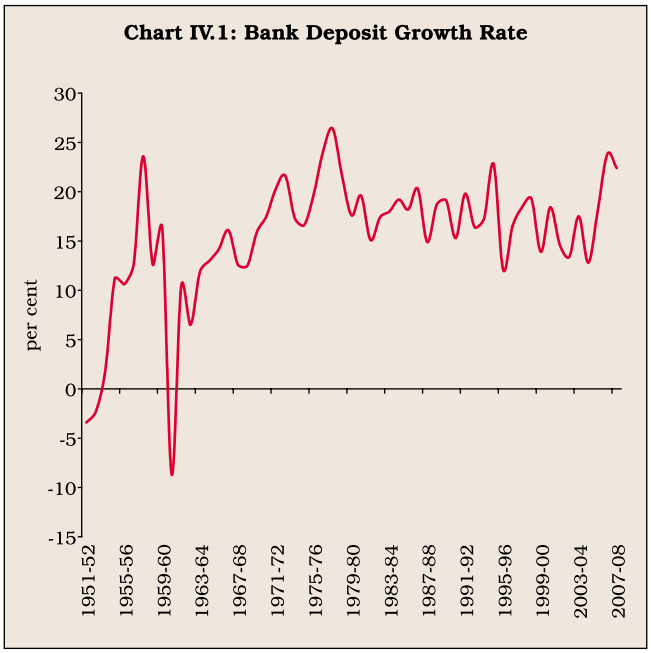


Table 4.4: Growth in Bank Deposits
(Annual Average)

(Per cent)

Period Averages	Demand	Time	Aggregate
1	2	3	4
1951-52 to 1968-69	7.1	13.1	9.5
1969-70 to 1983-84	13.3	22.7	19.2
1984-85 to 1994-95	19.5	18.2	18.4
1995-96 to 2004-05	12.6	16.4	15.7
2005-06 to 2007-08	22.5	21.3	21.4

Source : Handbook of Statistics on the Indian Economy, Reserve Bank of India.

the pre-nationalisation phase (1951-1969). Net financial savings (net of financial liabilities) of the household sector increased sharply by 49.2 per cent in a single year in 1970-71, *i.e.*, immediately after banks were nationalised. Consequently, physical savings of households declined by 8.9 per cent in 1970-71. Large branch expansion by commercial banks, especially in rural and semi-urban areas following nationalisation of 14 major private sector banks in 1969 also had a significant positive impact on deposit growth of banks. The second round of nationalisation of six private sector banks in 1980 led to further expansion of branch network and helped spur the growth of deposits. The number of bank offices in rural and semi-urban areas increased from 1,443 and 3,337, respectively, in 1969 to 30,185 and 9,816, respectively, in 1985. Consequent to the large branch expansion, outreach of the banking system expanded as reflected in the population per office, which declined from 65,000 in 1969 to around 14,000 in 1985 and has remained broadly stable thereafter (Table 4.5).

Table 4.5: Number of Bank Offices in India

March	Rural	Semi-urban	Urban	Metro-politan	Total	Population per Office (in thousands)
1	2	3	4	5	6	7
1969	1,443	3,337	1,911	1,496	8,187	65
1970	4,817	4,401	2,504	1,900	13,622	41
1975	6,807	5,598	3,489	2,836	18,730	32
1980	15,105	8,122	5,178	4,014	32,419	20
1985	30,185	9,816	6,578	4,806	51,385	14
1990	34,791	11,324	8,042	5,595	59,752	14
1995	33,004	13,341	8,868	7,154	62,367	15
2000	32,734	14,407	10,052	8,219	65,412	15
2005	32,082	15,403	11,500	9,370	68,355	16
2007	30,551	16,361	12,970	11,957	71,839	15

Note : Data for 1969 relate to end-June.
Source : 1. Basic Statistical Returns of Scheduled Commercial Banks in India, Reserve Bank of India.
2. Banking Statistics, 1972 for data for the year 1969 .

4.20 As a result, the share of rural deposits in total deposits increased from 3.1 per cent in 1969 to 14.4 per cent by 1984, which was primarily responsible for raising the overall deposit growth during the period 1969-1984. Similarly, the shares of semi-urban and urban deposits also increased somewhat up to the mid-1980s. On the other hand, the share of metropolitan deposits in total deposits declined sharply from 49 per cent to around 39 per cent over the same period (Chart IV.2).

4.21 Increased access to banking facilities helped improve the banking penetration. At the all-India level, the number of savings and current deposit accounts with SCBs per hundred persons increased from 5.8 in 1973 to 15.3 in 1981 and further to 31.8 in 1991. It declined to 28.9 in 2001 before increasing again to 34.9 in 2007. In rural areas, the number of savings and current deposit accounts with SCBs per hundred persons increased from 3.3 in 1973 to 11.4 in 1981 and further to 25.5 in 1991. It declined to 23.8 in 2001 before increasing again to 27.8 in 2007 in line with the emphasis on financial inclusion by the Government and the Reserve Bank. The share of deposits in rural areas in banks' total savings and current deposit accounts, which had increased up to 1991, however, declined in recent years (Table 4.6). In this context, it may be noted that apart from the SCBs, deposit facilities are also provided by primary agricultural credit societies (PACS), urban co-operative banks (UCBs) and post offices and, therefore, they also need to be taken into account in assessing the penetration of financial services in India (see Chapter VII for details).

Chart IV.2: Population Group-wise Bank Deposits

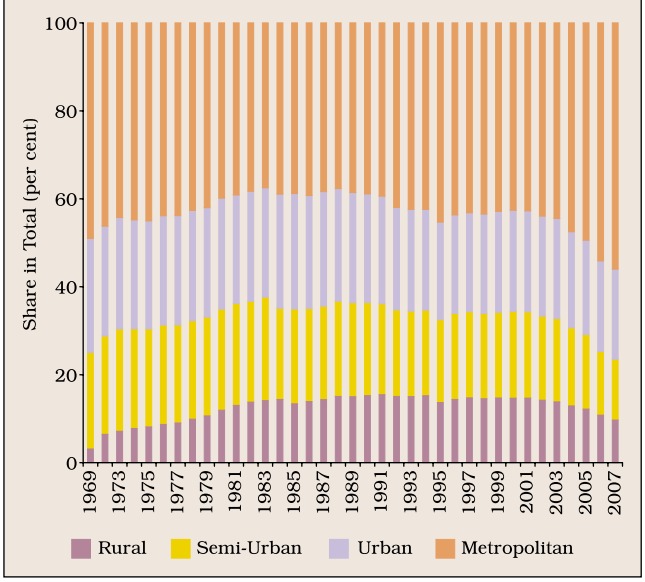


Table 4.6: Population Group-wise Distribution of Deposit Accounts of SCBs

	Share in Total Accounts (Per cent)		No. of Accounts per 100 Persons		
End-March	Rural	Urban	Rural	Urban	Total
1	2	3	4	5	6
Savings and Current Deposit Accounts					
1973	45.1	54.9	3.3	16.0	5.8
1981	57.1	42.9	11.4	28.1	15.3
1991	59.5	40.5	25.5	50.0	31.8
2001	59.3	40.7	23.8	42.3	28.9
2007	56.0	44.0	27.8	51.4	34.9

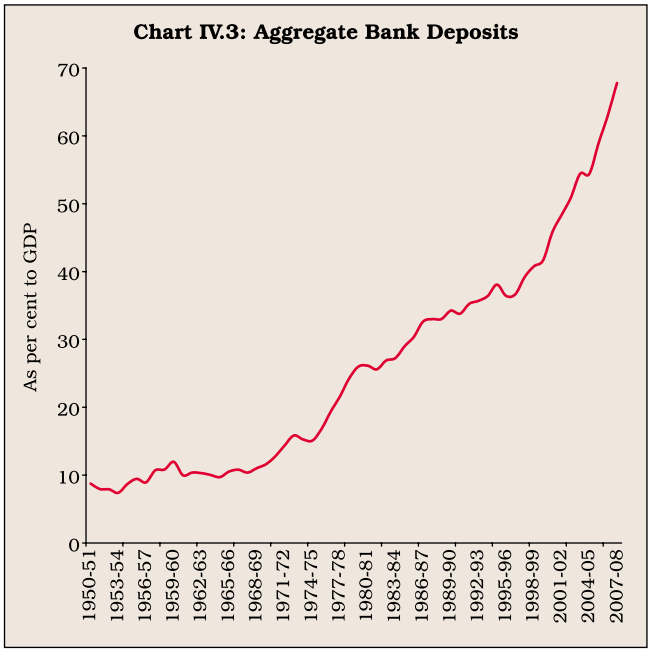
Note : 1. Data on bank deposits for 1973 and 1980 pertain to December.
2. The census population groups are 'Rural' and 'Urban', whereas the population groups used in BSR data are 'Rural', 'Semi-Urban', 'Urban" and 'Metropolitan'. Therefore, for the purpose of comparison and simplicity, 'Rural' and 'Semi-Urban' are taken as 'Rural' and 'Urban' and 'Metropolitan' are combined as 'Urban'.
3. For calculating the number of bank accounts per 100 persons for the year 1973, population census data for 1971 were used, while for the year 2007, the rural and urban population was derived by applying the compound growth rate of the 2001 census for projecting the urban population in 2007 and deducting that from the figure for total projected population available on the website of the Registrar General and Census Commissioner, Government of India.

Source : Basic Statistical Returns of Scheduled Commercial Banks in India, Reserve Bank of India, and Registrar General and Census Commissioner, Government of India.

4.22 The process of banking habit was also facilitated by the establishment of the Deposit Insurance Corporation in 1962 (against the backdrop of failure of banks), which offered protection to bank depositors, particularly small account holders. This restored faith of savers in the banking system as reflected in the ratio of aggregate bank deposits to GDP, which increased from an average of 9-10 per cent during the 1950s and the 1960s to an average of 18 per cent during the 1970s (Chart IV.3).

4.23 The share of bank deposits in gross financial savings of the household sector also increased from 35.7 per cent in 1970-71 to 42.5 per cent in 1983-84 reflecting the impact of bank branch expansion (Table 4.7). The share of bank deposits declined to 38.4 per cent by 1994-95 mainly due to disintermediation in the financial system on account of households' preference for capital market instruments. The Government's policy thrust on small saving schemes led to a further decline in the share of bank deposits to 36.4 per cent by 2004-05. However, there was a reversal in this trend with the share of bank deposits increasing to 55.6 per cent in 2006-07, reflecting aggressive deposit mobilisation by banks, partly facilitated by the extension of tax benefits to special

Chart IV.3: Aggregate Bank Deposits



deposit schemes as detailed in the subsequent sections. The higher interest rates on time deposits and unchanged interest rates on small savings contributed to some shift of funds from small savings to bank deposits.

4.24 A major structural break occurred in components of bank deposits in 1977-78 due to definitional changes in the treatment of savings deposits. In 1977-78, the share of demand deposits declined sharply, primarily reflecting the switch towards time deposits on account of the change in the treatment of apportionment of savings deposits into two components – demand and time – in March 1978. In terms of the revised definition, SCBs were required to treat the average of the monthly minimum balances in savings accounts eligible for interest payments as 'time' liability, while the remaining portion was to be treated as the 'demand' liability of the savings account. Furthermore, banks were instructed to calculate the proportions between 'demand' and 'time' liabilities twice a year as at end-June and end-December. Also, following the recommendations of the Chore Committee in 1978, banks' reliance on the cash credit reduced significantly as the corporates were required to contribute not less than 25 per cent of their current assets from their own funds and long-term resources. To the extent, corporates reduced their reliance on bank credit, it resulted in the decline in current deposits (Chart IV.4).

4.25 A compositional analysis of bank deposits also reveals that the share of term deposits, which was 55.7 per cent at end-March 1980, declined to around 51 per cent in 1981-82 reflecting a switch towards the new 12 per cent 6-year National Savings Certificates (NSC), which was introduced during the year. There was also a sharp increase in the issue of shares and debentures, particularly convertible debentures, by the corporate sector.

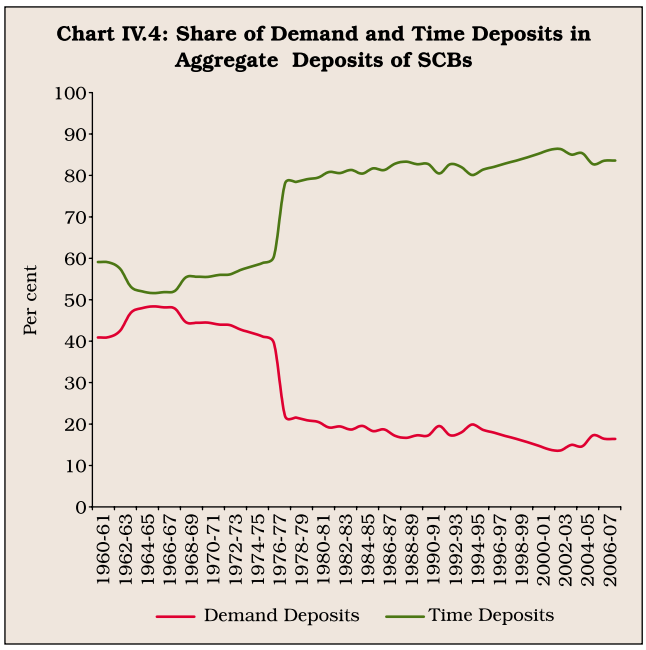
4.26 In the second phase (1984-1995), the aggregate deposit growth decelerated marginally to

Table 4.7: Financial Assets and Liabilities of the Household Sector: Distribution Pattern

(Per cent)

Item	1970-71	1983-84	1994-95	2004-05	2006-07	1970-71 to 1983-84 (average)	1984-85 to 1994-95 (average)	1995-96 to 2004-05 (average)	2005-06 to 2006-07 (average)
1	2	3	4	5	6	7	8	9	10
Currency	16.8	14.8	10.9	8.5	8.6	13.4	11.3	9.3	8.7
Bank deposits	35.7	42.5	38.4	36.4	55.6	44.6	36.5	36.9	50.9
Non- banking deposits	3.2	5.4	7.9	0.8	0.1	3.6	5.2	4.6	0.6
Life insurance fund	9.8	7.3	7.8	15.7	15.0	8.6	8.2	12.9	14.5
Provident and pension fund	23.2	16.2	14.7	13.0	9.2	19.0	17.5	17.7	9.9
Claims on Government	5.0	10.5	9.1	24.5	5.2	5.7	10.4	15.2	9.9
Shares & debentures (including Units of mutual funds)	3.9	4.1	11.9	1.1	6.3	2.6	11.3	3.8	5.6
Trade debt (Net)	2.4	-0.9	-0.8	0.0	0.0	2.6	-0.5	-0.5	0.0
Changes in Financial Assets (Total)	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Bank advances	86.1	85.3	87.3	92.6	96.8	82.9	82.2	83.4	96.6
Loans & advances from other financial institutions	6.4	8.8	9.7	6.9	3.2	8.0	11.3	13.7	3.4
Loans & advances from Government	11.7	3.9	1.7	0.2	-0.1	7.1	4.6	1.9	-0.1
Loans & advances from co-operative non-credit societies	-4.2	2.0	1.3	0.3	0.1	2.0	2.0	1.0	0.1
Changes in Financial Liabilities (Total)	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Handbook of Statistics on the Indian Economy, 2006-07.



18.4 per cent. The growth of demand deposits accelerated during this phase, while that of time deposits decelerated resulting in the overall slowdown in aggregate deposit expansion. The deceleration in time deposits growth was the result of (a) slowdown in expansion of branch network, and (b) substitution of time deposits held in banks with other saving instruments. The number of offices of SCBs, which showed nearly a four-fold increase between 1969 and 1980, expanded by less than two-fold between 1980 and 1995. Second, bank deposits were substituted in favour of other instruments. Units of mutual funds, shares and debentures, deposits of non-banking financial companies (NBFCs) and small savings grew rapidly, which was reflected in increase in their shares in household financial savings (refer Table 4.7).

4.27 The substitution of funds, particularly, in favour of units of mutual funds during the latter part of the 1980s and the early 1990s, to some extent, was facilitated by the availability of tax benefits under Section 80M of the Income Tax Act. Under this section, the dividend received by the companies was exempted from the income tax so long as the dividend paid by them was more than the dividend received. As a result, corporates invested large funds in the then Unit Scheme-64 (US-64) of the erstwhile Unit Trust of India (UTI). Apart from corporates, individual investors were also attracted to units of mutual funds. In addition to UTI, as many as 21 new mutual funds were set up between 1987-88 and 1995-96, which launched about 128 schemes. In the face of increased competition from newly established mutual funds, UTI also followed an aggressive policy of launching new schemes, especially during the latter half of the 1980s to meet investor's diverse income and liquidity needs. Out of 41 schemes introduced between 1964 and 1992, as many as 26 schemes by UTI were introduced between 1987 and 1992. Between 1987-88 and 1991-92, financial assets of mutual funds grew at an average annual rate of 153 per cent (Raj, 1999). Although a part of increase in financial assets might have emanated from appreciation of investments, a major part of such assets was funded from fresh mobilisation of funds. Capital market conditions in this phase were also buoyant (as against depressed conditions in the 1970s). As a result, units of mutual funds and direct investments in shares provided higher returns than interest rates on bank deposits. This encouraged switching of household financial savings from bank deposits to shares and debentures and units of mutual funds. Deposits mobilised by NBFCs during this phase also grew rapidly. The number of NBFCs, which had increased two fold between 1970 and 1980, rose by nearly eight times between 1980 and 1994. An idea of large deposit mobilisation by NBFCs can be had from their financial assets, which grew at an average annual rate of 44.6 per cent during 1990-94. Small savings also increased significantly as reflected in increase in the share of claims on Government in financial savings of the household sector. During this phase, the share of bank deposits in financial savings of the household sector declined sharply (refer Table 4.7). An empirical study conducted for India also found that time/term deposits of scheduled commercial banks were substituted in favour of units of mutual funds, non-convertible debentures (NCDs), life insurance policies of LIC and small savings (Raj, *op cit*)[1].

4.28 Bank deposit growth continued to decelerate further in the third phase (1995-2005) with the average aggregate deposit registering a growth of 15.7 per cent, although income levels increased further reflecting the impact of improvement in real GDP growth. However, in this phase, deceleration to a large extent was caused by deceleration in demand deposits and to some extent time deposits. The sharp deceleration in demand deposits growth was due to the successive reduction in the stipulated minimum maturities of

[1] The substitution may not be defined in a narrow sense, whereby the funds are actually shifted from one instrument to another instrument, but rather in a broad sense, whereby fresh funds instead of being invested in one instrument are invested in other instrument/s.

domestic term deposits. The minimum maturities of time deposits were gradually shortened from 46 days to 30 days in July 1996, from 30 days to 15 days in April 1998, and further from 15 days to seven days for wholesale term deposits of Rs.15 lakh and above in April 2001 and for retail term deposits under Rs.15 lakh in October 2004. This led to switch of funds from saving deposits (demand liability portion) to term deposits. In order to provide banks the flexibility in their operations and improve efficiency, not only the minimum maturity period of term deposits was brought down but also banks were gradually accorded freedom in fixing the interest rates on their domestic term deposits for specific maturities (Box IV.1).

Box IV.1
Deregulation of Deposit Interest Rates in India

The process of deregulation of domestic deposit rates began when banks were allowed to set interest rates for maturities between 15 days and up to 1 year subject to a ceiling of 8 per cent effective April 1985. However, this freedom was withdrawn by end-May 1985 in the face of an ensuing price war. The process of deregulation was resumed in April 1992 by replacing the existing maturity-wise prescriptions by a single ceiling rate of 13 per cent for all deposits above 46 days. The ceiling rate was brought down to 10 per cent in November 1994, but was raised to 12 per cent in April 1995. Banks were allowed to fix the interest rates on deposits with maturity of over 2 years in October 1995 which was further relaxed to maturity of over one year in July 1996. The ceiling rate for deposits of '30 days up to 1 year' was linked to the Bank Rate less 200 basis points in April 1997. In October 1997, the deposit rates were fully deregulated by removing the linkage to the Bank Rate. Consequently, the Reserve Bank gave the freedom to commercial banks to fix their own interest rates on domestic term deposits of various maturities with the prior approval of their respective Boards of Directors/Asset Liability Management Committee (ALCO). Banks were permitted to determine their own penal interest rates for premature withdrawal of domestic term deposits and the restrictions on banks that they must offer the same rate on deposits of the same maturity irrespective of the size of deposits was removed in respect of deposits of Rs.15 lakh and above in April 1998 with the bank board's laying down policy in this regard. Banks were encouraged to put a flexible interest rate system on deposits (with a fixed rate option) in practice as early as possible in April 2002. Now banks have complete freedom in fixing their domestic deposit rates, except interest rate on savings deposits, which continues to be regulated and is currently stipulated at 3.5 per cent.

In line with the regulation of domestic deposit rates, interest rates on various NRI deposit schemes were also regulated by the Reserve Bank. Prior to August 1985, interest rate on the prevalent NRI deposit schemes was stipulated two percentage points higher than the prescribed domestic term deposit rates. Subsequently, interest rates on FCNR(A) were revised taking into account trends in international interest rates. The differential, however, widened in the early 1990s, reflecting the need to attract these deposits in view of the external payments crisis of 1991. As part of the financial sector reforms, the detailed maturity-wise prescriptions were rationalised for NRE deposits and subjected to a single prescription of 'not more than 13 per cent' in October 1992 and 'not more than 12 per cent' in April 1993 in line with the flexibility provided for domestic deposits. With a view to aligning the maturity structure of NRE and domestic deposits, interest rates on NRE term deposits of maturity over 2 years were freed in April 1996, while those for maturity over 1 year were freed in April 1997. Effective September 13, 1997, banks were given complete freedom to decide interest rates across all maturities. Similarly, with regard to FCNR(B) scheme, banks were allowed to determine the interest rates (fixed or floating with an interest reset period of 6 months) subject to a prescribed ceiling effective from April 16, 1997. Earlier, the interest rates on FCNR(B) deposits were the same as those prescribed for FCNR(A) deposits. The minimum maturity period was also raised from six months to 1 year, effective October 1999 and from July 26, 2005 banks were allowed to accept FCNR(B) deposits up to a maximum maturity period of five years, against the earlier maximum limit of three years. In the case of NR(NR)RD scheme, banks were allowed the flexibility to fix the interest rates from the inception of the scheme in June 1992, *i.e.*, even before freeing the domestic deposit rates.

In response to changing conditions in the financial markets, however, interest rates on NRE term deposits were linked to the international rates by way of a ceiling of 250 basis points over and above the US Dollar LIBOR/SWAP rates of corresponding maturities, effective July 17, 2003. The ceiling rates were progressively reduced (to 100 basis points above LIBOR rates on September 15, 2003 and further to 25 basis points above LIBOR rates on October 18, 2003) and brought down to LIBOR/SWAP rates for corresponding maturities with effect from close of business as on April 17, 2004. Subsequently, the ceiling rate was raised again in stages to 100 basis points above LIBOR by April 18, 2006 before fixing at LIBOR with effect from April 24, 2007. Alongside, the NRE savings deposits rate was delinked from the domestic savings deposits rate and the ceiling rate on NRE savings deposits was fixed at 6-month US Dollar LIBOR/SWAP rate effective April 17, 2004. However, with effect from the close of business in India on November 17, 2005, the interest rates on NRE saving deposits are the same as applicable to domestic savings deposits.

Table 4.8: Small Savings Collections

(Rupees crore)

Year	Total Deposits		Total Certificates		Public Provident Fund		Total	
	Receipts	Outstanding	Receipts	Outstanding	Receipts	Outstanding	Receipts	Outstanding
1	2	3	4	5	6	7	8	9
1970-71	695	1,184	88	92	2	5	785	1,281
1975-76	1,445	3,179	99	455	9	30	1,553	3,664
1980-81	2,758	6,632	302	1,412	59	200	3,119	8,244
1985-86	5,285	11,772	3,187	9,873	122	720	8,594	22,365
1990-91	9,455	17,022	8,214	33,257	347	2,595	18,016	52,874
1995-96	15,920	30,248	16,828	62,452	0	1,028	32,748	93,728
2000-01	44,869	80,654	33,044	1,38,041	1,398	6,392	79,311	2,25,087
2001-02	51,746	1,05,078	28,078	1,49,667	1,929	8,111	81,753	2,62,856
2002-03	70,214	1,40,216	33,051	1,63,421	2,337	10,156	1,05,602	3,13,793
2003-04	94,272	1,88,907	39,170	1,74,563	2,528	12,267	1,35,970	3,75,737
2004-05	1,22,616	2,51,665	33,369	1,91,794	2,534	14,273	1,58,519	4,57,732
2005-06	1,30,447	3,06,968	39,812	2,03,771	3,024	16,872	1,73,283	5,27,611
2006-07P	1,16,303	3,32,130	34,532	2,12,785	4,065	19,457	1,54,836	5,64,372

P: Provisional.
Source : Handbook of Statistics on the Indian Economy, 2006-07.

4.29 In this phase, however, bank deposits faced competition mainly from post office deposits and small savings, the collection under which increased by more than four times (Table 4.8).

4.30 With the deregulation of various deposit rates as part of the financial sector reforms, interest rates on term deposits of all maturity spectrums declined from 12-13 per cent to 4.00-5.50 per cent between 1995-96 and 2003-04. During this period, interest on other saving instruments also declined. However, the decline in interest rate on other instruments was significantly lower than that on term deposits (Table 4.9).

4.31 Reflecting the softening of interest rates and shortening of maturity profile of term deposits, a distinct shift was noticed in the interest rates at which banks contracted term deposits. The share of deposits

Table 4.9: Structure of Interest Rates on Bank Deposits and other Small Savings Schemes

(Per cent)

Year	Term Deposits			PPF (lock in 15 years)	NSC (lock in 4 years)	Post Office MIS (lock-in 6 years)	MF Tax saving scheme#
	1-3 year	Over 3 year & up to 5 years	Above 5 years				
1	2	3	4	5	6	7	8
1970-71	6.00-6.50	7.00	7.25	–	–	–	8.00
1975-76	6.75-8.00	7.75-9.00	8.00-10.00	–	–	–	8.75
1980-81	7.50-8.50	10.00	10.00	–	–	–	11.50
1985-86	8.50-9.00	10.00	11.00	–	–	–	15.25
1990-91	9.00-10.00	11.00	11.00	12.00@	11.00@	14.00@	19.50
1995-96	12.00	13.00*	13.00*	12.00	11.00	13.00	20.00
2000-01	8.50-9.50*	9.50-10.00*	9.50-10.00*	11.00	10.50	11.00	10.00
2001-02	7.50-8.50*	8.00-8.50*	8.00-8.50*	9.50	9.00	9.50	–
2002-03	4.25-6.00*	5.50-6.25*	5.50-6.25*	9.00	8.50	9.00	–
2003-04	4.00-5.25*	5.25-5.50*	5.25-5.50*	8.00	8.50	8.00	–
2004-05	5.25-5.50*	5.75-6.25*	5.75-6.25*	8.00	8.50	8.00	–
2005-06	6.00-6.50*	6.25-7.00*	6.25-7.00*	8.00	8.50	8.00	–
2006-07	7.50-9.00*	7.75-9.00*	7.75-9.00*	8.00	8.50	8.00	–
2007-08	8.25-9.25*^	8.00-9.00*^ +	–	8.00	8.50	8.00	–

MIS : Monthly Income Scheme.
* : Refers to the deposit rates of 5 major public sector banks as at end-March.
@ : Refer to 1992-93.
^ : March 2008. + : Deposit rate for more than 3 years.
# : Dividend rates on units of Unit Trust of India (UTI) up to 2000-01.
— : Not available.
Source : Handbook of Statistics on the Indian Economy, 2006-07.

Table 4.10: Interest Rate Range-wise Distribution of Term Deposits

(Per cent)

Interest Rate Range	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
1	2	3	4	5	6	7	8	9	10	11	12
Less than 6 per cent	4.1	4.6	5.9	6.9	5.0	6.7	17.4	46.3	47.5	34.1	14.3
6 per cent & above but less than 8 per cent	7.1	6.9	7.4	9.9	11.9	18.3	36.3	27.7	38.9	47.1	28.6
8 per cent & above but less than 10 per cent	12.3	11.2	15.1	20.8	26.6	42.4	28.4	17.2	8.9	16.5	38.3
10 per cent & above	76.5	77.3	71.6	62.4	56.5	32.6	18.1	9.0	4.8	2.4	19.5
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source : Basic Statistical Returns of Scheduled Commercial Banks in India, Reserve Bank of India.

contracted at the interest rate of 10 per cent and above in total deposits of SCBs declined consistently from 77.3 per cent in 1998 to 9.0 per cent in 2004. On the other hand, the share of deposits contracted at less than 6 per cent in total deposits of banks increased from 4.1 per cent in 1997 to 46.3 per cent in 2004. Deposits contracted at up to 8 per cent interest rate constituted as much as 74 per cent of total deposits in 2004 as compared with 11.2 per cent in 1997 (Table 4.10).

4.32 With small savings rate generally being higher than the time deposit rates of similar maturities and the Government providing tax benefits for small savings, the effective rate of returns on such savings was often higher than the return on time deposits. As against annual rate of return of 5.25-5.50 per cent on term deposits with maturity of over five years in 2003-04, investors in marginal tax bracket of 30 per cent earned 14.6 per cent on NSC, 12.5 per cent on PPF and 8.32-10.03 per cent in post office deposits (Table 4.11).

Table 4.11: Effective Rate of Return Available on Small Saving Instruments for Different Income Tax Brackets (Without any surcharge)

(Per cent)

	Instrument	Relief Under The Provision of IT Act	Tenor	Marginal Income Tax Rate	From 02.09.1993 to 14.01.2000	From 15.01.2000 to 28.02.2001	From 01.03.2001 to 28.02.2002	From 01.03.2002 to 28.02.2003	March 2003
	1	2	3	4	5	6	7	8	9
1.	NSC (VIII Issue)	88, 80L	6 year	0	12.36	11.83	9.73	9.20	8.16
				10	20.27	19.56	16.75	14.36	13.04
				20	21.52	20.75	17.72	15.24	13.82
				30	22.77	21.95	18.70	16.12	14.60
2.	Public Provident Fund	88, 10(12)	15 year	0	12.00	11.00	9.50	9.00	8.00
				10	15.82	14.72	13.07	11.81	10.72
				20	17.17	15.95	14.13	12.79	11.58
				30	18.52	17.19	15.20	13.77	12.45
3.	Public Provident Fund (with permissible withdrawals)	88, 10(12)	15 year	0	12.00	11.00	9.50	9.00	8.00
				10	17.44	16.92	16.13	14.37	13.90
				20	19.04	18.41	17.45	15.59	14.99
				30	20.62	19.88	18.75	16.78	16.07
4.	Post Office Time Deposits	80L	1-5 year	0	10.92-13.09	8.24-10.92	7.71-9.31	7.45-8.78	6.40-7.71
				10	12.01-14.41	9.07-12.01	8.49-10.24	8.19-9.65	7.04-8.49
				20	13.11-15.72	9.89-13.11	9.26-11.17	8.94-10.53	7.68-9.26
				30	14.20-17.03	10.72-14.20	10.03-12.10	9.68-11.41	8.32-10.03
5.	Relief/Saving (Tax-Free) Bond	10(15)	5 year	0	10.25	9.20	8.68	8.16	6.61
				10	11.28	10.12	9.55	8.98	7.27
				20	12.30	11.04	10.42	9.79	7.93
				30	13.33	11.96	11.28	10.61	8.59
6.	NSS	88	4 year	0	11.00	10.50	9.00	8.50	7.50
				10	16.35	15.87	14.40	12.20	11.25
				20	15.31	14.87	13.54	11.39	10.52
				30	14.24	13.84	12.65	10.56	9.79

Source : Report of the Advisory Committee to Advise on the Administered Interest Rates and Rationalisation of Saving Instruments (Chairman: Dr. Rakesh Mohan), Reserve Bank of India, 2004.

4.33 Accordingly, the growth in small savings collection was significantly higher than that in bank deposits. Collections of small savings more than doubled during 2000-01 to 2004-05 (Chart IV.5). Despite deceleration, the share of overall bank deposits in the gross financial savings of the household sector remained broadly unchanged. Besides increase in the share of claims on Government, the share of life insurance fund during this phase also increased sharply. However, the combined increase in the shares of claims on Government and life insurance funds was broadly matched by the decline in the share of capital market instruments (refer Table 4.7).

4.34 As a result of increased competition from post offices, which was mainly from rural and semi-urban areas, the shares of rural, semi-urban and urban deposits in total deposits declined from their peaks in the 1980s and the early 1990s. Concomitantly, the share of metropolitan deposits in total deposits of banks increased from the early 1990s, partly reflecting the growing significance of new private sector banks, which are operating largely in urban and metropolitan areas. A disaggregated analysis of deposit types reveals that the share of the rural sector in total bank deposits, which had increased from 12.6 per cent in 1980 to 15.3 per cent by end-March 1990, declined to 12.9 per cent by end-March 2004, reflecting largely the decline in the share of term deposits. Similar trends were observed in respect of shares of deposits in semi-urban and urban areas. On the other hand, the share of metropolitan areas in total bank deposits persistently moved up in the current decade due mainly to increase in the share of term deposits. Another noteworthy feature was the decline in the share of current deposits in total deposits in respect of both urban and metropolitan areas (Table 4.12). This, to an extent, could be explained by the decline in the share of industry in total credit as detailed in Chapter VI. Since industry avails a part of credit by

Chart IV.5: Time Deposits and Small Savings

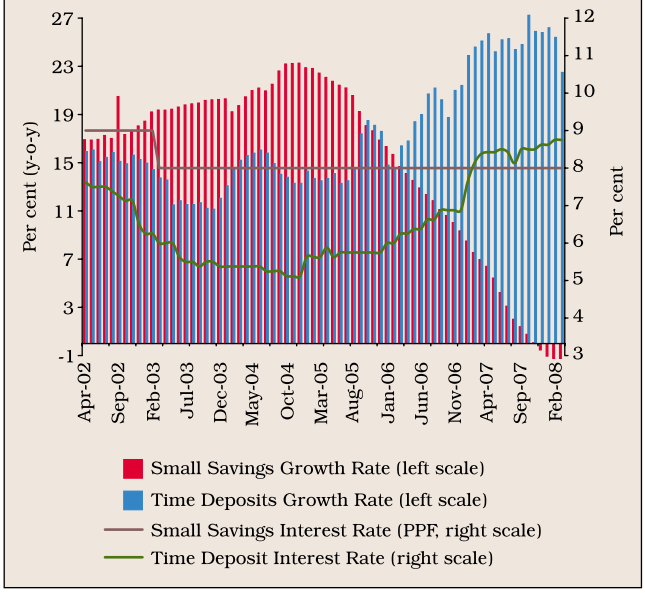


Table 4.12: Share of Population Groups in Total Deposits

(Per cent)

End-March	Current	Savings	Term	Total
1	2	3	4	5
Rural Deposits				
1980	1.0	5.4	6.1	12.6
1990	0.9	5.9	8.5	15.3
1995	0.8	4.7	8.2	13.7
2000	0.8	4.7	9.2	14.7
2001	0.7	4.7	9.3	14.7
2002	0.7	4.7	8.8	14.2
2003	0.6	4.9	8.3	13.8
2004	0.6	5.0	7.3	12.9
2005	0.6	5.1	6.4	12.2
2006	0.6	4.9	5.3	10.8
2007	0.5	4.5	4.7	9.7
Semi-Urban Deposits				
1980	2.6	7.8	12.7	23.1
1990	2.0	6.9	12.3	21.2
1995	1.7	5.8	11.3	18.8
2000	1.6	5.8	12.3	19.7
2001	1.5	5.8	12.3	19.6
2002	1.4	5.8	11.9	19.1
2003	1.4	6.1	11.4	18.9
2004	1.4	6.2	10.1	17.7
2005	1.4	6.4	9.1	16.9
2006	1.3	6.0	7.2	14.5
2007	1.3	5.7	6.8	13.8
Urban Deposits				
1980	3.9	6.9	14.2	25.1
1990	3.7	7.0	13.9	24.7
1995	3.4	5.9	12.9	22.2
2000	2.8	5.9	14.3	23.0
2001	2.8	6.0	14.1	22.9
2002	2.6	6.0	14.1	22.7
2003	2.5	6.3	14.0	22.8
2004	2.6	6.5	12.8	21.9
2005	2.6	6.7	12.2	21.5
2006	2.5	7.0	11.1	20.6
2007	2.5	6.5	11.5	20.5
Metropolitan Deposits				
1980	8.0	8.5	22.8	39.3
1990	8.5	8.5	21.9	38.9
1995	10.5	8.5	26.3	45.3
2000	7.7	7.8	27.1	42.6
2001	7.2	8.0	27.6	42.8
2002	6.5	7.7	29.7	43.9
2003	6.3	7.8	30.4	44.5
2004	7.4	8.3	31.8	47.5
2005	7.5	8.7	33.2	49.4
2006	7.9	10.2	36.0	54.1
2007	8.0	9.4	38.5	56.0

Note : Data for 1980 pertain to calendar year.
Source : Basic Statistical Returns of Scheduled Commercial Banks in India, Reserve Bank of India.

way of cash credit, reduced dependence on bank credit leads to reduction in cash credit limit and balances in current account. This perhaps also represented better cash management by the industry. On the other hand, the share of saving deposits in total deposits remained broadly unchanged in all population groups.

4.35 In terms of ownership pattern, the share of the household sector in banks' total deposits declined from 69.2 per cent in 1995 to 58.4 per cent in 2004 (Table 4.13). The share of the Government sector in total deposits of SCBs increased from 9.2 per cent in 1995 to 14.5 per cent by end-March 2004. This could be attributed mainly to improved public sector savings rate which, in turn, was due to improved performance of the non-departmental government enterprises. The average saving rate of the non-departmental enterprises of the public sector increased from 3.0 per cent of GDP during 1991-92 to 1996-97 to 4.1 per cent during 2003-04 to 2006-07 (Mohan, 2008). The corporate sector's (both financial and non-financial) share in total deposits also rose in recent years, reflecting their improved performance. Increased resource mobilisation by other financial intermediaries also led to increased parking of funds with the banking sector.

4.36 Disaggregated analysis of ownership pattern according to types of deposits of SCBs indicates that the decline in the share of the household sector occurred mainly because of decline in their share in term deposits. On the other hand, the increase in the deposits of the Government and the corporate sectors was mainly on account of increase in their share in term deposits. The share of foreign sector in term deposits declined significantly (Table 4.14). In current deposits, the share of the Government and financial corporate sectors declined over the years, while the share of non-financial corporate sector increased. The share of the household and foreign sectors in current deposits remained broadly unchanged. Within saving deposits, the ownership pattern did not show any major change over the years, with the bulk of the saving

Table 4.13: Share in Total Deposits of Scheduled Commercial Banks: Sector-wise

(Per cent)

End-March	Government Sector	Corporate Sector (Non-financial)	Corporate Sector (Financial)	Household Sector	Foreign Sector	Total Deposits
1	2	3	4	5	6	7
1995	9.2	4.2	6.7	69.2	10.7	100.0
1996	9.2	3.6	6.1	69.2	11.9	100.0
1997	8.6	4.0	7.7	67.4	12.4	100.0
1998	9.9	4.1	7.4	66.6	12.0	100.0
1999	10.2	4.1	8.8	65.3	11.5	100.0
2000	10.1	3.8	7.7	67.6	10.8	100.0
2001	10.0	4.6	7.3	67.2	11.0	100.0
2002	10.6	5.7	6.9	66.7	10.2	100.0
2003	11.8	5.1	6.7	65.4	11.0	100.0
2004	14.5	7.9	8.5	58.4	10.8	100.0
2005	14.6	8.7	7.8	60.7	8.3	100.0
2006	14.4	10.1	9.7	58.5	7.3	100.0

Note : Foreign sector represents the deposits of non-residents, foreign consulates, embassies, trade missions, information services, *etc.* and others.

Source : Statistical Tables Relating to Banks in India, Reserve Bank of India.

Table 4.14: Share in Various Types of Deposits of Scheduled Commercial Banks: Sector-wise

(Per cent)

End-March	Government Sector	Corporate Sector (Non-financial)	Corporate Sector (Financial)	Household Sector	Foreign Sector	Amount (Rs. crore)
1	2	3	4	5	6	7
Current Deposits						
1995	17.8	12.6	19.7	47.3	2.6	63,963
1996	17.0	11.3	18.7	50.7	2.4	63,656
1997	19.1	14.5	17.6	46.7	2.1	72,929
1998	17.5	13.7	19.4	46.6	2.8	82,370
1999	19.6	12.7	19.3	46.3	2.1	99,298
2000	19.4	12.3	17.0	47.9	3.4	1,12,657
2001	17.8	14.2	18.1	47.3	2.6	1,24,238
2002	17.8	16.1	16.4	46.3	3.3	1,30,903
2003	19.4	14.5	14.2	48.9	2.9	1,52,658
2004	16.2	22.3	12.9	45.9	2.7	2,05,776
2005	15.8	22.0	11.3	48.2	2.6	2,23,542
2006	14.1	22.4	14.5	45.4	3.6	2,85,081
Saving Deposits						
1995	6.1	0.2	0.6	87.5	5.5	93,369
1996	7.1	0.2	1.0	86.8	4.9	1,03,443
1997	7.7	0.3	1.2	86.0	4.8	1,13,918
1998	8.4	0.2	1.4	84.8	5.3	1,38,293
1999	7.4	0.2	1.6	85.4	5.4	1,69,772
2000	6.7	0.1	0.8	87.3	5.1	2,02,089
2001	6.4	0.4	1.2	86.9	5.1	2,32,261
2002	6.4	0.2	0.7	87.3	5.3	2,68,866
2003	6.8	0.3	1.0	86.7	5.3	3,30,747
2004	7.3	0.6	1.2	83.6	7.3	3,80,098
2005	7.2	0.5	0.7	86.1	5.5	4,72,146
2006	6.5	0.5	1.0	86.4	5.6	5,71,020
Term Deposits						
1995	8.0	3.5	5.6	67.9	15.0	2,28,622
1996	8.1	3.1	5.1	66.9	16.8	2,70,904
1997	6.6	2.9	7.7	65.4	17.4	3,21,805
1998	8.9	3.4	7.0	64.3	16.4	3,84,147
1999	9.3	3.7	9.2	62.1	15.7	4,67,933
2000	9.5	3.4	8.3	64.3	14.4	5,38,067
2001	9.7	4.3	7.4	63.8	14.8	6,19,962
2002	10.8	5.8	7.4	62.8	13.2	7,24,606
2003	12.3	5.4	7.5	60.0	14.7	8,33,343
2004	17.0	7.7	10.3	51.3	13.8	9,88,384
2005	17.6	9.5	10.1	52.2	10.7	10,89,765
2006	18.0	11.6	12.4	49.1	8.8	13,04,899

Source : Statistical Tables Relating to Banks in India, Reserve Bank of India.

deposits held by the household sector; its share ranged between 84-88 per cent between 1995 and 2004.

4.37 On the whole, the share of term deposits increased from 59.2 per cent at end-March 1995 to 63.1 per cent at end-March 2000 and further to a peak of 64.4 per cent at end-March 2002. The share of savings deposits declined from 24.2 per cent at end-March 1995 to 23.7 per cent at end-March 2000. Subsequently, the share of saving deposits increased to around 26.1 per cent by end-March 2007, while that of term deposits declined to 61.5 per cent (Chart IV.6).

4.38 However, within term deposits, the maturity profile of term deposits shortened significantly beginning 1990. The share of deposits of longer (above 5-year) maturities declined significantly, while that of deposits of shorter (up to 1-year) maturities increased (Table 4.15). The share of term deposits with maturity of 1-3 years also declined significantly, while that of term-deposits with maturity of 3-5 years declined marginally. This pattern was discernible broadly

Chart IV.6: Trends in the Share of Current, Savings and Term Deposits in Total Deposits of Banks

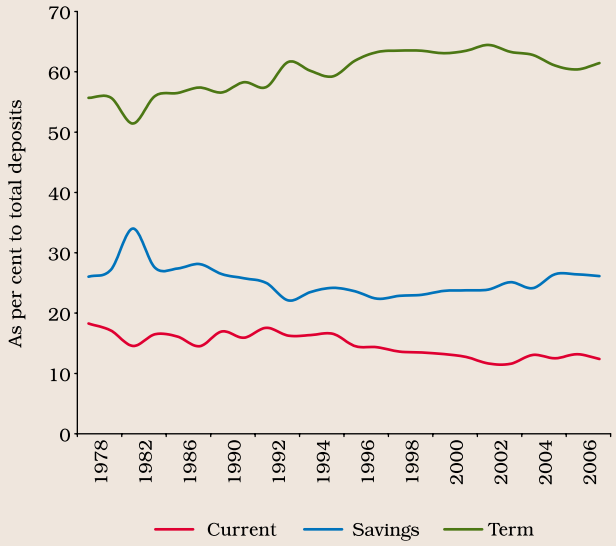


Table 4.15: Maturity-wise Ownership Pattern of Term Deposits of Scheduled Commercial Banks
(End-March)

(Amount in Rupees crore)

Period of Maturity (Original)	1990	1995	2000	2004	2005	2006	2007
1	2	3	4	5	6	7	8
Individuals							
Up to 1 year	5,258	37,477	95,647	1,91,392	1,99,102	1,87,737	1,81,743
	(9.0)	(20.7)	(23.9)	(31.2)	(31.5)	(29.3)	(25.2)
1-3 year	27,931	84,745	1,58,130	2,22,687	2,25,634	2,40,450	2,99,958
	(47.9)	(46.8)	(39.5)	(36.3)	(35.7)	(37.6)	(41.5)
3-5 year	10,796	35,146	95,900	1,42,798	1,41,282	1,42,451	(1,60,298)
	(18.5)	(19.4)	(23.9)	(23.3)	(22.4)	(22.2)	(22.2)
Above 5 year	14,339	23,699	51,107	56,701	64,811	69,791	79,703
	(24.6)	(13.1)	(12.8)	(9.2)	(10.3)	(10.9)	(11.0)
Sub-total	**58,324**	**1,81,068**	**4,00,784**	**6,13,577**	**6,30,829**	**6,40,429**	**7,21,703**
	(100.0)	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**
Others							
Up to 1 year	3,744	20,376	53,657	1,64,729	2,19,889	3,04,767	4,15,683
	(31.9)	(49.1)	(46.5)	(51.1)	(50.7)	(50.3)	(47.6)
1-3 year	5,121	16,008	39,099	96,636	1,37,199	2,08,208	3,37,568
	(43.6)	(38.6)	(33.9)	(30.0)	(31.6)	(34.4)	(38.6)
3-5 year	1,038	3,384	17,992	40,567	51,331	58,776	85,095
	(8.8)	(8.2)	(15.6)	(12.6)	(11.8)	(9.7)	(9.7)
Above 5 year	1,848	1,685	4,696	20,348	24,898	34,172	36,091
	(15.7)	(4.1)	(4.1)	(6.3)	(5.8)	(5.6)	(4.1)
Sub-total	**11,752**	**41,453**	**1,15,444**	**3,22,279**	**4,33,317**	**6,05,924**	**8,74,437**
	(100.0)	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**
Total							
Up to 1 year	9,002	57,853	1,49,304	3,56,120	4,18,991	4,92,504	(5,97,427)
	(12.8)	(26.0)	(28.9)	(38.0)	(39.4)	(39.5)	(37.4)
1-3 year	33,052	1,00,753	1,97,229	3,19,323	3,62,833	4,48,659	6,37,526
	(47.2)	(45.3)	(38.2)	(34.2)	(34.1)	(36.0)	(39.9)
3-5 year	11,834	38,530	1,13,892	1,83,364	1,92,613	2,01,227	2,45,393
	(16.9)	(17.3)	(22.1)	(19.6)	(18.1)	(16.1)	(15.4)
Above 5 year	16,188	25,384	55,803	77,048	89,709	1,03,963	1,15,794
	(23.1)	(11.4)	(10.8)	(8.2)	(8.4)	(8.3)	(7.3)
Total	**70,076**	**2,22,520**	**5,16,228**	**9,35,856**	**10,64,146**	**12,46,353**	**15,96,140**
	(100.0)	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**

Note : Figures in parentheses represent percentage shares in sub-totals/totals.
Source : Basic Statistical Returns of Scheduled Commercial Banks in India, Reserve Bank of India.

both in respect of individual and non-individuals. The decline in interest rates on term deposits and the increase in tax-adjusted returns on other saving instruments were the two major factors that contributed to this trend.

4.39 In the fourth phase 2005-06 to 2007-08, deposit growth accelerated on account of acceleration in both demand and time deposits (refer Table 4.4). With a pick-up in growth momentum from 2003-04, credit demand from banks increased on a sustained basis, leading banks to devise strategies for aggressive deposit mobilisation. The sharp acceleration in demand deposits in this phase reflected, to some extent, the increase in the balances in current account in tandem with the increased offtake of bank credit as also parking of funds by mutual funds and corporates in view of buoyant capital market conditions. Insofar as time deposits are concerned, in order to provide level playing field, the Government in the Union Budget 2006-07 also extended the tax benefits under Section 80C for fixed deposits in scheduled banks with maturity of five years and above (Box IV.2). In view of sustained growth in credit offtake from banks at a higher level since 2004-05, banks also began to raise interest rates on term deposits of different maturity above the small savings rates to improve the attractiveness of various deposit schemes. However, interest rates on post office deposits remained unchanged (refer Table 4.9). Accordingly, the interest rate differentials narrowed down initially and subsequently turned in favour of bank deposits. As a result, there was a shift of funds from small savings to bank deposits (refer Chart IV.5).

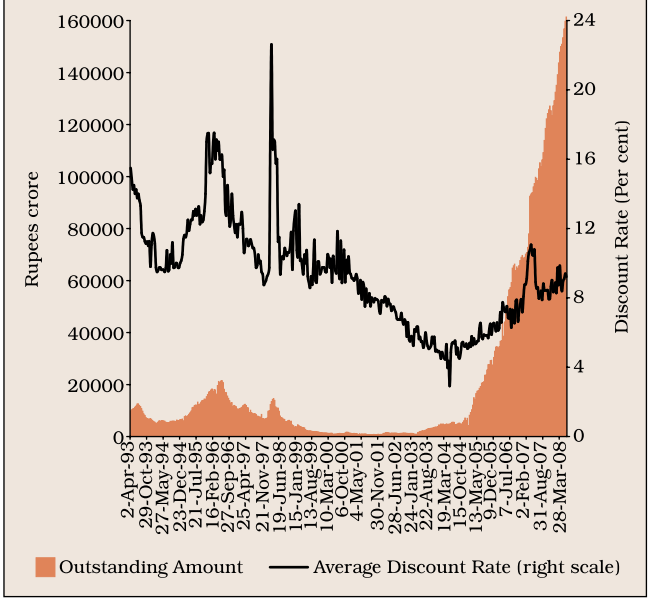
4.40 Apart from tax benefits on long term deposits, the introduction of bank deposit schemes for senior citizens at higher interest rates also led to improved mobilisation of time deposits by banks. The lowering of the minimum maturity period of certificates of deposit (CDs) to 7 days in April 2005 also generated increased interest in CDs. CDs, introduced in June 1989, are essentially securitised short-term time deposits, which provide greater flexibility to investors for deploying their short-term surplus funds. They are issued by banks during periods of tight liquidity at relatively higher discount rates as compared with term deposit rates. Notwithstanding deregulation of interest rates on CDs in 1992 and reduction in minimum issue size to Rs.1 lakh and requirement of issuance only in dematerialised form in 2002, there

Box IV.2
Rationalisation of Small Savings Rates

As part of the process of deregulation of interest rates, the Government had rationalised interest rates on small savings in 1999-2000. In recent years, the Government attempted to further rationalise the tax treatment prevalent on the various financial savings instruments, which were not homogeneous. There is considerable variation in the taxation of contributions made to savings schemes, the tax levied on the accumulations in such schemes and the tax treatment at the final stage of withdrawal. This lack of uniformity tends to induce artificial distortions and bias amongst the various financial instruments. While many of the savings plans are exempted from tax at all the three stages 'exempt-exempt-exempt' (EEE), others are subject to tax on either the accumulations or payments received at the terminal stage. Recognising the best international practice relating to taxation of financial savings as the 'exempt-exempt-taxed' (EET) method, the Government of India also switched over to this system in a phased manner by April 1, 2006. As a first step, this required switching from the rebate method to income based deduction method. Therefore, as per the proposal of the Union Budget 2005-06, the then existing method of providing tax rebate under Section 88 for contributions/investments in specified savings schemes were replaced by an income based deduction for contributions by inserting a new Section 80C under Chapter-VI-A of the Income-tax Act. Accordingly, an individual or a Hindu Undivided Family was allowed a deduction from income of an amount not exceeding Rs.1 lakh with respect to sums paid or deposited in the previous year, out of income chargeable to tax, in certain specified schemes, which was successively raised to Rs.1,15,000 (inclusive of health insurance premium) in 2007-08 and further to Rs.1,30,000 in the Budget 2008-09. The additional amount of Rs.15,000 would be allowed for health insurance premium likely for dependant parents. The saving instruments eligible for tax benefit under the new schemes under Section 80C of the Income Tax Act are the same as those entitled for rebate from income-tax under Section 88, and included life insurance premia, contributions to provident fund or schemes for deferred annuities, purchase of infrastructure bonds, payment of tuition fees, repayment of principal amount of housing loans, *etc*. The coverage of Section 80C has been proposed to be enlarged in the Budget 2008-09 by including the Senior Citizens Savings Scheme 2004 and the Post Office Time Deposit Account as eligible saving instruments. The small savings rates as well as the marginal income tax rates have remained unchanged since March 2003, while the tax exemption limits under Section 80C have been revised upwards in successive Budgets. In respect of capital market instruments, although short-term capital gains attract higher tax rates, the exemption of long-term capital gains makes these instruments relatively more attractive compared to term deposits.

was hardly any activity in this market segment up to 2004, except the years of credit pick-up during the mid-1990s. With sustained pick-up in bank credit growth at around 30 per cent from 2004-05, banks increasingly resorted to the issuance of CDs to supplement their deposit mobilisation in order to support the strong credit demand. The flexibility of return that can be offered by the cash-strapped banks to attract bulk deposits made CDs the preferred route for mobilising resources, especially by private and foreign banks with limited branch network and retail customer base. Accordingly, the outstanding amount of CDs issued by banks increased from Rs.12,078 crore at end-March 2005 to Rs.93,272 crore by end-March 2007 and further to Rs.1,47,792 crore as on March 28, 2008. Accordingly, the share of outstanding CDs in aggregate deposits of SCBs increased from less than 1 per cent in 2004-05 to 4.6 per cent during 2007-08. The average discount rate on CDs, which had hardened from 5.3 per cent at end-March 2005 to 11.1 per cent at end-March 2007 in line with the general hardening of interest rates, eased somewhat thereafter (Chart IV.7).

Chart IV.7: Certificates of Deposit



4.41 In this phase, the growth of non-resident (NRI) deposits decelerated significantly. As a result, the share of NRI deposits in aggregate deposits of SCBs, which constituted 15.5 per cent at end-March 1993, declined consistently (except in 1997) to 9.5 per cent at end-March 2004 and further to 6.4 per cent at end-March 2007 (Table 4.16). As a result, the share of foreign deposits in total deposits declined significantly (refer Table 4.13). The sharp decline witnessed beginning 2003-04 could be attributed to the rationalisation of various NRI deposit schemes and

Table 4.16: Non-Resident Indian (NRI) Deposits

(Amount in Rupees crore)

End-March	NR(E)RA	FCNR(A)	FCNR(B)	NR(NR)RD	FC(B&O)D	FC(O)N	Total NRI Deposits	NRI's Share in Total Deposits (Per cent)	Growth in Total NRI Deposits (Per cent)
1	2	3	4	5	6	7	8	9	10
1991	7,040	19,845	–	–	515	–	27,400	12.1	—
1992	7,833	30,576	–	–	1,895	–	40,304	15.2	47.1
1993	8,616	33,163	–	1,952	3,261	–	46,992	15.5	16.6
1994	11,053	29,176	3,476	5,501	1,672	38	50,916	14.6	8.4
1995	14,348	22,207	9,648	7,831	–	32	54,066	13.3	6.2
1996	13,452	14,616	19,648	12,166	–	45	59,927	13.1	10.8
1997	17,886	8,282	26,906	20,116	–	14	73,204	13.6	22.2
1998	22,267	4	33,445	24,735	–	9	80,460	12.5	9.9
1999	25,629	–	33,222	28,058	–	–	86,909	11.3	8.0
2000	29,465	–	35,632	29,447	–	–	94,544	10.5	8.8
2001	33,357	–	42,357	31,966	–	–	1,07,680	10.2	13.9
2002	41,205	–	47,175	34,392	–	–	1,22,772	10.2	14.0
2003	71,184	–	48,651	16,253	–	–	1,36,088	10.0	10.8
2004	92,977	–	49,572	7,895	–	–	1,50,444	9.5	10.5
2005	93,159	–	50,108	1,015	–	–	1,44,282	7.9	-4.1
2006	98,443	–	58,272	–	–	–	1,56,715	7.2	8.6
2007	1,06,786	–	65,955	–	–	–	1,72,741	6.4	10.2

Source : Handbook of Statistics on the Indian Economy, 2006-07 and Report on Trend and Progress of Banking in India 2006-07.

decline in the ceiling interest rates prescribed by the Reserve Bank for various deposit schemes as part of the strategy to manage capital flows as well as increased recourse to foreign currency borrowings by banks in view of lower interest rates abroad. The present ceilings in respect of FCNR(B) deposits of all maturities is LIBOR/SWAP rate *minus* 75 basis points and for NR(E)RA deposits is at the LIBOR/ SWAP rate effective from April 24, 2007. NRI deposit schemes were introduced in the 1970s and in the 1990s to support balance of payments (Box IV.3).

4.42 The deceleration in NRI deposits, however, did not have any significant impact on the overall deposit growth. The acceleration in deposits was also registered despite increased competition faced by banks from capital market instruments (shares/ debentures/units of mutual funds). It may be noted that while dividend income on capital market instruments is exempt from tax, investors also do not have to pay tax on long-term capital gains, while short-term capital gains are taxed at 10 per cent (raised to 15 per cent in the Budget for 2008-09). Funds mobilised by mutual funds and through new capital issues increased sharply, reflecting bullish sentiment in the capital market. However, with the Indian economy moving on to a higher growth path and sharp acceleration in the overall as well as sectoral saving rates, there was a general improvement in resource mobilisation by banks, non-banks and through equity market instruments (Table 4.17).

4.43 A significant shift was noticed in the various components of household sector financial savings. The share of bank deposits in household sector savings increased significantly from 36.9 per cent during 1995-96 to 2004-05 to 50.9 per cent during 2005-06 to 2006-07. The share of capital market instruments and life insurance fund also increased. On the other hand, the share of claims on Government declined (refer Table 4.7).

4.44 Bank deposits constitute the single largest source of domestic savings. Despite some fluctuations from time to time, bank deposits have maintained their

Box IV.3
Non-Resident Deposits

India, like many other developing countries, has been mobilising a part of their external capital requirements through special deposit schemes designed for non-residents by banks, in both foreign currency and local currency. Against the backdrop of the oil shocks in the 1970s and in order to tap the savings of Non-resident Indians (NRIs) employed in oil-rich countries, the Reserve Bank devised special deposit schemes for the first time in February 1970 with the introduction of Non-Resident External Rupee Account [NR(E)RA] which was followed by Foreign Currency Non-Resident (Account) [FCNR(A)] scheme in November 1975. The FCNR(A) scheme, where foreign exchange risk was borne initially by the Reserve Bank and subsequently by the Government, was withdrawn in August 1994 in view of its implications for the central bank's balance sheet and its quasi-fiscal costs to the Government. In order to provide depositors with an alternative to FCNR(A) under the market determined exchange rate regime, a new scheme known as Foreign Currency Non-Resident (Bank) [FCNR(B)] was introduced under which the foreign exchange risk was borne by banks on the basis of their risk perceptions. A new rupee denominated scheme, Non-Resident Non-Repatriable Rupee Deposit [NR(NR)RD], which was initially non-repatriable, was subsequently provided with features of repatriation of only interest income. The NR(NR)RD scheme was withdrawn in April 2002. Thus, currently only two NRI deposit schemes - the NR(E)RA scheme, also known as the NRE scheme and the FCNR(B) scheme - are in operation. While NRI deposits provided an important source of external finance, the acceptance of these deposits by banks had monetary implications. Therefore, the policy since the 1990s has been to retain the attractiveness of NRI deposit schemes, while at the same time reduce the effective cost of borrowing in terms of interest outgo and the cost to macroeconomic management. In line with these objectives, while interest rates on these deposits were gradually deregulated, the reserve requirements and, in recent period, interest rate ceilings have been fine-tuned in relation to capital flows cycles as part of the strategy of modulating these flows consistent with the overall macroeconomic management.

Apart from accessing external resources through NRI deposits schemes, banks have also resorted to mobilisation of funds from abroad through special deposit schemes in response to certain unfavourable external developments from time to time. Three such schemes have been launched since 1991 through banking channels with exchange rate guarantees. In the aftermath of the Balance of Payments (BoP) crisis, the State Bank of India (SBI) floated the 5-year India Development Bonds (IDBs) in October 1991 and raised US $ 1.6 billion. In view of an anticipated shortfall in capital flows, especially debt flows, the SBI floated a 5-year Resurgent India Bonds (RIBs) in August 1998 and raised US $ 4.2 billion. On the third occasion, the SBI floated a 5-year India Millennium Deposits (IMDs) scheme in December 2000 and raised US $ 5.5 billion as a pre-emptive step to check any possible depletion of India's foreign exchange reserve in the face of surge in world petroleum prices.

Table 4.17: Resource Mobilisation by Banks, Non-banks and Equity Market (Flows)

(Rupees crore)

Year	Public Deposits with NBFCs	Small Savings	Mutual Funds	New Capital Issues by Non-Government Public Limited Companies	Aggregate Deposits of SCBs
1	2	3	4	5	6
1970-71	–	323*	18	66	878
1980-81	–	1,266	52	164	6,229
1990-91	–	8,545	7,508	4,312	25,582
1995-96	–	10,391	-5,833	15,998	51,526
1996-97	–	12,383	-2,037	10,410	80,119
1997-98	–	20,644	4,064	3,138	1,06,305
1998-99	-3,392	28,541	2,695	5,013	1,27,061
1999-00	-1,087	32,214	22,117	5,153	1,25,567
2000-01	-1,257	37,577	11,135	5,818	1,58,691
2001-02	737	37,769	10,120	5,692	1,50,544
2002-03	1,278	50,937	4,583	1,878	1,49,724
2003-04	-456	61,944	47,873	3,722	2,22,796
2004-05	882	81,995	2,789	13,079	2,59,109
2005-06	2,316	69,879	52,482	21,154	3,26,918
2006-07	–	36,761	91,271	31,600	5,32,299

* : Relating to 1971-72.

– : Not available.

Note : Aggregate deposits of SCBs up to 1994-95 are from the returns under Section 42 of the RBI Act, 1934 and from 1995-96 onwards are from the consolidated balance sheets.

Source: Handbook of Statistics on the Indian Economy, Reserve Bank of India.

predominant position in domestic savings and have played an important role in stepping up the share of financial savings of the household sector in gross domestic savings from an average of 1.9 per cent in the 1950s to 10.8 per cent during 2000-2007. The household sector has increasingly incurred financial liabilities, particularly through bank advances, to undertake its investments in physical assets in the form of construction, machinery and equipment, and change in stocks in recent years, which tended to dampen the net household financial savings. It is, however, significant to note that physical savings of the household sector have also moved in tandem with the increase in gross financial savings (Table 4.18 and Chart IV.8). Although a part of savings in physical assets is for genuine

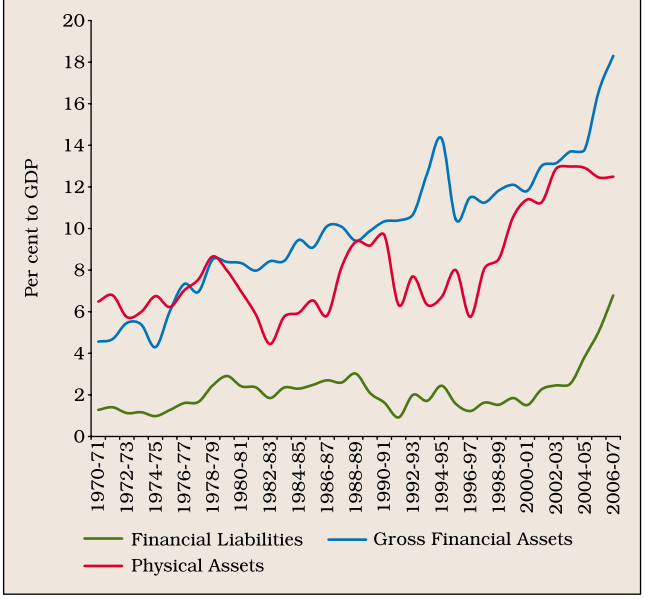
Table 4.18: Gross Domestic Saving Rates

(Per cent of GDP)

Sector	1950s	1960s	1970s	1980s	1990s	2000-01 to 2006-07
1	2	3	4	5	6	7
1. Household Sector (1.1+1.2)	6.6	7.6	11.4	13.5	17.7	23.2
	(68.2)	(61.7)	(66.5)	(71.0)	(77.0)	(80.9)
1.1 Financial Savings	1.9	2.7	4.5	6.7	9.9	10.8
	(18.8)	(21.8)	(26.0)	(35.4)	(43.3)	(37.9)
1.2 Physical Savings	4.7	4.9	6.9	6.8	7.8	12.3
	(49.4)	(39.9)	(40.5)	(35.6)	(33.7)	(43.0)
2. Private Corporate Sector	1.0	1.5	1.5	1.7	3.8	5.3
	(10.4)	(12.0)	(9.1)	(9.2)	(16.3)	(17.8)
3. Public sector	2.0	3.2	4.2	3.7	1.5	0.7
	(21.4)	(26.3)	(24.3)	(19.9)	(6.7)	(1.3)
4. Gross Domestic Savings (1+2+3)	**9.7**	**12.3**	**17.2**	**19.0**	**23.0**	**29.2**
	(100.0)	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**

Note : Figures in parentheses are percentages to gross domestic savings.

Chart IV.8: Household Saving Rates



requirements, quite a significant part is locked up in unproductive assets.

4.45 Although the bank deposits to GDP ratio (deflated by consumer price index) in India moved up gradually over the years, it was still lower than almost all advanced countries and several emerging market economies in Asia included in the sample (Table 4.19). This was despite the fact that some of the advanced countries are predominantly market-based systems. An analysis of 116 countries covering both developed and developing economies reveals that the bank deposits to GDP ratio, in general, tends to move up as income levels rise (Chart IV.9).

4.46 One of the major reasons for the low deposit-GDP ratio in India was the high share of physical savings in total savings even as India's savings rate compared favourably with several advanced and emerging market economies (Table 4.20).

Table 4.19: Bank Deposits to GDP Ratio (Deflated by CPI): Cross-Country Evidence

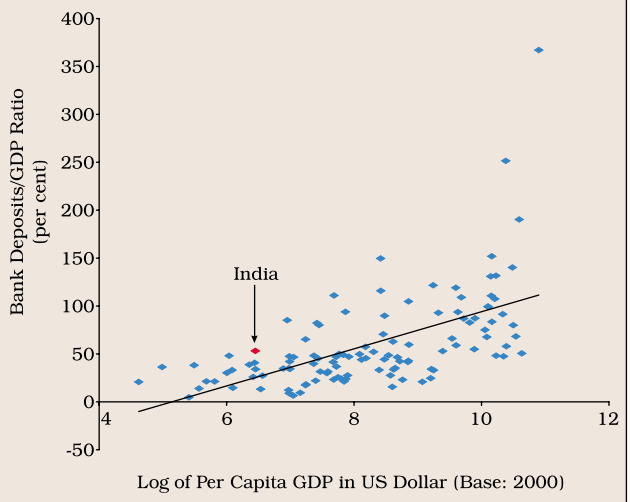
Country/Year	1960	1965	1970	1975	1980	1985	1990	1995	2000	2006
1	2	3	4	5	6	7	8	9	10	11
Developed Economies										
Australia	0.38	0.42	0.38	0.37	0.33	0.34	0.48	0.54	0.62	0.75
Canada	0.32	0.33	0.44	0.46	0.56	0.60	0.70	0.73	0.68	1.52
France	0.17	0.23	0.27	0.37	0.65	0.61	0.58	0.60	0.62	0.68
Germany	0.32	0.40	0.48	0.54	0.55	0.58	0.54	0.58	0.90	0.99
Japan	0.40	0.65	0.78	1.13	1.32	1.54	1.77	1.97	2.30	1.90
New Zealand	0.24	0.19	0.16	0.20	0.24	0.26	0.72	0.74	0.82	0.94
Sweden	0.53	0.48	0.50	0.48	0.47	0.44	0.41	0.37	0.37	0.48
Switzerland	0.85	0.85	0.89	0.73	0.84	1.05	1.02	1.13	1.31	1.40
United Kingdom	0.32	0.28	0.27	0.33	0.26	0.37	0.88	0.63	1.01	1.32
United States	0.55	0.62	0.60	0.65	0.65	0.70	0.69	0.56	0.64	0.68
Emerging Market Economies										
Brazil	–	–	–	–	–	–	0.18	0.25	0.40	0.52
Chile	–	–	—	0.07	0.19	0.23	0.28	0.30	0.49	0.47
India	**0.12**	**0.11**	**0.13**	**0.17**	**0.26**	**0.31**	**0.31**	**0.33**	**0.43**	**0.53**
Indonesia	–	–	–	–	–	0.17	0.30	0.39	0.45	0.35
Israel	–	–	–	–	0.12	0.68	0.57	0.58	0.78	0.87
Korea	–	–	–	0.24	0.25	0.29	0.33	0.33	0.61	0.66
Malaysia	0.14	0.16	0.30	0.56	0.62	1.02	0.81	0.95	1.12	1.16
Mexico	0.17	0.24	0.21	0.25	0.22	0.19	0.14	0.25	0.25	0.23
Philippines	0.12	0.14	0.16	0.13	0.18	0.23	0.25	0.39	0.50	0.47
South Africa	–	–	0.55	0.54	0.46	0.49	0.48	0.44	0.50	0.57
Thailand	–	–	0.21	0.28	0.32	0.53	0.63	0.73	1.03	0.94

Note : 1. As the deposits data are in stock and GDP data are in flows, the deposits to GDP ratios have been calculated by the World Bank using the following deflation method: {(0.5)*[Ft/P_et + Ft-1/P_et-1]}/[GDPt/P_at], where F is demand, time and saving deposits, P_e is end-of period CPI, and P_a is average annual CPI.

2. Data for Germany and Brazil for 1990 pertain to the year 1992.

Source : World Bank's New Database on Financial Development and Structure, October 2007.

Chart IV.9: Bank Deposit Growth and Per-Capita GDP: 2006



Source: World Bank's New Database on Financial Development and Structure, 2007.

Liability Structure of Banks: Deposits *versus* Borrowings

4.47 Deposit is the main source of funds for banks in most countries. However, in some countries, banks also depend heavily on borrowings, which raise questions about liquidity and solvency and overall stability of the banking system (Box IV.4).

4.48 Deposits constitute a major source of funds for banks in India. The share of deposits in total liabilities of banks remained broadly steady over the years. The share of capital and reserves in total liabilities, which was very small in 1990-91, increased significantly to 6.2 per cent by end-March 1995 in line with the emphasis on the capital adequacy requirements based on risk-weighted assets under the Basel I norms which were introduced from 1992-93. The capital to risk-weighted assets ratio (CRAR), which was 8 per cent to start with, was raised to 9 per cent from the year ended March 2000. Further,

Table 4.20: Gross Domestic Savings Rate: Cross-Country Evidence

(Per cent of GDP)

Country	1960	1965	1970	1975	1980	1985	1990	1995	2000	2006
1	2	3	4	5	6	7	8	9	10	11
Developed Economies										
Australia	–	–	31.2	26.1	26.1	24.3	23.1	22.5	22.4	25.2
Canada	22.0	25.6	24.1	23.2	24.8	23.2	21.0	22.0	26.0	25.3
France	–	–	26.7	23.9	22.2	18.3	21.2	19.7	21.4	19.6
Germany	–	–	–	21.1	20.5	19.5	23.1	22.7	22.1	23.2
Japan	34.0	34.0	41.0	33.4	31.9	32.2	34.1	29.8	26.9	24.8
New Zealand	–	–	–	20.6	19.4	23.8	20.3	24.1	23.2	22.1
Sweden	–	27.6	26.2	25.1	20.4	22.5	23.4	23.5	24.2	25.9
Switzerland	–	34.8	35.8	30.3	28.7	29.1	31.9	28.5	28.9	28.3
United Kingdom	17.6	19.4	21.1	17.7	19.9	19.3	17.6	16.6	15.5	13.6
United States	19.6	21.2	18.4	18.4	19.8	17.5	16.3	16.9	16.6	13.5
Emerging Market Economies										
Brazil	19.6	22.2	20.1	22.9	21.1	24.4	21.4	16.5	16.5	19.7
Chile	15.2	19.3	19.8	15.0	16.9	19.6	28.6	28.4	23.7	34.9
India	**11.2**	**13.7**	**14.2**	**16.9**	**18.5**	**19.0**	**22.8**	**24.4**	**23.7**	**32.4**
Indonesia	12.4	7.9	14.3	26.6	38.0	29.7	32.3	30.6	32.8	29.4
Israel	17.0	13.0	3.9	-3.4	6.8	5.7	14.4	16.9	20.6	18.3
Korea	1.9	8.0	15.2	20.2	23.9	30.6	36.4	36.6	34.2	30.9
Malaysia	25.7	22.0	24.3	23.3	29.8	29.9	34.5	39.7	47.3	37.7
Mexico	15.2	18.4	20.8	21.0	24.9	26.3	22.0	22.6	21.9	20.7
Philippines	16.2	20.8	21.9	24.8	24.2	16.5	18.4	14.6	23.1	13.1
South Africa	24.2	25.8	24.1	28.3	37.9	29.4	23.2	18.9	18.9	17.1
Thailand	14.1	18.6	21.2	22.1	22.9	25.5	33.8	35.4	31.5	31.8

Note : 1. Data for Australia, Canada, Japan, New Zealand, Switzerland and United States for 2006 pertain to the year 2005.
2. Data for India are on a fiscal year basis.

Source : World Development Indicators (WDI) online, World Bank and Handbook of Statistics on the Indian Economy, 2006-07, Reserve Bank of India.

Box IV.4
Deposits *versus* Borrowings: Some Issues

Traditionally, deposits constituted the primary source of funding for banks for undertaking financial intermediation, while their recourse to borrowings arose when the depositors switched their financial assets towards alternative instruments in line with the development of financial markets. As deposits are generally insured up to a threshold limit by the Government, they allow savers to retrieve their funds on demand without any capital loss, thereby ensuring full safety. On the other hand, the absence of both default risk and restrictions on access allows banks to mobilise deposits at lower rates relative to other financial institutions as the benefits of deposits insurance is available to banks almost without any payment of premium. Thus, insured deposits are not only a subsidised source of funds but also constitute the preferred 'core' funding for banks. As against insured deposits, recourse to borrowings is not only more costly but is also considered to be more sensitive to a bank's financial health and returns available on alternative financial instruments. As the providers of uninsured funds risk losing their money in the case of a bank failure, they are more likely to demand a higher return or pull out some of its money from the bank.

Notwithstanding the embedded features of liquidity and safety, savers tend to divert a part of surplus funds away from bank deposits towards investing in mutual funds, equity, debt instruments and contractual savings instruments such as insurance, and provident and pension funds. Apart from financial market development, many other factors such as changes in demographics and individual preferences also play a role in such shifts. While older people may rely on investment income and be risk averse rather than tie up their money for a long period of time, working (middle-age) population may seek higher returns when saving for retirement and have more flexibility to invest for the long-term. Even without changes in demographics, if households change their preferences and begin placing more importance to returns rather than safety of insured deposits, then also there could be a flight from bank deposits. Furthermore, greater access by households to alternative investment avenues enabled by developments in information processing, telecommunications technology and advances in financial engineering have lowered the transactions costs to households while channeling their funds into non-deposit assets.

These shifts have several implications for resource management by banks. First, the decline in cheaper insured deposits may raise costs for banks by making them rely on more expensive funding through borrowings. The shift to non-deposit funding would, therefore, require banks to engage in more active, complex and costly management of their funding base to ensure that they can meet their repayment commitments. Accordingly, banks may have to pay a higher rate on deposits to retain money which otherwise might switch to other investments having its implications for bank profitability and fund stability. Second, in certain circumstances, raising funds through non-deposit sources such as borrowing or bulk deposits may be cheaper at the margin than the insured deposits even if the rates paid on non-deposit funds are actually higher. This could be due to higher non-interest costs required to raise insured deposits such as the expense of branches, staff and technology. Furthermore, while raising rates to attract new deposits could also increase the cost of its existing deposit base, borrowings can be raised by banks without altering the cost for its existing deposits. Therefore, banks, in the face of growing preferences towards non-deposit instruments, may find it economical to reduce their branch structure or to carry out new techniques for raising money. However, with increasing reliance on non-deposit sources of funding, banks would have to develop the requisite expertise to design prompt and cost-effective repayment schedules, establish additional sources of emergency backup funds, and build up buffer of marketable and liquid securities.

In this new environment, thus, banks face the challenge of proper assessment of risks associated with borrowed liquidity *vis-à-vis* stored liquidity inherent in core deposits. Regulators also need to be proactive in dealing with the emergence of any systemic risks arising out of increased recourse to borrowings.

the Reserve Bank also continuously assessed risks weights on certain categories of advances as a prudential measure to protect the balance sheets of banks during phases of rapid credit expansion. This prompted banks to raise resources from the market and also plough back profits (see Chapter V). However, the share of capital and reserves in total liabilities has remained broadly unchanged from 1995. Banks supplemented their resources through borrowings from various financial institutions such as NABARD, EXIM Bank and erstwhile IDBI as well as from the Reserve Bank in the form of refinance and rediscounting facilities. The Reserve Bank's accommodation to commercial banks was in the form of food credit refinance, export credit refinance, stand-by refinance against pledge of Government securities during times of mismatch between sources and uses of fund and discretionary refinance to tide over temporary financial stringencies. During the 1990s, there were some rationalisation of the various refinance facilities along with reductions in the cash reserve ratio (CRR) from a peak of 15 per cent in 1991 to 9.5 per cent in November 1997, which was reflected in the decline in the share of borrowings in

total liabilities between 1990-91 and 1997-98. Subsequently, the share of borrowings increased again, reflecting flexibility provided to banks to tap foreign currency borrowings, especially for granting pre-shipment credit in foreign currency (PCFC)/export bills rediscounting (EBR) to exporters. Banks were also allowed to use funds generated through buy-sell swaps in the domestic foreign exchange markets for granting such loans, subject to aggregate gap limit approved by the Reserve Bank. The share of overseas foreign currency borrowings in the aggregate deposits of banks gradually increased from around 0.1 per cent of total deposits at end-March 2001 to almost 2.3 per cent at end-March 2007 in line with the policy flexibility and the easing of interest rates abroad. Apart from overseas borrowings, banks also borrowed by way of call/term funding from financial institutions, whose share in total liabilities increased from almost zero per cent in 1998-99 to about 3.2 per cent in 2006-07**.** Some banks also raised funds by way of debt instruments from the capital market as past Tier II capital requirements and to support infrastructure financing. On the whole, however, the share of borrowings in total liabilities of banks has remained broadly the same since 1992. On the other hand, the share of other liabilities and provisions declined consistently mainly reflecting the decline in non-performing assets (NPAs) of banks as percentage of their gross advances (which declined from 15.7 per cent in 1996-97 to 2.5 per cent by 2006-07) and consequent decline in provisioning (Table 4.21).

4.49 The cost of deposits, which reflects the average rate of contracting deposits of different types and different maturities over a period of time, declined between 2003-04 and 2005-06 before increasing marginally in 2006-07 in the wake of hardening of domestic interest rates. The cost of borrowing was lower than the cost of deposits. However, the gap between the two narrowed down significantly in 2006-07 (Table 4.22). In this context, it may be noted that while deposit rates are inherently sluggish and adjust with a lag to the liquidity conditions, interest rates on managed liabilities (*i.e.*, borrowings) respond more swiftly to the evolving market cost of funds, as is evident from international experiences. An increase in the cost of funds was also accompanied by an increase in the return on funds in 2006-07. As a result, banks were more or less able to maintain their spread.

4.50 To sum up, banks in India have played an important role in financial intermediation by mobilising deposits from the public, and stepping up the savings rate. Growth of bank deposits has varied over different periods of time and has been accompanied by some

Table 4.21: Liabilities of Scheduled Commercial Banks - Share of Major Components
(Excluding RRBs)

(Per cent)

End-March	Capital and Reserves	Deposits	Borrowings	Other Liabilities and Provisions	Total Liabilities (Rs. crore)
1	2	3	4	5	6
1991	1.9	70.7	8.3	19.0	3,20,345
1992	2.6	77.7	6.6	13.0	3,41,524
1993	3.0	78.4	7.7	11.0	3,85,778
1994	5.1	80.3	3.4	11.2	4,34,949
1995	6.2	78.9	4.9	10.0	5,14,990
1996	6.2	76.4	7.1	10.4	5,99,168
1997	6.5	79.9	3.5	10.1	6,72,736
1998	6.7	81.0	3.2	9.1	7,95,412
1999	5.8	81.1	4.2	8.9	9,50,718
2000	5.6	81.1	4.1	9.2	11,05,464
2001	5.2	81.5	4.3	9.0	12,95,405
2002	5.5	78.5	6.7	9.4	15,36,424
2003	5.8	79.8	5.1	9.3	16,99,197
2004	5.9	80.0	4.8	9.3	19,74,017
2005	6.4	78.0	7.1	8.5	23,55,509
2006	6.6	77.7	7.3	8.4	27,85,863
2007	6.4	77.9	7.0	8.8	34,63,406

Source : Handbook of Statistics on the Indian Economy, 2006-07 and the Report on Trend and Progress of Banking in India, 2006-07.

distinct features in each phase. In the phase beginning immediately after nationalisation of banks, bank deposit growth accelerated sharply as rapid branch expansion that followed nationalisation enabled banks to tap savings from the rural areas. In the second phase (1984-1995), bank deposit growth decelerated as banks faced increased competition from alternative saving instruments, especially capital market instruments (shares/debentures/units of mutual funds) and non-banking financial companies. This was the

Table 4.22: Cost of Funds and Return on Funds of SCBs

(Per cent)

Indicator	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5
Cost of Deposits	4.9	4.2	4.1	4.5
Cost of Borrowings	2.5	1.7	3.0	3.6
Cost of Funds	4.8	4.0	4.0	4.4
Return on Funds	8.2	7.1	7.4	7.7
Spread	3.4	3.1	3.3	3.3

Note : 1. Cost of Deposits = Interest paid on Deposits/Deposits.
2. Cost of Borrowings = Interest paid on Borrowings/ Borrowings.
3. Cost of Funds = (Interest paid on Deposits + Interest paid on Borrowings)/(Deposits + Borrowings).
4. Return on Funds = (Interest earned on Advances + Interest earned on Investments) /(Advances +Investment).

Source : Report on Trend and Progress of Banking in India, Reserve Bank of India.

phase of disintermediation as savings instead of being deployed in bank deposits were increasingly deployed in alternative saving instruments. Bank deposit growth decelerated further between 1995 and 2004. In this phase, banks faced competition from post office deposits, which carried significantly higher tax-adjusted returns than bank deposits. Despite this, however, bank deposits maintained their share in the savings of the household sector. During this phase, both ownership pattern and maturity pattern underwent a significant change. Bank deposits held by the Government and corporate sectors increased significantly. As a result, the share of deposits held by the household sector declined significantly even as the share of banks deposits in household sector financial savings remained broadly unchanged. The share of term deposits in total deposits increased. This was largely on account of increase in the share of the Government and the corporate sectors, as the share of the household sector in term deposits declined. However, within term deposits, there was a significant shortening of maturity profile in favour of short-term deposits.

4.51 In the fourth phase (2005-2008), bank deposit growth accelerated significantly as a result of vigorous resource mobilisation efforts by banks. This was facilitated by extension of benefits available on post office deposits to bank deposits. Growth of post office deposits and other small savings decelerated sharply. During this phase, the growth of NRI deposits decelerated sharply. However, banks were also able to mobilise large funds by way of certificates of deposit. During this phase, funds mobilised by mutual funds and by corporates through new capital issues increased significantly. As a result, the share of bank deposits and capital market instruments in the financial savings of the household sector increased sharply and that of claims on Government declined significantly.

4.52 The share of deposits and borrowings in the overall liabilities of banks has remained broadly unchanged in the post-reform period. The cost of borrowings between 2003-04 and 2006-07 was lower than the cost of deposit. However, the gap between them narrowed down significantly during 2006-07.

4.53 On the whole, the banking sector has played an important role in stepping up the savings rate of the household sector. However, physical savings have continued to grow in tandem with financial savings of the households and the challenge for the banking sector is to convert unproductive physical savings into financial savings. This issue is addressed in Section V in the light of cross country experiences set out in the following section.

IV. CROSS-COUNTRY EXPERIENCES

4.54 International experience shows that the role of financial intermediation has evolved over time, and varied across countries in tune with their state of financial development. A feature resulting from the evolutionary process of financial development has been progressive reduction in transaction costs and asymmetric information which have, to some extent, resulted in decline in the importance of traditional banking business of taking deposits and extending loans. Second, in tune with this, other financial intermediaries such as the pension funds and mutual funds have grown in importance in the recent period. Third, as financial development has introduced new financial markets such as financial futures, which are markets for intermediaries rather than individuals, the demand for new forms of financial intermediation has grown in relation to the traditional forms. Therefore, in recent years, modern theories of intermediation have developed that stress risk trading, risk management and participation costs as the key reasons for existence of modern intermediaries. In this modern set up, although the importance of non-bank intermediaries such as pension funds and mutual funds has increased significantly, banks have continued to play a significant role by diversifying their activities from traditional form of financial intermediation, whereby the sources of income originate more from fee-based activities to meet the demand for funds rather than through accepting deposits and extending loans. The key features of evolution of this financial intermediation process and the associated implications for the banking sector are borne out by the experience of development of financial systems in the US, the UK, France, Germany and Japan (Allen and Santomero, 2001).

4.55 In the United States, despite improved performance of banks, the consolidation process in the banking industry has resulted in the loss of its market share to other types of financial intermediaries. The decline in the banking sector's share in total intermediary assets has been noticeable since the mid-1970s, after a period of relative stability over 1940-1970. The share of commercial banks in total financial intermediary assets declined from 42 per cent in 1970 to below 25 per cent in 2005. With banks losing access to core deposits (as savers moved to non-bank financial institutions with the development of the financial system), they could not extend the benefits of relationship lending to borrowers prompting them to switch away from banks to not only the entities offering close substitutes to bank loans but also to those entities that issued securities

(Mester, 2007). Accordingly, the shares of finance companies and asset-backed securities (ABS) issuers, and government-sponsored enterprises (GSEs), real estate investment trusts (REITs) and mortgage companies in total financial intermediary assets in the US increased sharply during the 1990s (Table 4.23). Despite their loss in the market share of intermediary assets, financial assets of the banking sector, as percentage of GDP, have not declined markedly (Scholtens van Wensveen, 1999). This suggests a change in the ownership pattern of the financial assets, whereby there has been a switch in asset holdings from those held directly to those held by non-bank intermediaries. Thus, the banking sector has experienced a reduction in its size in relation to other intermediaries but not relative to total financial assets of the economy. This has been consistent with long-term trend of a decline in the individual ownership of corporate equity in the US.

4.56 Nevertheless, the banks in the US have been losing their share in business and consumer lending to other non-banking intermediaries. The shrinking market share of the banking sector implies that the synergies between the liability and asset sides of the bank balance sheet have reduced. The decline in the market share of the banks may have begun from the liabilities side instead of assets side of the balance sheet, thereby reflecting a decline in demand for deposits rather than a decline in demand for relationship lending. Studies have found empirical evidence of an explicit link between banks' liability structure and its distinctive lending behaviour (Berlin and Mester, 1999). Most banks undertake relationship lending, which is typically associated with lower loan rates, less stringent collateral requirements, a lower likelihood of credit rationing, more contractual flexibility and reduced costs of financial distress for borrowing firms. The foundation of relationship lending depends on the ability of the banks to raise core deposits. The core deposits are rate inelastic in character and enable banks to offer relationship lending by insulating their cost of funds from economic shocks. The banks are, therefore, able to offer multi-period contracts to the borrowers insuring them against adverse credit shocks. However, as banks lose access to core deposits when savers switch their financial savings towards mutual funds, they offer less insurance (loan-rate smoothing) to borrowers. This results in banks losing their market share to intermediaries that hold securities rather than loans. This process explains as to how banks have lost their market share not only to entities offering close substitutes to bank loans but also to entities issuing securities. The declining demand for deposits not only raises banks' cost of funds but also reduces the feasibility of relationship lending by banks, reducing firms' demand for bank loans as they became less distinctive. In other words, the banking sector has been shrinking since their loans have become less

Table 4.23: Relative Shares of Total Financial Intermediaries Assets in the United States

(Per cent)

Financial Intermediary	1960	1970	1980	1990	2000	2003	2005
1	2	3	4	5	6	7	8
Insurance Companies							
Life Insurance	20.6	15.0	10.9	11.5	9.4	9.6	9.4
Property and casualty	3.0	2.7	3.5	3.5	2.5	2.4	2.6
Pension Funds							
Private	3.9	3.2	4.3	4.7	3.2	2.7	2.2
Public (federal, state, and local government)	3.7	4.3	4.2	4.1	4.1	3.4	2.6
Finance companies and ABS issuers	4.8	4.7	5.1	7.5	12.2	12.9	14.0
Mutual funds							
Stock and bond	1.1	1.3	0.8	6.4	8.5	9.2	10.2
Money market	0.0	0.0	1.2	3.8	6.3	5.4	4.6
GSEs, REITs, mortgage companies	2.5	5.1	9.0	14.8	21.2	23.8	22.2
Depository institutions (banks)							
Commercial banks	39.1	42.1	39.1	30.2	25.4	23.7	24.6
Savings and loans and mutual savings banks	20.4	20.4	20.5	11.9	5.3	5.0	5.5
Credit unions	0.9	1.3	1.5	1.7	1.8	2.0	2.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note : Totals may not add up to 100 per cent because of rounding off.
Source : Federal Reserve System Flow of Funds Accounts.

"special", reflecting declines in the cost of information processing and communication which have lowered the cost of the duplication of bank services.

4.57 Banks have been losing ground on the liability side of their balance sheet. In particular, as the dependency ratio increased in the US as well as other industrial countries, consumer demand shifted towards saving products from credit products. Asset accumulation in anticipation of retirement has been becoming more important and this market growth has been the fastest for household wealth accumulation. However, the traditional bank deposits – the time and savings account – have been losing ground to mutual funds which have much leaner cost structures and offered significantly higher returns. Accordingly, time and saving deposits of banks have declined steadily relative to fixed income mutual funds since 1980. Furthermore, as non-banks are introducing new technologies, banks are also losing ground in their fundamental role of facilitating payments. The widespread use of credit cards has also eroded the central role played by demand deposits of banks in the payment system. The payment vehicles are increasingly being issued by primarily monoline organisations or distributed nationally by mass mailing which is different from usual multi-product banking relationship and has further eroded banks' previous unique role and demand for its deposit products. The declining role of the traditional intermediation business has led to a decline in the importance of net interest income for both the banking sector and the economy as a whole in the US. As this decline in the basic intermediation business has been economically motivated and technologically driven, it is viewed as likely to be irreversible (F. Allen, *et. al*, op. cit).

4.58 Although the intermediation business has declined, banks in the US have shifted from traditional intermediation function towards fee-producing activities such as trusts, annuities, mutual funds, mortgage banking, insurance, brokerage and transactions services. Therefore, while the spread income accounted for a share of 80 per cent in total bank earnings in the late 1980s, region and money centre banks earned more than half of their income from fees and trading income in the late 1990s. Consequently, the structure of banks in the US has altered over the years whereby they are no longer the main repository of liquid savings for the financial system and the primary source for business and consumer finance.

4.59 The trends relating to banks in the US are increasingly being mirrored in other economies such as France, Germany and the UK. The ratio of households' claims on banks as a proportion of their total financial claims has declined in all these countries, which is also being reflected in respect of all non-financial sectors on banks. The ratio of liabilities of banks to non-bank financial intermediaries compared to total financial liabilities has risen significantly. Simultaneously, the ratio of securities liabilities of banks to total financial liabilities has risen somewhat for France, marginally for Germany but stayed roughly the same for the UK over the period 1981-1996 (Schmidt, *et al*., 1998).

4.60 A feature emerging from the cross country experience is that banks' ability to attract household deposits reflected the different holding pattern of total assets ultimately held by the households in the different economies. For instance, households held only 19 per cent of their assets in terms of cash equivalents including deposits in the US, whereas the share was slightly higher at 24 per cent in the UK in 1994. A significant proportion of 31 per cent was held in the form of fixed income assets such as domestic and foreign bonds, and loans and mortgages, while the largest portion, 46 per cent was held in risky assets including domestic and foreign equity and real estate in the US. In the UK, however, households held significantly lower amounts in fixed income assets at 13 per cent and substantially higher shares in risky equity and real estate assets, at 52 per cent. On the other hand, households are relatively shielded from risk in Japan. They kept 52 per cent of their assets in cash and cash equivalents, 19 per cent in fixed income assets and only 13 per cent in risky equity and real estate assets. Households were also found to be risk averse in France and Germany where they kept 33 per cent and 40 per cent, respectively, of their asset holdings in cash and cash equivalents. It may also be noted that not only the households hold higher shares of their assets portfolio in risky assets in the US and the UK as compared to Germany, France and Japan, but also they hold more in financial assets. Thus, as quantum of financial assets increases, the share of risky assets borne by the households also increases.

4.61 Another factor explaining the relatively higher proportion of household assets in bank deposits in Japan, France and Germany as compared to the US and the UK is that the financial markets are relatively less developed in the former group of countries. In the presence of incomplete financial markets, long-lived financial institutions like banks allow effective inter-temporal smoothing of risks that cannot be diversified at a given point of time, thereby inducing

the households more to park their financial savings with banks than in the case of economies with developed financial systems. In these economies, banks acquire a 'buffer' of short-term liquid assets when times are good and run this buffer down when times are bad. As a result, households that hold most of their assets in bank accounts and other fixed income assets are shielded from risk and are able to smooth consumption streams. On the other hand, in the case of economies with developed financial markets, competition faced by banks from financial markets may not make inter-temporal smoothing by banks viable in the long run. This is because, in good years, households shift their savings out of the banking system for investing in the market to reap better returns and thereby avoid accumulation of bank reserves. Therefore, in bank-based systems such as those in Japan, France and Germany, risk management can be achieved through inter-temporal smoothing as banks eliminate risk by investing in short-term liquid assets. Other kinds of risk management are relatively less important as cross sectional risk sharing is correspondingly reduced in importance. On the other hand, in market-based financial systems, inter-temporal smoothing by financial intermediaries is ruled out by competition from financial markets. Financial markets allow high returns in good times and there is an incentive for households to withdraw their deposits from banks and invest the funds in the market. In such a financial system, setting cross-sectional risk sharing becomes correspondingly more important. The individuals or institutions acting on their behalf have to ensure that risks are managed and traded in a way so that those who are more tolerant of risk end up bearing it. Financial systems in such countries become more market oriented and risk management through the use of derivatives and other similar techniques becomes more important. This is also reflected in the evolutionary process of the financial system in the US. Until the mid-1970s, banks were the dominant form of financial institutions in the US and the structure was more like in Japan, France and Germany, whereby banks undertook inter-temporal smoothing. Subsequently, however, the occurrence of financial innovations has changed the form of financial system from a bank-based to a market-based one in the US with banks increasingly demonstrating their willingness to compete with markets. Accordingly, they have entered new markets and developed new products, while their traditional role of taking deposits and extending lending has been steadily shrinking. This has been accompanied by a shift from inter-temporal smoothing to cross-sectional risk sharing. The role of surviving intermediaries has evolved to facilitate cross-sectional management of risks through derivatives and so forth, rather than adopting inter-temporal smoothing of risks.

4.62 In Australia, the performance of the banking system since 1995 has been driven to a large extent by the developments in the household sector. Households have progressively invested an increasing share of their financial assets in market-linked products, through direct holding of equities, investments in unit trusts, and holdings of assets in superannuation and other managed funds. This also reflected, to some extent, changes made in retirement saving arrangements in Australia, notably the introduction of compulsory employer superannuation contributions, which were increased to 9 per cent of an employee's earnings in 2002. To the extent that households invested in market-linked assets, the share of household savings held in deposits with banks and other deposit-taking institutions declined. The development of financial markets changed the banking environment instilling competitive pressures in banks' traditional business lines, notably deposit taking and household lending. Banks initially hoped to attract a significant share of retirement savings into specially designated retirement savings accounts (RSAs) following the Government's approval for these products in 1996. The RSAs are essentially term deposits that attract concessional tax rates if held until retirement age. These products, however, could not evoke much saving interest from the households because even though they were capital guaranteed the rates of interest failed to match the strong returns on investments in equity-based funds during the buoyant share market run in the 1990s. Reflecting limited success achieved in this regard, some of the largest banks adopted an alternative strategy by beginning a series of major acquisitions of asset/wealth management funds so as to access the fees and income associated with the growing wealth-management sector. Consequently, nearly all of the Australian-owned banks offer some form of wealth management products. As a result of this expansion, banks controlled an estimated 40 per cent of retail funds under management in Australia in 2005 as compared to less than 20 per cent in the mid-1990s. Although these banks had difficulty in maintaining their share after acquisitions, wealth management has become an increasingly important source of revenue for the banking sector. While households' demand for credit has been strong, the household saving rate has

fallen and an increasing share has been channelled into non-deposit products. Thus, bank lending growth has outpaced the growth of low-cost retail deposits. Furthermore, the competition among banks for these deposits has also intensified and increasingly some of them have introduced high-yield on-line saving accounts beginning in the late 1990s offering high rates of interest to the depositors relative to traditional transaction and term deposits.

4.63 The banks in Australia also adopted a number of alternative approaches to fund their domestic lending growth, including securitisation and issuing debt securities. While some small banks made extensive use of the strategy of securitisation of their loans, the large banks funded the shortfall by accessing domestic wholesale markets and increasingly, by sourcing of funds from offshore. Consequently, the aggregate of foreign liabilities of Australian banks exceeded the value of retail deposits and accounted for 27 per cent of their total liabilities in 2005 as compared with 15 per cent in the mid-1990s. The foreign liabilities of Australian banks stood at around $ 370 billion in December 2005, with nearly two-thirds of these in the form of negotiable debt securities. The rest of the foreign liabilities comprised non-resident deposits and intra-group transfers. The intra-group transfers formed a relatively important source of funds for foreign bank branches operating in Australia. The shares of retail deposits and wholesale deposits were 23 per cent and 50 per cent, respectively, of total liabilities of the banking system. Australian banks issued securities to a range of markets and currencies, with over 80 per cent of outstanding offshore debt securities being issued into the US and UK markets and a further 10 per cent in Hong Kong and Japan. Despite offshore debt being predominantly (80 per cent) foreign denominated, Australian banks have little exposure to foreign-exchange risk, which is typically hedged using cross-currency swaps and foreign-exchange forward contracts. Net foreign currency debt on the balance sheets of Australian banks was $186 billion as at March 2005 ($117 billion four years ago), of which $168 billion was hedged in derivative markets. A concern, however, that is sometimes raised regarding banks' reliance on foreign funding is the potential rolling over of debt in times of stress. Notwithstanding the difficulties that some emerging market sovereigns have had experienced in refinancing their foreign currency-denominated debt, there was little evidence that in countries with developed capital markets and floating exchange rates, the foreign investors were less likely to roll over their debt securities than were domestic investors (Hall and Veryard, 2006).

4.64 In comparison with the advanced countries, the saving rates in emerging market economies (EMEs) have generally remained higher; the banking systems played an important role in raising the saving rates. In Korea, the foundations of the modern financial system were laid during the early 1950s when the central and commercial banking systems were realigned under the new institutional bases provided by the Bank of Korea Act and the Banking Act. Specialised banks were established during the 1960s, to facilitate capital mobilisation and strengthen financial support for underdeveloped or strategically important sectors. Most non-bank financial institutions were introduced during the 1970s in order to diversify the financing sources, promote the development of the money market, and attract funds into the organised market. With a shift from a government-orientated stance on economic policy towards a market-orientated stance beginning the early 1980s, the number of commercial banks and non-bank financial institutions increased further as part of a series of broad measures to spur financial liberalisation and internationalisation. In the aftermath of the currency crisis in 1997, the Korean financial system underwent substantial changes in the course of the implementation of a comprehensive financial reform programme. In particular, the number of banking and non-banking financial institutions declined as a result of consolidation. Reflecting the structural changes in the financial system in Korea, the share of banks in total assets declined from around 67 per cent in 1995 to around 60 per cent in 2006. The share of merchant banking corporations in the total assets declined from around 5 per cent to around 1 per cent over the same period. This led to an increase in the shares of insurance companies from around 7 per cent to around 13 per cent and that of investment trust management companies from around 8 per cent to around 10 per cent during the same period. As at the end of June 2007, commercial banks in Korea consisted of 7 nationwide commercial banks and 6 local banks (with a total of 4,900 branches) and 36 foreign bank branches. The business demarcation, however, was strict with commercial banks permitted to engage in very limited securities business. They were also not allowed to undertake insurance business until August 2003, after which bancassurance was introduced permitting them to sell insurance products. The principal sources of funds for banks continue to be in the form of deposits, which was around 60 per cent at end-June 2007,

while borrowings constituted around 25 per cent of the total sources of funds. Regarding the uses of funds, the banks deployed the largest proportion in extending loans which was around 71 per cent at end-June 2007.

4.65 In Thailand, the structure of financial system underwent significant changes both in terms of number of market participants and the volume of their market activities. By the mid-1980s, 30 commercial banks had 1,526 branches handling the majority of transactions in Thailand. The 16 largest banks accounted for over 90 per cent of assets, deposits, and loans of the commercial banks, indicating a high concentration and little competition in the banking industry (Barbara, 1987). With the growing wave of globalisation in the mid-1980s, Thailand began a progressive deregulation of the financial sector. On the interest rate front, the authorities gradually removed interest rate ceilings in order to encourage savings mobilisation and to make the financial system more dynamic. Interest rate ceilings on long-term time deposits were abolished in June 1989, on short-term time deposits in March 1990, on savings deposits in January 1992, and on loan rates in June 1992. In addition, the central bank in 1992-93 gave commercial banks more flexibility by loosening the requirement of government bond holding as a pre-requisite for opening up new branches. The obligations of commercial banks to extend credits to rural borrowers or those in the vicinity were also relaxed to cover more related occupations and wider geographical areas. An analysis of the liabilities of banks reveals that the share of deposits in total liabilities, which had declined from 77 per cent to 70 per cent in 1996, increased to 79 per cent reflecting post-crisis recovery. Thereafter, the share of deposits again declined to around 72 per cent in 2007. On the other hand, the share of borrowings in total liabilities, which had increased from 9 per cent in 1991 to 9.3 per cent in 1996, declined to 3.4 per cent in 2003 before increasing to 8.5 per cent in 2007. The ownership pattern shows that bank deposits in Thailand are predominantly held by households. However, the share of individuals in total deposits declined from around 69 per cent in 1999 to around 61 per cent in March 2008. On the other hand, the share of the business sector in total deposits rose from 16 per cent to 20 per cent during the same period.

4.66 The general decline in deposits since the early 1990s was reflected in the persistent fall in the gross domestic savings rate of Thailand from a peak of 36.3 per cent of GDP in 1991 to 35.1 per cent in 1997 (the crisis year). After recovering to the pre-crisis peak in 1998, the saving rate continued its declining trend and reached 31.8 per cent in 2006. This drop in the saving rate was mainly on account of the household sector, which could be attributed to three major factors such as the rise of social security programme, the boom in consumption and the shift between corporate and household savings. Since the early 1990s, the government, in its efforts to mobilise savings, instituted a multi-pillar approach to social safety net programme to ensure appropriate welfare for old ages and retirees as well as promote domestic saving. On the other hand, public and corporate sector saving rates behaved pro-cyclically. The share of net public saving in the gross saving rose from a low single digit in the early 1980s to roughly 25-28 per cent during the pre-crisis period of economic boom before dropping to 10 per cent right after the crisis. It, however, recovered to 18 per cent of gross national saving in 2002-03. The share of net corporate saving rose steadily from 9 per cent of gross national saving in the early 1980s to 25 per cent right before the crisis, reflecting the higher growth of the corporate sector income relative to other sectors in the economy during the time period. After the crisis, its share, however, plummeted temporarily to 6 per cent, but rose subsequently to a high of around 26 per cent in 2002-03, given favourable economic conditions and rising corporate profits after the crisis (Pootrakool *et al*, 2005).

4.67 In China, prior to the late 1970s, People's Bank of China (PBC) was virtually the only financial institution that conducted all types of financial services business (though very limited in variety and size), besides being the regulator. The dual banking system emerged in 1984 with the separation of commercial banking from central banking (Shiyu, *et al.* 2006). Apart from the separation of Industrial and Commercial Bank of China from the PBC, three other specialised banks emerged. However, their business operations were limited within the framework of a planned economy. In tandem with the reforms towards a socialist market economy, these specialised banks were made to transform into real commercial banks in 1993. This was facilitated by the emergence of three large policy banks in 1994 to separate policy financing and commercial financing. The Law of Peoples' Republic of China on Commercial Banks was enacted, establishing the specialised banks as state-owned commercial banks but making them responsible for their business operations. By the end of 2004, apart from the four state-owned commercial banks and

three policy banks, several other type of banks such as 12 share-holding commercial banks, 112 city commercial banks, 681 urban credit co-operatives (UCCs), 32,854 rural credit co-operatives (RCCs), eight rural cooperative banks, seven rural commercial banks, 211 foreign financial institutions, 220 foreign bank representative offices, four asset management companies, 59 trust and investment companies, 74 finance companies, 12 financial leasing companies, three auto financing companies and a large number of post office savings institutions emerged. Reflecting the expansion of the financial system, deposits grew steadily from 31.1 per cent of GDP in 1978 to 176.2 per cent of GDP in 2004. Despite the diversification of the financial systems in terms of institutions and markets, banks continue to predominate reflecting more public confidence on banks over other market-based institutions facilitated by the implicit insurance cover provided by the State. Although the Government has attempted to provide similar protection and intervention to capital market, the nature of capital market has tended to make the public less confident. Therefore, the process towards market-based financial activity in China has yet to be steady or significant (Liping He, 2005).

4.68 To sum up, the cross-country experiences suggest that as the financial sector develops, the savers are attracted towards new financial instruments away from the traditional bank deposits. This is more so when capital markets witness favourable conditions. The decline in the deposits held by the household sector, however, is compensated by deposits by non-bank intermediaries. Thus, the banking sector experiences a reduction in size in relation to other intermediaries, but not in relation to total financial assets of the economy. In fact, the current phase of the banking sector in India more or less mirrors this pattern. Nevertheless, banks combine aggressive deposit mobilisation with exploring newer ways of raising cost-effective non-deposit resources to meet their resource requirements. This, however, poses many challenges to both the banks and the regulators in view of its implications for liquidity and solvency of banks and the overall stability of the financial system. In emerging markets, resource mobilisation by banks has played an important role in sustaining high domestic saving rates. In recent years, however, deposits mobilised by banks moderated somewhat, reflecting disintermediation, boom in consumption as well as the need for enhanced social security programmes necessitated by the changing demography.

V. EMERGING ISSUES AND THE WAY FORWARD

4.69 As the Indian experience shows, the acceleration of economic growth has been largely enabled by the sustained increase in the level of domestic savings, expressed as proportion of GDP. Historically, household savings have been the mainstay of the gross domestic savings of the Indian economy. In recent years, however, there has been sharp increase in the private corporate savings and public sector savings rates, reflecting strong growth in corporate profitability and fiscal prudence due to the implementation of the Fiscal Responsibility and Budget Management (FRBM) Act, 2003. It may, however, be noted that the improvement in corporate sector savings on account of higher profitability was largely an outcome of the reforms pursued over the years, whereby forces of global competition and conducive policy environment led to an improvement in productivity and efficiency. In the years ahead, acceleration in the saving rate of the private corporate sector may not continue at the same scale in view of the fact that the early benefits of reforms reaped by the corporate sector, especially by deleveraging of balance sheets, may not be available at the same scale in future (Mohan, 2008). Similarly, with the Central Government budgeting a revenue deficit of 1 per cent of GDP instead of 0 per cent of GDP as stipulated under the FRBM Act for 2008-09 and further risks to fiscal consolidation from various factors, including the expected pressures from the implementation of the Sixth Pay Commission award, there would be limits to further increases in public sector saving rates in the short run. Therefore, improving the household sector saving rate should constitute the main plank for sustaining the overall domestic savings in the Indian economy.

4.70 In this regard, it may be noted that the share of financial savings (net of financial liabilities) in total household savings has declined by almost 10 percentage points to around 47 per cent in the current decade, reflecting higher savings in physical assets. Accordingly, a major challenge would be to raise financial saving rate which would depend on further deepening of the financial sector through introduction of new instruments with features catering to the household sector's requirement consistent with their risk-return and maturity profiles as well as through the continuation of insurance and pension reforms. Furthermore, another challenge would be to release resources of the household sector held in physical assets over and above the genuine requirement for savings in various financial assets. Although households continue to hold their financial savings

mainly in the form of bank deposits, there was a significant decline in its share in total financial savings from an average of around 45 per cent during 1970-1984 to around 37 per cent during 1995-2005, before increasing to 51 per cent in the last two years. The recovery partly reflects the aggressive efforts at mobilisation of time deposits by banks from 2005-06 onwards to meet high credit demand and was partly facilitated by the Government measure of extending tax incentives on special bank deposit schemes. The interest rate differential between small savings/post office deposits and bank deposits, which narrowed down initially, turned subsequently in favour of bank deposits in view of unchanged interest rates on small savings/post office deposits, which also made the bank deposits more attractive. Accordingly, the sharp jump in time deposit growth reflected to an extent some switch away from small savings, signifying only a portfolio shift and it is a moot question as to whether the current trend would be sustained. Therefore, to sustain the recent trend in deposits, banks need to tap hitherto untapped savings, especially in rural areas, by introducing appropriate deposit schemes suitable to savers with various risk and return profiles.

4.71 The current phase of high growth has been supported by a step up in the household gross financial saving rate, which, in turn, has been led by aggressive mobilisation of deposits by the banks. It is observed that the increase in the growth rates of real GDP from 5.8 per cent during 1992-93 to 2002-03 to 8.8 per cent during 2003-04 to 2006-07 was supported by the household gross financial saving rate increasing from 12.1 per cent of GDP to 15.6 per cent. Over the same period, the ratio of bank deposits to household gross financial savings increased from 36.7 per cent to 44.0 per cent. A sensitivity analysis based on these trends shows that raising real GDP growth by one percentage point would require 1.2 percentage point increase in the household gross financial saving rate (gross financial savings/nominal GDP) in the current phase of economic growth. This, in turn, would require the ratio of bank deposits to gross financial savings to grow by 2.5 percentage point. In the light of the growing resource requirements for sustaining the high growth momentum of the Indian economy, banks would have to reassess their traditional strategies of resource mobilisation, including from the rural sector.

Implications of Changing Pattern of Bank Deposits

4.72 Following the financial liberalisation since the early 1990s, some shifts have taken place in the ownership pattern of bank deposits. The household sector's share in aggregate deposits has steadily declined, while the shares of the Government and corporate sectors have increased. The decline in household sector's share reflects mainly the sharp fall in their shares in term deposits. The increased interests from the corporate and Government sectors reflects the favourable impact of successive shortening of the stipulated minimum maturity of time deposits as well as the policy of allowing banks to offer differential interest rates on wholesale term deposits. Another notable feature in respect of time deposits has been the decline in the share of deposits of over five years maturity across all the sectors, reflecting availability of alternative saving instruments with attractive returns. This phenomenon is not confined to India alone and was observed in several other countries, as was alluded to earlier.

4.73 As the financial sector develops, the share of non-deposit saving instruments tend to increase at the expense of bank deposits. This trend is expected to accentuate in the coming years. The challenge, therefore, for the banks is to mobilise hitherto untapped savings and to improve their services to not only retain their existing depositors but also attract new depositors. They would also have to widen their deposit base through exploring new opportunities thrown up by the recent emphasis on inclusive growth and financial inclusion. As the growth process strengthens and becomes more inclusive, it is expected that demand for financial products would accelerate rapidly, necessitating a greater penetration of banking services.

Changing Demographics and Financial Services

4.74 Banks also have to recognise the changing saving patterns associated with the changing demographic profiles. The proportion of population in the working age group of 15-64 years is expected to increase steadily from 62.9 per cent in 2006 to 68.4 per cent in 2026. Accordingly, the dependency ratio (ratio of dependent to working age population), which declined from 0.80 in 1991 to 0.73 in 2001, is expected to decline further to 0.59 by 2011 (GoI, 2008). The changing demographics appear to have played a role in the shift in composition of household savings towards physical assets, especially reflecting housing demand. Accordingly, banks would also need to devise innovative strategies of mobilising surplus resources from a progressively younger age profile of savers. Another noticeable feature emerging in India is that public sector employment, which grew by an average

of 1.53 per cent per annum during 1983-1994, declined by 0.70 per cent during 1994-2005. On the other hand, growth in private sector employment in the organised sector accelerated from 0.44 per cent to 0.58 per cent over the same period. With the private sector leading the growth in organised employment, there would be an increased demand for varied financial products such as insurance and other contractual saving instruments consistent with the changing risk-return profiles of the working age population. The changing demographics and employment patterns would generate demand for a wide range of financial services such as insurance, housing and other financial products with innovative features. In order to reap the benefits of the changing demographics and employment patterns, banks would have to re-orient their role as financial intermediaries beyond the traditional confines of passive deposit mobilisation and lending by providing a package of financial services as demanded by the customers. *Ipso facto*, the customers would be keeping their deposits with the banks.

Rural Deposit Mobilisation – Need for Innovations

4.75 Against the backdrop of a decline in the share of rural deposits in total deposits of SCBs since the 1990s, there is a need to step up efforts to access rural savings to raise the overall deposit mobilisation of banks. Although there are many challenges, the rural sector throws up vast opportunities for banks to reap the benefits of low cost large deposit base, which may not be available to other financial intermediaries. The international experience provides some useful lessons in this regard.

4.76 The rural sector harnesses the power of providing small amounts of household savings which can be mobilised by the banks that can be made available for productive uses to rural and agricultural enterprises. A major challenge faced by banks in rural areas is that deposit transactions often involve small amounts and display irregular patterns reflecting seasonality and erratic nature of small scale income generating activities. In order to cater to this demand, many banks in the Philippines have adopted 'piggy banking' concept, whereby small locked boxes were provided to the savers to be maintained at their homes after opening of the savings account with a minimum deposit. The keys were kept with the banks. This allowed the clients to save small amounts on a daily basis in their boxes and bring them to the banks when they intended to deposit their savings. This enabled reduction in banks' time on collections (USAID, 2005). Another major challenge lies in identifying appropriate technologies to reduce significantly the costs of doing rural business that result from low population density and poor physical infrastructure. While technological and management information system (MIS) solutions are necessary to overcome this challenge, their impact on the efficiency, quality of services, bottomlines and outreach potential of the banks need to be carefully assessed. For instance, local technology firms in the Philippines helped develop open source software to meet the specific needs with multiple branches and units and the central bank's data processing and reporting requirements. This software allowed customisation of the technology by the rural banks and its flexible adjustment in tandem with additions or changes in products. It proved to be high quality and cost effective system that improved the banks' ability to quickly and efficiently handle multiple transactions and more clients. Thus, although there are challenges in tapping rural savings, the international experience shows that these challenges could be met effectively by adopting some innovative methods. The experience of other countries with suitable adaptations can be a guide to the banks attempting to expand their outreach in the rural sector and boost rural savings.

Competition from Other Intermediaries/Markets

4.77 With greater avenues for the deployment of funds and the prospects for higher returns enabled by the development of markets, investors progressively diversify their portfolios across instruments and institutions, thereby demanding financial services for management of cross-sectional risks. This leads to a change in the nature of the demand for intermediation services, whereby investors look beyond stable returns offered by bank deposits while parking their surplus funds. This, in turn, leads to the emergence of a number of specialised intermediaries/markets that are able to cater to the evolving investor requirements. Against the backdrop of the ongoing financial innovations following the adoption of financial liberalisation in India in the early 1990s, equity market related instruments such as equity shares and units of mutual funds have been gaining importance in view of their higher returns, *albeit* with higher embedded risks. To an extent, this trend has resulted from the natural process of financial market development, whereby new instruments gain popularity with a decline in transactions cost and asymmetric information. By enabling investors in better assessment of risk-return perceptions, this has widened the choices of

investments. With traditional deposit base of banks shrinking with these developments, there is a need for them to extend their outreach to prospective depositors/investors by expanding the ambit of the specialised financial services offered by them by repackaging and redesigning of products to suit individual needs.

4.78 Banks, however, face various constraints compared to non-banks while diversifying their activities. First, non-banks are able to manage their resources more effectively by having a leaner cost structure and quickly adopting new technologies, thereby offering higher returns. Furthermore, non-bank intermediaries such as brokerages, asset management firms and mutual funds are able to offer specialised services like cash management and wealth management for various investors, including high net worth individuals. Second, unlike non-banks, banks are often subjected to various regulatory requirements such as statutory stipulations of reserve requirements, directed lending, prudential regulations driven provisioning requirements and limits on capital market exposures. While these measures promote financial stability, they constrain the diversification opportunities thrown by a developing financial system. Third, special deposit schemes announced by the Government from time to time which offer not only higher returns but also provide tax incentives, boost effective returns *vis-à-vis* the traditional bank deposits, thereby constraining banks' effort at deposit mobilisation. While various restrictions on banks and prudential requirements may be justifiable from the special role banks play in the system, the policy anomaly arising out of tax benefits needs to be removed to provide banks a level playing field.

Need for Continued Focus on Deposits

4.79 Banks have the benefit of low cost deposit base which, to an extent, make them immune from the day-to-day market volatilities. Thus, the core deposit base serves as a source of 'stored liquidity' which is durable as compared with 'borrowed liquidity' originating from the market. Another distinguishing feature is that while deposits rates are relatively more rigid, interest rates on borrowing vary more flexibly in tune with the market conditions. During periods of favourable macroeconomic conditions characterised by abundant liquidity and low nominal rates, the low perception of financial risks often induces financial market participants to undertake progressively higher risks. On the other hand, during periods of turbulence caused by any unforeseen event, the resultant reassessment and repricing of risks by investors trigger heightened uncertainties in the market and thereby expose the excessively leveraged entities to the risk of default. Therefore, while accessing the market for borrowed liquidity have the benefits, the probability of excessive leveraging associated with borrowings calls for adequate safeguards to protect the fund base from unforeseen events. This was borne out by the Northern Rock crisis, a UK-based bank, which had a higher share of borrowed liquidity *vis-à-vis* stored liquidity. Faced with problems in mobilising funds from the market due to the tightening of credit conditions, the performance of the bank was adversely affected prompting depositors to withdraw their money in large numbers, which ultimately resulted in a bank run.

4.80 Banks in India have traditionally relied on deposits for their funding requirements. Their reliance on borrowings has been insignificant. As the economy expands and the demand for funds increases, banks at times may find their deposit resources to be insufficient for meeting the growing demand, thereby encouraging them to raise funds by way of borrowings. Going by the Northern Rock experience, heavy borrowing by banks has serious implications, especially during financial distress, and, therefore, too much reliance on borrowings needs to be avoided. In case banks resort to such borrowings, they also need to adopt appropriate internal risk management strategies. In particular, while the increased flexibility given to banks in India in recent years opens up new opportunities for raising resources, the enhancement of associated risks would demand appropriate management of their liabilities through minimising costs along with mitigation of risks arising from adverse movement in interest rates and exchange rates. They need to regularly review their business strategies so that they are in a position to combine longer term viable financing with profitability in operations.

Need for Skill Development in Banks

4.81 Banks while gearing to face competition from non-banks and capital market instruments both at home and abroad, which is likely to increase in future, would have to appropriately price and package their products to remain competitive, which would demand appropriate skill development at bank levels. While banks have the potential, they need to invest significantly in skill enhancement at all levels, for developing innovative products and delivering new service modes in the face of increased competition. Public sector banks face added challenges while

attracting and retaining new personnel in the face of rigid compensation structures in comparison with private and foreign sector banks.

Implications for Monetary Policy

4.82 Moving forward, resource mobilisation that dovetails into the transition to the higher growth trajectory is likely to lead to more product innovations on the part of both banks and non-banks. With the blurring of distinctions between banks and non-banks from the functional perspective and increased substitutability of bank deposits with other saving instruments, the assessment of monetary aggregates for drawing policy perspectives would have to be carefully undertaken. Furthermore, addition of new features into the financial instruments would have implications for the conventional mode of accounting based on identifiable characteristics of money. With the growth process strengthening and becoming more inclusive, the demand for housing, urban services, retail and utilities is expected to be scaled up as disposable incomes grow. In such a scenario, it is likely that growth in bank credit and monetary aggregates might deviate, and persistently so, from what might be expected from historical relationships and elasticities in view of the ongoing structural changes. This raises the critical issues of clarity in reading signs of inflation, asset prices and systemic liquidity from money/credit expansion.

VI. SUMMING UP

4.83 Historically, banks in India have played a central role in mobilising and allocating resources for supporting the growth process. The nationalisation of private sector banks in 1969 marked a turning point in the history of the banking sector in India. Large branch expansion that followed enlarged the deposit base of banks in rural and semi-urban areas. Although another wave of nationalisation in 1980 carried forward this process, the aggressive strategies of fund mobilisation by mutual funds and NBFCs in the backdrop of buoyant capital market in the second half of the 1980s set in process of some disintermediation of household savings. Some deceleration in bank deposit growth was again observed during 1995-2005 in tune with the maturing of saving preferences under a deregulated market environment. However, bank deposits growth accelerated significantly during 2005-2008 due to vigorous deposit mobilisation efforts by banks in the wake of strong credit offtake. This was despite the sharp growth in other instruments such as shares and units of mutual funds.

4.84 Bank deposits have all along been the mainstay of the savings process in the Indian economy. Although banks have played an increasingly important role in stepping up the financial savings rate, physical savings, nevertheless, have tended to grow in tandem with the financial savings. A major challenge, thus, is to convert unproductive physical savings into financial savings. This is also necessary for banks as they face several challenges in realising the full potential of deposit mobilisation in a growing economy. Bank deposits have become relatively less attractive to the households in view of the availability of a wide menu of alternative saving instruments offering scope of higher returns to savers. Furthermore, savers have also become more informed in managing risks of their portfolios through the use of specialised services offered by other financial intermediaries. This behaviour is expected to accentuate in future. In view of the shrinking share of the household sector deposits in total deposits, banks need to explore ways of broadening the depositor base as also provide improved services for retaining their clientele. It is, therefore, necessary for banks to seek for new sources of deposits. There is an enormous potential in rural and semi-urban areas and banks need to tap these sources. This, however, would require banks to offer customised products with features suitable to individual risk-return requirements as well as economise on their operational costs through diversification of activities. In this context, the recent policy emphasis on financial inclusion offers greater scope for banks to widen their deposit base. Furthermore, the changing demographics and employment patterns have also thrown opportunities for banks to expand their role by bringing the depositors with younger age profile within their fold. The substitution of funds from banks to non-bank instruments and *vice-versa* has been observed in the recent past and such trends may also occur in future. This would call for greater care in the assessment and interpretation of monetary aggregates.

V MANAGING CAPITAL AND RISK

5.1 Banking institutions are exposed to a diverse set of market and non-market risks. Banking, by its very nature, is an attempt to manage multiple and seemingly opposing needs, and that makes banks 'special'. Banks stand ready to provide liquidity on demand to depositors through chequeing accounts and extend credit as well as liquidity to their borrowers through lines of credit (Kashyap, Rajan and Stein, 1999). In the process, banks face several risks for which they need to take protective measures to ensure that they remain solvent and liquid. Thus, robust risk management and strong capital position are critical in ensuring that individual banking organisations operate in a safe and sound manner, which, in turn, is crucial for maintaining the stability of the financial system and fostering economic growth.

5.2 The major goals of financial sector policies are to maintain financial stability and also enhance access to financial services. These two goals are mostly mutually reinforcing. Through the financial stability goal, policymakers aim at protecting savers, investors and other economic agents from economic disruptions, which help in ensuring access to financial services, including unprivileged sections of society. Ensuring financial stability calls for greater soundness of the system and more effective risk management practices. Understanding the risks in the system and managing them, and earmarking sufficient amounts of capital, increases the stability of the system. More generally, strong capital helps banks absorb unexpected shocks and reduces the moral hazard associated with deposit insurance.

5.3 Traditionally, banks held capital as a buffer against insolvency, and liquid assets – cash and securities – to guard against unexpected withdrawals by depositors or drawdowns by borrowers (Saidenberg and Strahan, 1999). Risk is the potential of both expected and unexpected events having an adverse impact on banks' capital or earnings. Capital adequacy ratios are intended to ensure that banks maintain a minimum amount of own funds in relation to the risks they face so that banks are able to absorb unexpected losses. Thus, the expected losses are covered by a combination of product pricing, business revenue and loss provisions, and the unexpected losses by capital funds of the bank. Capital ensures that unanticipated market situation or deterioration in borrower credit quality does not present any serious challenge to bank's solvency. Capital does not, however, seek to ensure that banks would be immune from failure[1].

5.4 Theories suggest that banks' choices of portfolio risk and capital are interrelated. A sound risk management process is the basis for an effective assessment of the adequacy of a bank's capital. For depository institutions, it is, therefore, necessary that the economic substance of risk exposures is fully recognised and incorporated into the system. The estimates of risk must translate into robust capital assessments.

5.5 Capital and risk management are of interest not only to supervisors, but also to all stakeholders, including bank owners, employees as well as depositors and lenders. The owners are inherently interested in the continued existence of the bank as they expect a reasonable return on their investments and wish to avoid capital losses. Furthermore, the bank's employees, depositors and lenders also have a stake in its survival. This is because, in case of bank failure, the bank is unable to repay all of its depositors and lenders in full and on time and there is a possibility that these parties may have to bear losses. Similarly, the credibility of bank employees is questioned in case of bank failure. The individual interests of these groups are not necessarily congruent; however, all parties are interested in ensuring that the institution does not take on risk positions that might endanger its continued existence. The traditional objective of capital regulation has been to reduce bank failures and to promote banking stability. Another important objective has been to reduce losses to depositors' and the deposit insurer when a bank fails. Regulators are particularly sensitive to deposit insurance losses because the Government not only often provides insurance through formal programmes, but also, in the absence of *de jure* coverage, acts as the insurer of last resort.

[1] Working Group on Capital Adequacy, BIS, 2000, page 2.

5.6 Even though regulators all over the world have been concerned about bank capital, there were no formal regulations that specified minimum capital ratios in the pre-Basel phase, *i.e.,* before the signing of the Basel Capital Accord in 1988. At the beginning of the 1980s, regulators became increasingly dissatisfied with many banks' capital ratios, especially those of the larger banking organisations and bank holding companies. As a result, regulators in the US specified minimum capital-to-asset ratios for all banks under their jurisdiction in 1981; the remaining banks were required to raise their capital-to-asset ratios; and were brought under numerical standards by 1983 (Wall, 1989). The banking industry in the US increasingly raised its capital ratios in the years subsequent to the adoption of the 1981 guidelines. However, the simplistic use of capital-to-total assets ratio as a measure of risk was called into question as banks adjusted their portfolios away from less risky and towards riskier assets. During the 1980s, however, banks in the US and western Europe reduced their investment in high liquidity, low-return assets and increased their exposure to potentially risky off-balance sheet transactions. Thus, the capital-to-total assets ratios that might have been adequate in the early 1980s lost their importance later in the decade. As a consequence, several countries adopted the risk-based capital standards that were popularised during this period under the aegis of the BIS.

5.7 The signing of the Basel Accord by 12 countries (all G-10 countries *plus* Luxembourg and Switzerland) in July 1988 was a landmark in the area of capital regulation. The Basel Accord, 1988 was designed to establish minimum levels of capital for internationally active banks. Its simplicity encouraged over 100 countries across the world not only to adopt the framework, but also apply it across the entire banking segment without restricting it to the internationally active banks. However, developments during the 1990s reduced the effectiveness of the 1988 Basel Capital Accord. Significant advances in technology and financial product innovations reshaped the role played by banks in the credit process. Core institutions started to move away from traditional buy-and-hold strategies to an originate-to-distribute or market-based model.

5.8 The worldwide trend towards deregulation of the financial sectors added to the widespread banking problems of many countries. Furthermore, with the increasing globalisation of the financial systems, concerns about bank soundness assumed heightened importance for international financial stability in general, and banking sector stability in particular (BIS, 2000). Hence, banking organisations' capital ratios became the focus of regulatory and supervisory attention. Recent market events have also highlighted emerging new risks for the banking system, which have created some intricate risk management challenges. As banks have extended their range of activities from basic lending to holding securities, trading complex instruments, providing liquidity facilities, engaging in off-balance sheet transactions, and conducting other financial activities, and as they have involved themselves in new markets, the risk management challenges have multiplied. As a result, bank supervisors are also taking keen interest in promoting strong risk management practices within banking organisations. At the heart of the contemporary banking supervision is an assessment of the quality of banks' procedures for evaluating, monitoring, and managing risk. Supervisors have also started to evaluate banks' internal models for determining economic capital which helps banking organisations link risk to capital as also to compare risks and returns across diverse business lines and locations.

5.9 In line with the international best practices, India has also been strengthening capital adequacy framework and risk management practices of banks. These, however, have varied over different banking segments, depending on their size and complexity. Basel I norms for scheduled commercial banks, which constitute the largest segment of the banking system, were introduced in 1992. These norms, subsequently, were also applied to urban co-operative banks. Internationally active domestic banks and foreign banks have already moved over to Basel II tailored to country-specific conditions, while other scheduled commercial banks are in the process of moving towards adoption of Basel II. India has put in place a comprehensive risk management system to take care of credit risk, market risk and operational risk, for enhancing financial stability.

5.10 This chapter is organised in seven sections. The introductory section is followed by a section on the relationship between risk and capital in Section II. Section III focuses on the international convergence of capital measurement and capital standards. Section IV delineates several issues relating to implementation of Basel II framework, including its benefits, limitations, its likely impact, challenges in implementation as well as the progress of its implementation in major countries. The policy developments in the area of managing capital and risk in the Indian context are discussed briefly in Section V. Besides, this section also includes the progress in implementation of Basel II risk management

practices, asset liability management and corporate governance in the Indian context. An analysis as to how banks managed capital in the post-reform period and an assessment of capital requirements in each of the next five years (2007-08 to 2011-12), with special focus on public sector banks, are also presented in this section. Section VI sets out the issues of relevance and challenges for the future. Section VII concludes the chapter.

II. RISK AND CAPITAL

5.11 The risks associated with providing banking services differ by the type of service rendered. Risk is the danger of an adverse deviation in the actual result from an expected result. This interpretation of risk can be expressed as a probability distribution, with future results fluctuating around an expected level. The actual risk to the bank thus consists of the possibility that the result will deviate negatively from the expected value due to random fluctuations. Risk is inherent in banking business. Banks that run on the principle of avoiding risks cannot meet the legitimate credit requirements of the economy. On the other hand, a bank that takes excessive risks is likely to run into difficulty. Credit risk is the most common risk in banking and possibly the most important in terms of potential losses. The default of a small number of key customers could generate very large losses and in an extreme case could lead to a bank becoming insolvent. This risk relates to the possibility that loans will not be paid or that investments will deteriorate in quality or go into default with consequent loss to the bank. Credit risk is not confined to the risk that borrowers are unable to pay; it also includes the risk of payments of the bills being delayed beyond the maturity time, which can also cause problems for the bank. Changes in the banking industry and financial markets have increased the complexity of banking risks faced by the banking institutions. Therefore, apart from some traditional risks, banks have also come to face several new risks (Table 5.1).

5.12 Having identified the risks, the management of risk in a financial institution consists of three elements - (i) the accurate measurement and monitoring of risk; (ii) controlling and pricing exposures; and (iii) the holding of adequate capital and reserves to meet unexpected losses. The trend in supervisory oversight in recent years has been to work on each of these aspects.

5.13 The definition of a suitable risk appetite is a basic operational pre-requisite for the bank to set consistent risk limits. Risk appetite is defined as the bank's willingness to take on financial risks as quantified by the appropriate indicators *(i.e.,* as a measure of the bank's risk-seeking behavior). Based on the defined risk appetite, an overview of the bank's actual risk structure can provide a starting point for defining its target risk structure. The bank's actual risk structure might include the current relative significance of various risk types at the overall bank level (credit risk, market risks in the trading book, interest rate risk in the banking book, *etc*.) and the distribution of risk concentrations among individual risk types. After assessing the bank's risk position, the next important step is to ensure that enough capital is available to absorb losses, should risk/s materialise.

5.14 Capital is the rarest and most expensive of a bank's resources and is directly and immediately available to cover losses. Insofar as a banking company is concerned, capital serves several purposes. It (i) is a permanent source of funding support for the bank's operations; (ii) absorbs losses and changes in asset values and thereby helps in maintaining solvency; (iii) encourages depositors' confidence; (iv) encourages shareholders' interest in governance of the bank; (v) provides protection to creditors in the event of liquidation; and (vi) protects the bank against uncertainty. The capital provided by a bank's shareholders, on the one hand, allows banks to take risk, and on the other hand, it requires that such risks provide an appropriate remuneration. It is, therefore, necessary to link capital management to value creation, while accurately and promptly monitoring cost (in terms of capital absorbed by potential losses) and benefits (in terms of net profits) generated by different types of risks.

5.15 Traditional approaches to bank regulation emphasise the positive features of capital adequacy requirements (Dewatripont and Tirole, 1994). Capital serves as a buffer against losses and hence failure. Capital adequacy requirements play a crucial role in aligning the incentives of bank owners with depositors and other creditors (Berger *et al.*, 1995 and Keeley and Furlong, 1990). On the other hand, it has been argued that capital requirements may increase risk-taking behavior. If equity capital is more expensive to raise than deposits, then an increase in risk-based capital requirements tends to reduce banks' willingness to screen and lend (Thakor, 1996). It has also been found that raising capital requirements forces banks to supply fewer deposits, which reduces the liquidity-providing role of banks (Gorton and Winton, 2000).

Table 5.1: Types of Risks Faced by Banks

Types of Risks	Definition
Credit Risk	Refers to the negative consequences associated with defaults or non-fulfillment of concluded contracts in lending operations due to deterioration in the counterparty's credit quality.
Counterparty Default Risk	Refers to the possibility that the other party in an agreement will default.
Equity Risk (Participations)	Refers to the possibility of depreciation in the banks' investments in the stock market due to adverse price movements of the equity due to company-specific factors.
Securitisation Risk	Securitisation is a process of distributing risk by aggregating debt instruments in a pool and then issuing new securities backed by the pool. There are two types of securitisations, *viz*., 'traditional' and 'synthetic' securitisations. A 'traditional' securitisation is one in which an originating bank transfers a pool of assets that it owns to an arm's length special purpose vehicle. Conversely, a 'synthetic' securitisation is one in which an originating bank transfers only the credit risk associated with the underlying pool of assets through the use of credit-linked notes or credit derivatives while retaining legal ownership of the pool of assets.
Concentration Risk	A concentration risk is any single exposure or group of exposures with the potential to produce losses large enough (relative to a bank's capital, total assets, or overall risk level) to threaten a bank's health or ability to maintain its core operations.
Market Risk	Market risk generally refers to risks which result from price changes in the money and capital markets. Market risk also results from sensitivity to foreign exchange fluctuations due to open foreign exchange positions and (in the broadest sense) open term positions.
Interest Rate Risk (IRR)	Interest rate risk (IRR) is defined as the change in a bank's portfolio value due to interest rate fluctuations. The IRR management system is concerned with measurement and control of risk exposures, both in trading book (*i.e*., assets that are regularly traded and are liquid in nature) and in banking book (*i.e.*, assets that are usually held till maturity and rarely traded). IRR can be classified in following four categories: repricing risk (*i.e.*, fluctuations in interest rate levels that have differing impacts on bank assets and liabilities), yield curve risk (*i.e.*, changes in portfolio values caused by unanticipated shifts in the slope and shape of yield curve), basis risk (*i.e.*, imperfect correlation between index rates across different interest rate markets for similar maturities) and optionality (*i.e.*, risks arising from interest rate options embedded in a bank asset, liabilities and off-balance-sheet positions).
Equity Price Risk	This risk arises due to fluctuations in market prices of equity due to general market-related factors.
Foreign Exchange Risk	This risk arises due to fluctuations in exchange rates.
Operational Risk	The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events is called the operational risk. This definition includes legal risk, but excludes strategic and reputational risk.
Compliance/Legal Risk	Compliance/Legal risk includes, but is not limited to, exposure to fines, penalties or punitive damages resulting from supervisory actions, as well as private settlements. Legal/compliance risk arises from an institution's failure to enact appropriate policies, procedures, or controls to ensure it conforms to laws, regulations, contractual arrangements, and other legally binding agreements and requirements.
Documentation Risk	The unpredictability and uncertainty arising out of improper or insufficient documentation which gives rise to ambiguity regarding the characteristics of the financial contract is referred to as documentation risk.
Liquidity Risk	Liquidity risk arise from a bank's inability to meet its obligations when they come due, and refers to situations in which a party is willing but unable to find counterparty to trade an asset.
Term Liquidity Risk	This risk arises due to an unexpected prolongation of the capital commitment period in lending transactions (unexpected delays in repayments).
Withdrawal/Call Risk	The risk that more credit lines will be drawn or more deposits withdrawn than expected is referred to as withdrawal or call risk. This brings about the risk that the bank will no longer be able to meet its payment obligations without constraints.
Structural Liquidity Risk	This risk arises when the necessary funding transactions cannot be carried out (or can be carried only on less favourable terms). This risk is sometimes also called funding liquidity risk.
Contingent Liquidity Risk	Contingent liquidity risk is the risk associated with finding additional funds or replacing maturing liabilities under potential, future stressed market conditions.
Market Liquidity Risk	This risk arises when positions cannot be sold within a desired time period or can be sold only at a discount (market impact). This is especially the case with securities/derivatives in illiquid markets, or when a bank holds such large positions that they cannot be sold easily. These market liquidity risks can be accounted for by extending the holding period in risk measurements (*e.g*. the holding period for VaR) or by applying expected values derived from experience.
Other Risks	
Strategic Risk	Strategic risk refers to negative effects on capital and earnings due to business policy decisions, changes in the economic environment, deficient or insufficient implementation of decisions, or a failure to adapt to changes in the economic environment.
Reputation Risk	Reputation risk refers to the potential adverse effects which can arise from bank's reputation deviating negatively from its expected level. A bank's reputation refers to its image in the eyes of the interested public (investors/lenders, employees, customers, *etc*.) with regard to competence, integrity and reliability.
Capital Risk	Capital risk results from an imbalanced internal capital structure in relation to the nature and size of the bank, or from difficulties associated with raising additional risk coverage capital quickly, if necessary.
Earnings Risk	Earnings risk arises due to the inadequate diversification of a bank's earnings structure or its inability to attain a sufficient and lasting level of profitability.
Outsourcing Risk	While there are many ways to categorise outsourcing risk, four of the most convenient are operational disruption risk, data risk, quality risk and reputation risk.

5.16 Capital that needs to be maintained should be consistent with the risk profile and operating environment. In pursuing this objective, banks need to put in place robust methodology for linking risk to capital such that capital is adequate given its risk profile. The risk management is required to establish the amount and type of risks that the bank is willing to take, collect enough capital resources to cover such risks and allocate capital to the business units that are in a position to produce the desired profit flow. This process does not occur once and for all, but requires a continuous adjustment. More specifically, the business areas that cannot reach the profitability target are required to be analysed, restructured and eventually abandoned. Specific amounts of a bank's capital can be explicitly allocated to its various business lines (or to its business units), depending upon the bank's strategic decisions. Moreover, the allocations can vary over time, for example, within a business cycle. They can be increased or decreased as business conditions in a particular area improve.

5.17 Capital management is concerned mainly with defining the optimal amount of capital the bank should hold (economic capital) and the optimal regulatory capital mix. Thus, the capital of an individual bank can be viewed as a mix of regulatory capital and economic capital (Box V.1). Both regulatory and economic capital are expected to cover unexpected losses resulting from banks' business operations.

Box V.1
Economic Capital *versus* Regulatory Capital

Both regulatory and economic capital have to do with bank's financial staying power; Economic and regulatory capital are not determined by the same set of variables and also do not respond in the same manner to changes in the common variables that affect them, such as the loans' probability of default and loss given default. Regarding the determinants of economic and regulatory capital, while economic capital (EC) depends on the intermediation margin and the cost of bank capital, the regulatory capital depends on the confidence level set by the regulator. Hence, there does not exist a direct relationship between both capital levels. Variables that affect both economic and regulatory capital such as the loans' probability of default and loss given default, have a positive impact on both capital levels for reasonable values of these variables, but when they reach certain critical values, their effect on economic capital becomes negative, increasing the gap with regulatory capital (Elizalde and Repullo, 2007).

There are various methods for determining EC. A common methodology is to base EC on the probability of (statutory) ruin, which is the probability that liabilities will exceed assets on a present-value basis at a given future valuation date, resulting in technical insolvency. EC based on the probability of ruin is determined by calculating the amount of additional assets needed to reduce the probability of ruin to a target specified by management. When setting this target, management takes several factors into consideration that relate primarily to the solvency concerns of policyholders.

The variables that only affect economic capital, such as the intermediation margin and the cost of capital, can account for large deviations from regulatory capital. The relative position of economic and regulatory capital is mainly determined by the cost of bank capital: economic capital is higher (lower) than regulatory capital when the cost of capital is low (high) (Elizalde and Repullo, 2007).

To conclude, the two concepts reflect the needs of different primary stakeholders. For economic capital, the primary stakeholders are the bank's shareholders, and the objective is the maximisation of their wealth. For regulatory capital, the primary stakeholders are the bank's depositors, and the objective is to minimise the possibility of loss (Allen, 2006). With the regulatory tendency in recent years to come closer to credit risk modelling and to allow banks to develop their own models for determining the amount of regulatory capital to hold, comparing the current regulatory and economic capital is becoming an insightful exercise for the regulatory decisions of the future (Zhu, 2007).

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Whereas regulatory capital is held compulsorily as a part of adherence to prudential regulations as per the national supervisor's directions, economic capital is held beyond the minimum required level at banks' own volition. Economic capital is defined by bank management for internal business purposes, without regard to the external risks the bank's performance poses on the banking system or broader economy. Moreover, the amount of economic capital held, its form and the areas of a bank's business that it supports, could vary from bank to bank. In contrast, regulatory capital requirements must set standards for solvency that support the safety and soundness of the overall banking system or broader economy. Though both types of capital differ in scope and substance, they are not mutually exclusive and are non-additive. Regulatory capital follows standardised definitions whereas economic capital is derived from bank-specific methodologies. Moreover, given the amount of capital that is necessary to tackle risks (economic capital) and to comply with the supervisors' requirements (regulatory capital), the goal of value creation can be pursued also by optimising the composition of the capital collected by the bank so as to minimise its average unit cost. For this purpose, in addition to the 'core' shareholders' capital, all the types of innovative and hybrid capital instruments can be used (for instance, preference shares, perpetual subordinated loans, contingent capital) that are available in the financial markets.

III. BASEL NORMS ON CAPITAL ADEQUACY

5.18 Internationally, there were no explicit capital adequacy standards before the introduction of Basel I norms in 1988. The most common approach was to lay down minimum capital requirements for banks in the respective banking legislations and determine the relative strength of capital position of a bank by ratios such as debt-equity ratio, or its other variants for measuring the level of leverage. Though capital regulation in banking existed even before the Basel Accord of 1988, there were vast variations in the method and timing of its adoption in different countries. In the pre-Basel phase, the use of capital ratios to establish minimum regulatory requirements was being tested for more than a century. In the US, between 1864 and 1950s, the supervisors did (i) try to make use of a variety of capital adequacy measures such as static minimum capital requirements based on the population of each bank's service area, ratios of capital-to-total deposits and capital-to-total assets; (ii) adjust assets for risk; and (iii) create capital-to-risk-assets ratios, but none was universally accepted at that time. Even the banking sector was in favour of a more subjective system where the regulators could decide which capital requirements were suited for a particular bank as a function of its risk profile (Laurent, 2006).

5.19 Early attempts to evolve a new financial architecture can be traced to the collapse of Bretton Woods system coupled with oil shocks of 1973-74. The introduction of flexible exchange rates, divergence of interest and inflation rates, emergence of new technology oriented companies which resulted in collapse of some of the traditional 'brick and mortar companies' led to many institutional failures. This in turn, led to the demand for Government intervention and new financial architecture (Kapstein, 2006). The G-10 central bankers met in June 1974, but failed to evolve a consensus. The US argued for an explicit signalling of lender of the last resort facility, while the Germans were on the other side citing lack of mandate and the moral hazard problem. However, the failure of the talks led to the exclusion of many small banks from the inter-bank market which resulted in strong political pressure on the central bankers to meet again in September 1974. In the meeting, concern was expressed about the inadequate supervision of international banking and an assurance was given that the means for the provision of temporary liquidity be made available, which could be used as and when necessary. In the autumn of 1974, the Bank of England began to conceptualise the formation of a G-10 group of bank supervisors leading to the formation of the Standing Committee on Banking Regulation and Supervisory Practices, or the Basel Committee in December 1974. The initial mandate of the Committee was for sharing of and application of each others' knowledge, rather than any comprehensive attempt to harmonise cross-country supervision. Nevertheless, it led to an unimaginable degree of regulatory harmonisation later.

5.20 The approach of regulation prescribed by the Committee focussed on home country control with no institution escaping supervision instead of multilateral surveillance of the supervisory arrangements. As a first step towards home country control, the Basel Committee in 1978 recommended that the use of consolidated financial statement for international banking supervision. While consolidated banking statements were a norm in the US and a few other countries, these were not so widespread in Europe. For example, in Germany, strict limits were placed on the ability of its supervisors to collect information about foreign activities of their banks. The emergence

of macroeconomic weakness, more bank failures and diminishing bank capital triggered a regulatory response in 1981 when, for the first time, the federal banking agencies in the US introduced explicit numerical regulatory capital requirements. The standards adopted employed a leverage ratio of primary capital (which consisted mainly of equity and loan loss reserves) to average total assets. However, each regulator had a different view as to what exactly constituted bank capital. The debt crisis of August 1982 led to injection of liquidity and left a corresponding demand of institution of minimum capital standards. The inadequate capitalisation of Japanese banks and differing banking structures (universal banks of Germany *vis-à-vis* narrow banks of US) and varying risk profile of individual banks made agreement on capital standards difficult.

5.21 Over the next few years, regulators worked to converge upon a uniform measure. The Congress in the US passed legislations in 1983, directing the federal banking agencies to issue regulations addressing capital adequacy. The legislation provided the impetus for a common definition of regulatory capital and final uniform capital requirements in 1985. By 1986, regulators in the US were concerned that the primary capital ratio failed to differentiate among risks and did not provide an accurate measure of the risk exposures associated with innovative and expanding banking activities, most notably off-balance-sheet activities at larger institutions.

5.22 Regulators in the US began studying the risk-based capital frameworks of other countries – France, the UK and West Germany had implemented risk-based capital standards in 1979, 1980 and 1985, respectively. The agencies also revisited the earlier studies of risk-based capital ratios. A proposal by the Federal Reserve Bank of New York, for example, assigned asset categories based on credit risk, interest rate risk and liquidity risk factors. The regulators agreed that the definition of capital adequacy needed to be better tailored to bank risk-taking in order to address two major trends in the banking industry. First, banks were moving away from safer, but lower yielding, liquid assets. At the same time, they were increasing their off-balance-sheet activities, whose risks were not accounted for by the then capital ratios. The regulators wanted a new 'risk asset ratio' to serve as a supplemental adjusted capital ratio to be used in tandem with existing ratios of capital-to-total-assets, on the belief that this would allow the capital framework to explicitly and systematically respond to individual banking organisations' risk profiles and account for a wider range of risky practices. However, leading the initiative in 1987, the US joined the UK in announcing a bilateral agreement on capital adequacy, soon to be joined by Japan (buoyed by a booming stock market in raising capital). Subsequently in December 1987 'international convergence of capital measures and capital standards', *i.e.*, Basel Accord (now Basel I) was achieved. In July 1988, the Basel I Capital Accord was created.

5.23 The Basel Committee on Banking Supervision (BCBS), thus, had been making efforts over several years to secure international convergence of supervisory regulations governing the capital adequacy of international banks. The Committee after a consultative process, whereby the proposals were circulated not only to the central bank Governors of G-10 countries, but also to the supervisory authorities worldwide, finalised the Basel Capital Accord in 1988 (now popularly known as Basel I). The Committee's work on regulatory convergence had two fundamental objectives. One, the framework should serve to strengthen the soundness and stability of the international banking system. Two, the framework should be fair and have a high degree of consistency in its application to banks in different countries with a view to diminishing an existing source of competitive inequality among international banks.

5.24 Three main components of the Basel I framework were constituents of capital, the risk weighting system, and the target ratio. The central focus of this framework was credit risk and, as a further aspect of credit risk, country transfer risk. Capital, for supervisory purposes was defined in two tiers. At least 50 per cent of a bank's capital base was to consist of core elements comprising equity capital and published reserves from post-tax retained earnings (Tier 1). The other elements of capital (supplementary capital) (Tier 2) were allowed up to an amount equal to that of the core capital. These supplementary capital elements and the particular conditions attaching to their inclusion in the capital base were prescribed in detail. Tier 2 or supplementary capital comprised unpublished or hidden reserves, revaluation reserves, general provisions/general loan loss reserves, hybrid debt capital instruments, and subordinated term debt.

5.25 The Committee recommended a risk-weighted assets ratio in which capital was related to different categories of asset or off-balance-sheet exposure, weighted according to broad categories of relative riskiness, as the preferred method for assessing the capital adequacy of banks - other

methods of capital measurement were considered supplementary to the risk-weight approach. The risk weighted approach was preferred over a simple gearing ratio approach because (i) it provided a fairer basis for making international comparisons among banking systems whose structures might differ; (ii) it allowed off-balance-sheet exposures to be incorporated more easily into the measure; and (iii) it did not deter banks from holding liquid or other assets which carried low risk. There were inevitably some broad-brush judgements in deciding which weight should apply to different types of asset and the framework of weights was kept as simple as possible with only five weights being used for on balance-sheet items, *i.e.,* 0, 10, 20, 50 and 100 per cent. Government bonds of the countries that were members of the Organisation for Economic Cooperation and Development (OECD) (which includes all members of the Basel Committee) were assigned a zero risk weight, all short-term inter-bank loans and all long-term inter-bank loans to banks headquartered in OECD countries a 20 per cent risk weight, home mortgages a 50 per cent risk weight, and most other loans a 100 per cent risk weight. The capital adequacy ratio was prescribed at eight per cent.

5.26 Basel I originally focused on credit risk, a major source of risk for most banks. Banks, however, developed new types of financial transactions that did not fit well into the risk weights and credit conversion factors in the laid down standards. For instance, there was a significant growth in securitisation activity, which banks engaged in partly as regulatory arbitrage opportunities. In order to respond to emerging risks, the Basel Committee members in 1996 adopted the Market Risk Amendment, which required capital for market risk exposures arising from banks' trading activities. Thus, through this amendment an explicit capital cushion was provided for the price risks to which banks were exposed, particularly those arising from their trading activities. The amendment covered market risks arising from banks' open positions in foreign exchange, traded debt securities, traded equities, commodities and options. The novelty of this amendment lay in the fact that it allowed banks to use, as an alternative to the standardised measurement framework originally put forward in April 1993, their internal models to determine the required capital charge for market risk. The standard approach defined the risk charges associated with each position and specified how these charges were to be aggregated into an overall market risk capital charge. The minimum capital requirement was expressed in terms of two separately calculated charges, one applying to the '*specific risk*' of each security, whether it was a short or a long position, and the other to the interest rate risk in the portfolio (termed '*general market risk*') where long and short positions in different securities or instruments could be offset.

5.27 The major achievement of the Basel Capital Accord 1988 was the introduction of discipline through imposition of risk-based capital standards both as measure of the strength of banks and as a trigger device for supervisors' intervention under the scheme of prompt corrective action (PCA). Over the years, however, several deficiencies of the design of the Basel I framework surfaced. The Basel I capital adequacy norms were criticised for the simple 'one-size-fits-all' approach that did not adequately differentiate between assets that have different risk levels. This standard encouraged capital arbitrage through securitisation and off-balance sheet exposures. The Basel rules encouraged some banks to move high quality assets off their balance sheet, thereby reducing the average quality of bank loan portfolios. Furthermore, banks took large credit risks in the least creditworthy borrowers who had the highest expected returns in a risk-weighted class (Kupiec, 2001). The approach incorrectly assumed that risks were identical within each bucket and that the overall risk of a bank's portfolio was equal to the sum of the risks across the various buckets. But, most of the times, the risk-weight classes did not match realised losses (Flood, 2001).

5.28 Securitisation of banks' credit portfolios became a widespread phenomenon in industrialised countries. At first, banks used to sell their mortgage loans, for such loans represented accurately evaluated risks. But after the advent of e-finance, it became possible to expand this activity to other types of loans, including those made to small businesses. This type of activity also allowed banks to have a much more liquid credit-risk portfolio and, in theory, to adjust their capital ratio to an optimal economic level rather than sticking to the ratio prescribed by the Basel Committee.

5.29 Moreover, diversification of a bank's credit-risk portfolio was not taken into account in the computation of capital ratios. The aggregate risk of a bank was not equal to the sum of its individual risks – diversification through the pooling of risks could significantly reduce the overall portfolio risk of a bank. Indeed, a well-established principle of finance is that the combination in a single portfolio of assets with different risk characteristics can produce less overall risk than merely adding up the risks of the individual

assets. The Accord, however, did not take into account the benefits of portfolio diversification.

5.30 Basel I offered only a limited recognition of credit risk mitigation techniques. In addition, significant financial innovations that occurred after Basel I suggested that a bank's regulatory capital ratios might not always be useful indicators of its underlying risk profile. Financial crises of the 1990s involving international banks highlighted several additional weaknesses in the Basel standards that permitted and in some cases, even encouraged, excessive risk taking and misallocations of bank credit (White, 2000). Basel I did not explicitly address all the risks faced by banks such as liquidity risk, and operational risks that may be important sources of insolvency exposure for banks.

5.31 Despite the amendment to the original framework in 1996, the simple risk weighting approach of Basel I did not keep pace with more advanced risk measurement approaches at large banking organisations. By the late 1990s, some large banking organisations, especially in advanced countries had begun developing economic capital models, which used quantitative methods to estimate the amount of capital required to support various elements of an organisation's risks. Banks used economic capital models as tools to inform their management activities, including measuring risk-adjusted performance, setting pricing and limits on loans and other products, and allocating capital among various business lines and risks. Economic capital models measure risks by estimating the probability of potential losses over a specified period and up to a defined confidence level using historical loss data. These models make more meaningful risk measurement than the Basel I regulatory framework, which differentiates risk only to a limited extent, mostly based on asset type rather than on an asset's underlying risk characteristics.

5.32 The Basel Committee itself recognised the deficiencies in the Basel I framework. The rapid rate of innovation in financial markets and the growing complexity of financial transactions reduced the relevance of Basel I as a risk managing framework, especially for large and complex banking organisations. Various shortcomings also distorted the behaviour of banks and made it much more complicated to monitor them. With a view to addressing the shortcomings of Basel I, the BCBS introduced a new capital adequacy framework for International Convergence of Capital Measurement and Capital Standards (Basel II) in June 2004 to replace the 1988 Capital Accord by year-end 2007 (Box V.2). Basel II norms aim at aligning minimum capital requirements to banks' underlying risk profiles. The framework is also designed to create incentives for better risk measurement and management. Major features of Basel II framework are presented below.

Pillar 1: Capital Adequacy

5.33 Under Pillar 1, commercial banks are required to compute individual capital adequacy for three categories of risks (*i.e.,* credit risk, market risk and operational risk) broadly under two sets of approaches – standardised and advanced.

Capital Charge for Credit Risk

5.34 Basel II marks a break from Basel I in the case of credit risk in that the loans to similar counterparts such as private firms, sovereigns *etc.*, require different capital coverage, depending upon their riskiness as evaluated by some external rating agency, or by the bank itself. Basel II proposes a range of approaches to credit risk. The simplest methodology is the standardised approach which aligns regulatory capital requirements more closely with the key elements of banking risk by introducing a wider differentiation of risk weights and a wider recognition of credit risk mitigation techniques, while avoiding excessive complexity. In this method, risk weights are defined for certain types of credit exposures primarily on the basis of credit assessments provided by rating agencies. The default risk as reflected in the credit rating is then translated into the resulting capital requirements (Chart V.1).

5.35 The standardised approach, however, does not differentiate between expected and unexpected losses. Expected losses should be calculated as standard risk costs in the credit approval process. The actual credit risk, which refers to a 'potential surprise loss' thus only comprises the unexpected loss beyond the expected loss assumed in the calculation of standard risk costs. In order to ensure that these data can be compared and aggregated with other risks (for instance, market risks), the unexpected loss should be used as the uniform basis for risk measurement. Regardless of whether a distinction is drawn between expected and unexpected loss, the most important criterion in selecting suitable risk quantification methods is their risk orientation (*i.e.*, increased risk requires increased capital).

5.36 Under the internal rating based (IRB) approach, banks that have received supervisory approval, arrive at their own internal estimates of risk

Box V.2
Basel II Norms: Main Elements

While the Basel I framework was confined to the minimum capital requirements for banks, the Basel II accord expands this approach to include two additional areas, *viz*., the supervisory review process and increased disclosure requirements for banks. In terms of Basel II, the stability of the banking system rests on the following three pillars, which are designed to reinforce each other: (i) Pillar 1: Minimum Capital Requirements - a largely new, risk-adequate calculation of capital requirements which (for the first time) explicitly includes operational risk in addition to market and credit risk; (ii) Pillar 2: Supervisory Review Process (SRP) - the establishment of suitable risk management systems in banks and their review by the supervisory authority; and (iii) Pillar 3: Market Discipline - increased transparency due to expanded disclosure requirements for banks.

The central focus of this framework as in Basel I, continues to be credit risk. In the revised framework, the minimum regulatory capital requirements take into account not just credit risk and market risk, but also operational risk. The measures for credit risk are more complex, for market risk they are the same, while those for operational risk are new. Besides, Basel II includes certain Pillar 2 risks such as credit concentration risks and liquidity risks.

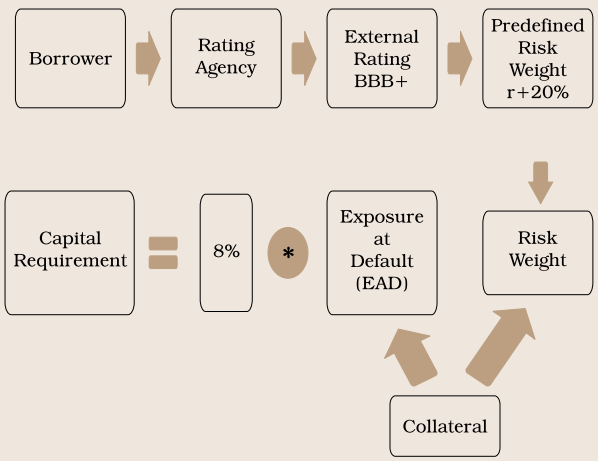
Apart from an increase in the number of risks, banks are required to achieve a more comprehensive risk management framework. While Basel I required lenders to calculate a minimum level of capital based on a single risk weight for each of the limited number of asset classes, under Basel II, the capital requirements are more risk sensitive. The credit risk weights are related directly to the credit rating of each counterparty instead of the counterparty category.

Basel II capital adequacy rules are based on a 'menu' approach that allows differences in approaches in relationship to the nature of banks and the nature of markets in which they operate (Table 1). The minimum requirements for the advanced approaches are technically more demanding and require extensive databases and more sophisticated risk management techniques. Basel II prescriptions have ushered in a transition from capital adequacy to capital efficiency which implies that banks adopt a more dynamic use of capital, in which capital will flow quickly to its most efficient use. Unlike Basel I, Basel II is quite complex as it offers choices, some of which involve application of quantitative techniques.

Basel II - Main Features

Items	Main Features
Pillar 1: Capital Adequacy	
Credit Risk 1 Simplified Standardised Approach (SSA)	Greater risk sensitivity than Basel I through more risk buckets and risk weights for sovereigns and banks based on External Credit Agency (ECA) risk scores.
Credit Risk 2 Standardised Approach (SA)	More risk buckets than SSA. Risk weights for asset classes based on ratings of external credit assessment institutions (ECAIs) or ECA scores. Enhanced credit risk mitigation available.
Credit Risk 3 Foundation Internal Ratings Based Approach (F-IRB)	Based on risk components: probability of default (PD), loss given default (LGD), exposure at default (EAD), and maturity (M). Banks can use own PD estimates and supervisory estimates for other components. Stress testing required.
Credit Risk 4 Advanced Internal Ratings Based Approach (A-IRB)	Capital requirements determined as in F-IRB. Banks can use own estimates for PD, LGD, EAD and M; subject to supervisory validation of systems. Stress testing required.
Operational Risk 1 Basic Indicator Approach	Flat rate of 15 per cent of the average gross annual income, during last three years.
Operational Risk 2 Standardised Approach	Operational risk charges for each business line, based on annual income per business line, multiplied by risk factor per business line.
Operational Risk 3 Advanced Measurement Approach	Full reliance on banks' internal risk measurement systems, subject to supervisory approval.
Pillar 2: Supervisory Review	Banks required to have a process for internal capital adequacy assessment process (ICAAP) and a strategy for maintaining capital level. Supervisors evaluate banks' internal capital adequacy systems and compliance. Higher capital adequacy levels for individual banks could be prescribed if risk profile requires. Early intervention by supervisors. Stress tests and assessment of interest rate risk and concentration risk.
Pillar 3: Market Discipline	Information to be disclosed *inter alia* includes available capital in the group, capital structure, detailed capital requirements for credit risk; breakdown of asset classification and provisioning; breakdown of portfolios according to risk buckets and risk components; credit risk mitigation (CRM) methods and exposure covered by CRM; and operational risk.

Chart V.1: Calculating Credit Risk using the Standardised Approach



components in determining the capital requirement for a given exposure. The risk components include measures of the probability of default (PD) – the probability that counterparty will default within one year, loss given default (LGD) – the amount of the loss expressed as a percentage of the amount outstanding at the time when the counterparty defaults, the exposure at default (EAD) – the credit amount outstanding at the time of default, and effective maturity (M). In some cases, banks may be required to use a supervisory value as opposed to an internal estimate for one or more of the risk components.

5.37 Under the IRB approach, banks must categorise banking-book exposures with different underlying risk characteristics into broad classes of assets, *viz.,* (a) corporate, (b) sovereign, (c) bank, (d) retail, and (e) equity. One essential pre-requisite for calculating unexpected loss is the availability of default probabilities (PDs). As it is also possible to rely on predefined supervisory values for the other risk parameters (LGD, EAD, M), the bank's internal calculation of default probabilities constitutes the central indicator in calculating a simple credit value at risk under the IRB Approach. Thus, the advanced approach for credit risk uses risk parameters determined by a bank's internal system for calculating minimum regulatory capital. In comparison with standardised approach, the IRB approach is more risk sensitive. However, such methods also increase the complexity of capital calculation.

Risk Mitigation Techniques

5.38 Historically, banks have been using various techniques like guarantees and security to support obligations of the borrowers. In recent years, credit intermediation has been vastly facilitated by the proliferation of complex risk transfer instruments, including credit derivatives and various types of asset-backed securities. One consequence is that a large number of banks shifted to 'originate-to-distribute' business models, transferring risk to other investors. In the calculation of capital requirements under Basel II, various credit risk mitigation techniques can be used in order to limit credit risk. Under the standardised approach, these include financial collateral as well as guarantees and credit derivatives. Basel II better assesses the risk inherent in arrangements using evolving technologies, such as securitisation and credit derivatives, that are used to buy and sell credit risk. Basel II also establishes benchmarks for recognising risk transfer and mitigation in securitisation and credit derivatives structures. It sets a boundary between the point at which a firm transfers risk and actually retains the risk. The Basel II framework suggests 'operational requirements' that must be met before an originating bank is able to recognise the transfer of the assets, or the risk related to them, and to exclude the assets from its risk-based capital calculations.

Capital Charge for Operational Risk

5.39 Operational risk has been defined by the BCBS 'as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events'. This definition includes legal risk, but excludes strategic and reputational risk. The most important types of operational risk involve breakdowns in internal controls and corporate governance. Such breakdowns can lead to financial losses through error, fraud, or failure to perform in a timely manner or cause the interests of the bank to be compromised in some other way, for example, by its dealers, lending officers or other staff exceeding their authority or conducting business in an unethical or risky manner. Other aspects of operational risk include major failure of information technology systems or events such as major fires or other disasters.

5.40 Two important indicators of operational risk are the size and complexity of a bank. As the number of employees, business partners, customers, branches, systems and processes at a bank increases, its risk potential also tends to rise. Other operational risk indicator is process intensity, *i.e.,*

number of lawsuits filed against a bank. In cases where business operations (for instance, the processing activities mentioned above) are outsourced, the bank cannot automatically assume that operational risks have been eliminated completely. This is because a bank's dependence on an outsourcing service provider means that risks incurred by the latter can have negative repercussions on the bank. Therefore, the content and quality of the service level agreement as well as the quality (for instance, ISO certification) and creditworthiness of the outsourcing service provider can also serve as risk indicators in this context.

5.41 Various methods can be used to assess operational risks. The Basel II framework has given guidance to three broad methods of capital calculation for operational risk – basic indicator approach (which is based on annual revenue of the financial institution), standardised approach (which is based on annual revenue of each of the broad business lines of the financial institution) and advanced measurement approaches (which are based on the internally developed risk measurement framework of the bank adhering to the standards prescribed and include methods such as internal measurement approach (IMA), loss distribution approach (LDA), scenario-based, and scorecard).

5.42 The basic indicator approach (for the calculation of minimum capital requirements) is the simplest method of quantifying operational risks. In this approach, a risk weight of 15 per cent is applied to a single indicator, specifically the average gross income (*i.e.,* the sum of net interest income and net non-interest income) over the previous three years. The advantage of applying the basic indicator approach primarily lies in its simplicity. However, there is no immediate causal relationship between bank's operational risks and its operating income. In order to come to a better assessment of the risk profile, it is advisable not to rely on the basic indicator approach alone to capture risks. For instance, a more specific calculation of a bank's risk situation can be performed by means of a systematic internal survey of realised operational risks using a loss database.

5.43 Under the standardised approach, operational risk is also calculated exclusively on the basis of the risk indicator described above. However, in this case the indicator is not calculated for the bank as a whole, but individually for specific business lines as defined by the supervisory authority (retail, corporate, trading, *etc*.). Accordingly, the standardised approach includes not only a risk weight of 15 per cent, but specific risk weights defined for each business line. This means that applying the standardised approach basically involves the same problems as applying the basic indicator approach. Advanced measurement approaches provide banks with substantial flexibility and do not prescribe specific methodologies or assumptions. However, they do specify several qualitative and quantitative standards to be met by banks before adopting these approaches. Such methods could be used to aptly reflect the bank's risk profile, but their design and implementation involve high levels of effort. The quantification models for operational risk using internal methods are currently in the developmental stage.

5.44 While Basel II is an international framework based on shared regulatory objectives, it is subject to country-specific implementation. Therefore, a country has the discretion to use multiple risk-based capital regimes depending on the banking organisation's size and complexity. Since the international accord was issued in 2004, individual countries have been implementing national rules based on the principles and detailed framework that it sets forth, and each country has used some measure of national discretion within its jurisdiction. The Basel Committee noted that as a result, regulators from different countries would need to make substantial efforts to ensure sufficient consistency in the application of the framework across jurisdictions. Furthermore, the Basel Committee emphasised that the international accord set forth only minimum requirements, which countries may choose to supplement with added measures to address such concerns as potential uncertainties about the accuracy of the capital rule's risk measurement approaches.

Pillar 2: Supervisory Review

5.45 On the one hand, Pillar 2 (Supervisory Review Process) requires banks to implement an internal process for assessing their capital adequacy in relation to their risk profiles as well as a strategy for maintaining their capital levels, *i.e.,* the Internal Capital Adequacy Assessment Process (ICAAP). On the other hand, Pillar 2 also requires the supervisory authorities to subject all banks to an evaluation process and to impose any necessary supervisory measures based on the evaluations (Box V.3).

5.46 The dynamic growth of financial markets and the increased use of complex bank products have brought about new challenges before credit institutions, which have highlighted the need for functioning systems aimed at containment and

Box V.3
Principles for the Supervisory Review Process

The Basel Committee has defined the following four basic principles for the supervisory review process.

Principle 1: Banks should have a process for assessing their overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital levels.

Principle 2: Supervisors should review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with regulatory capital ratios. Supervisors should take appropriate supervisory action if they are not satisfied with the result of this process.

Principle 3: Supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum.

Principle 4: Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored.

Essentially, these include evaluations of the banks' internal processes and strategies as well as their risk profiles, and if necessary taking prudential and other supervisory actions.

Reference:

Bank for International Settlements. 2006. *Basel II: International Convergence of Capital Measurement and Capital Standards: A Revised Framework - Comprehensive Version*, Basel Committee on Banking Supervision, June.

targeted control of each institution's risk position. Banks are required to employ suitable procedures and systems in order to ensure adequate capital in the long-term with due attention to all material risks. These procedures are collectively referred to as the ICAAP. The selection and suitability of methods depend heavily on the complexity and scale of each individual institution's business activities.

5.47 The main motive for introducing the ICAAP is to ensure a viable risk position by dealing with risks in the appropriate manner. In particular, it is important to detect, at the earliest possible, developments which may endanger the institution in order to enable the bank to take suitable countermeasures. There are two basic objectives of ICAAP. The main objective of the ICAAP is to secure the institution's risk-bearing capacity. When calculating the bank's risk bearing capacity, it is necessary to determine the extent to which a bank can afford to take certain risks. For this purpose, the bank needs to ensure that the available risk coverage capital is sufficient at all times to cover the risks taken. Secondly, the bank must review the extent to which risks are worth assuming, that is, it is necessary to analyse the opportunities arising from risk taking (evaluation of the risk and return). The ICAAP thus constitutes a comprehensive package which delivers significant benefits from a business perspective.

5.48 An essential prerequisite for analysing the risk-bearing capacity is to assess all of a bank's material risks and aggregate them to arrive at the bank's overall risk position (Box V.4). The purpose of assessing risks is to depict the significance and effects of risks taken on the bank. Banks need to implement efficient and appropriate stress testing framework and assess the impact not only of specific events, but also the impact of various scenarios. In the first step, a bank needs to use risk indicators to assess which of its risks are actually material. In the second step, the bank needs to quantify its risks, wherever possible. The results of these impact studies need to be integrated into capital planning and business strategy. Finally, the bank needs to calculate the internal capital required to cover its risks.

Pillar 3: Market Discipline

5.49 Theoretically, regulation aimed at creating and sustaining competition among banks, notably through increased transparency, is believed to play an important role in mitigating bank solvency problems. Market discipline in the banking sector can be described as private counterparty supervision that has always been the first line of regulatory defence in protecting the safety and soundness of the banking system (Greenspan, 2001). Some authors have drawn attention to market pressure as an explanation for the rapid acceptance and diffusion of the Basel capital adequacy standards (Genschel and Plümper, 1997). Their contention is that these standards have increased transparency, thereby enabling financial markets to 'punish' poorly capitalised banks and rewarding banking systems with higher capital levels. Banks with higher capital ratios may be able to access the capital market for raising resources, which, in turn, allow banks to maintain higher capital levels.

5.50 The purpose of market discipline (detailed in Pillar 3) in the revised framework is to complement

Box V.4
Assessment of Risks

The area of validation might emerge as a key challenge for banking institutions in the foreseeable future. At present, few banks possess processes that both span the range of validation efforts listed and address all elements of model uncertainty. The components of model validation can be grouped into four broad categories: (a) backtesting, or verifying that the *ex ante* estimation of expected and unexpected losses is consistent with *ex post* experience; (b) stress testing, or analysing the results of model output given various economic scenarios; (c) assessing the sensitivity of credit risk estimates to underlying parameters and assumptions; and (d) ensuring the existence of independent review and oversight of a model.

Backtesting

The methodology applied to backtesting market risk VaR models is not easily transferable to credit risk models due to the data constraints. The Market Risk Amendment requires a minimum of 250 trading days of forecasts and realised losses. A similar standard for credit risk models would require an impractical number of years of data given the models' longer time horizons.

Given the limited availability of data for out-of-sample testing, backtesting estimates of unexpected credit loss are certain to be problematic in practice. It is difficult to find a formal backtesting programme for validating estimates of credit risk – or *unexpected* loss. Where analyses of *ex ante* estimates and *ex post* experience are made, banks typically compare estimated credit risk losses to a historical series of actual credit losses captured over some years. However, the comparison of *expected* and *actual* credit losses does not address the accuracy of the model's prediction of *unexpected* losses, against which economic capital is allocated. While such independent work on backtesting is limited, some literature indicates the difficulty of ensuring that capital requirements generated using credit risk models will provide an adequately large capital buffer.

Banks employ various alternative means of validating credit risk models, including so-called 'market-based reality checks' such as peer group analysis, rate of return analysis and comparisons of market credit spreads with those implied by the bank's own pricing models. However, the assumption underlying these approaches is that prevailing market perceptions of appropriate capital levels (for peer analysis) or credit spreads (for rate of return analysis) are substantially accurate and economically well founded. If this is not so, reliance on such techniques raises questions as to the comparability and consistency of credit risk models, an issue which may be of particular importance to supervisors.

Stress Testing

Stress tests aim to overcome some of the major uncertainties in credit risk models – such as the estimation of default rates or the joint probability distribution of risk factors – by specifying particular economic scenarios and judging the adequacy of bank capital against those scenarios, regardless of the probability that such events may occur. Stress tests could cover a range of scenarios, including the performance of certain sectors during crises, or the magnitude of losses at extreme points of the credit cycle.

In theory, a robust process of stress testing could act as a complement to backtesting given the limitations inherent in current backtesting methods. However, there is no ideal framework or single component of best practice on stress testing, and industry practices vary widely. In 2004, the Committee on the Global Financial System conducted an extensive survey covering 64 banks and securities firms from 16 countries (BIS, 2005). More than 80 per cent of the stress tests reported were based on trading portfolios. The use of stress tests has expanded from the exploration of exceptional but plausible events, to encompass a range of applications. Among the major challenges are those related to stress testing credit risk, integrated stress testing and the treatment of market liquidity in stress situtations.

With respect to stressed conditions, Basel II has advanced comprehensive stress testing frameworks. The Basel II framework requires that stress scenarios capture the effects of a downturn on market and credit risks, as well as on liquidity. Such an improved firm-wide approach to risk assessment is essential for ensuring that banks have a sufficient capital buffer that will carry them through difficult periods.

Sensitivity Analysis

The practice of testing the sensitivity of model output to parameter values or to critical assumptions is also not common. In the case of certain proprietary models, some parameter (and even structural) assumptions are unknown to the user, and thus sensitivity testing and parameter modification are difficult.

According to a survey conducted by the BCBS, a minority of banks indicated they conduct sensitivity analysis on a number of factors, including: (a) Expected Default Frequency (EDF) and volatility of EDF; (b) LGD, and (c) assignment of internal rating categories (BIS, 2000). However, the depth of the analysis differed between the 54 respondent banks. Furthermore, none of the respondents attempted to quantify the degree of potential error in the estimation of the probability distribution of credit losses, though a few compared the results generated by the internal model with those from a vendor model.

Management Oversight and Reporting

The mathematical and technical aspects of validation are important. Equally important, however, is the internal environment in which a model operates. The amount of senior manager oversight, the proficiency of loan officers, the quality of internal controls and other traditional features of the credit culture will continue to play a key part in the risk management framework.

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Bank for International Settlements. 2005. *Stress Testing at Major Financial Institutions : Survey Results and Practice,* January.

the minimum capital requirements (detailed under Pillar 1) and the supervisory review process (detailed under Pillar 2). The aim is to encourage market discipline by developing a set of disclosure requirements which will allow market participants to assess key pieces of information on the scope of application, capital, risk exposures, risk assessment processes, and hence the capital adequacy of the institution. In principle, banks' disclosures should be consistent with how senior management and the board of directors assess and manage the risks of the bank.

5.51 Non-compliance with the prescribed disclosure requirements would attract a penalty, including financial penalty. However, direct additional capital requirements rarely serve as a response to non-disclosure, except in certain cases. In addition to the general intervention measures, the revised framework also anticipates a role for specific measures. Where disclosure is a qualifying criterion under Pillar 1 to obtain lower risk weights and/or to apply specific methodologies, there would be a direct sanction (not being allowed to apply the lower risk weighting or the specific methodology).

IV. ADVANTAGES, LIMITATIONS, ISSUES AND CHALLENGES OF BASEL II

5.52 The main incentives for adoption of Basel II are (a) it is more risk sensitive; (b) it recognises developments in risk measurement and risk management techniques employed in the banking sector and accommodates them within the framework; and (c) it aligns regulatory capital closer to economic capital. These elements of Basel II take the regulatory framework closer to the business models employed in several large banks. In Basel II framework, banks' capital requirements are more closely aligned with the underlying risks in the balance sheet. Basel II compliant banks can also achieve better capital efficiency as identification, measurement and management of credit, market and operational risks have a direct bearing on regulatory capital relief. Operational risk management would result in continuous review of systems and control mechanisms. Capital charge for better managed risks is lower and banks adopting risk-based pricing are able to offer a better price (interest rate) for better risks. This helps banks not only to attract better business but also to formulate a business strategy driven by efficient risk-return parameters. However, competition in the market where pricing is controlled by market might override the risk-based pricing. Risk levels enable estimation of risk appetite and capital allocation. Marketing of products thus becomes more focused/targeted.

5.53 The movement towards Basel II has prompted banks to make necessary improvement in their risk management and risk measurement systems. Basel II would improve the collection and use of data so that they could aggregate and better understand information about their risk portfolios. For instance, the framework requires fundamental improvement in the data supporting the probability of default (PD), exposure at default (EAD) and loss given default (LGD)[2] estimates that underpin economic and regulatory capital assessments over an economic cycle. This has spurred improvements in areas such as data collection and management information systems. These advances, along with the incentives to improve risk management practices, will support further innovation, and improvement in risk management and economic capital modelling. Basel II incorporates much of the latest 'technology' in the financial arena for managing risk and allocating capital to cover risk. Thus, banks would be required to adopt superior technology and information systems which aid them in better data collection, support high quality data and provide scope for detailed technical analysis. The recent financial turmoil exhibited that even such technical analysis have their limitations, such as incomplete data or assumptions that have not been tested across business cycles. Therefore, quantitative assessment of risks also needs to be supplemented by qualitative measures and sound judgement.

5.54 Basel II goes beyond merely meeting the letter of the rules. Under Pillar 2, when supervisors assess economic capital, they are expected to go beyond banks' systems. Pillar 2 of the framework provides greater scope for bankers and supervisors to engage in a dialogue, which ultimately will be one of the important benefits emanating from the implementation of Basel II.

5.55 The added transparency in Pillar 3 should also generate improved market discipline for banks, in

[2] PD, EAD and LGD are parameters used in the calculation of economic capital or regulatory capital under Basel II for a banking institution. The probability of default is the likelihood that a loan will not be repaid and will fall into default. In general EAD can be seen as an estimation of the extent to which a bank may be exposed to a counterparty in the event of, and at the time of, that counterparty's default. LGD is the fraction of EAD that will not be recovered following default.

some cases forcing them to run a better business. Indeed, market participants play a useful role by requiring banks to hold more capital than implied by minimum regulatory capital requirements - or sometimes their own economic capital models - and by demanding additional disclosures about how risks are being identified, measured, and managed. A strong understanding by the market of pillars 1 and 2 would make Pillar 3 more comprehensible and market discipline a more reliable tool for supervisors and the market.

5.56 The creation of a more risk sensitive framework for capital regulation which is one of the key objectives of Basel II is expected to provide supervisors, banks and other market participants with a measure of capital adequacy that better reflects the true financial condition of a large bank. A more risk sensitive minimum capital ratio is also intended to encourage large banks to make lending, investment, and credit risk hedging decisions based on the underlying economics of the transactions. Moreover, increasing the risk sensitivity of the minimum capital requirements is intended to give large banks stronger incentives to manage and measure their own risk. Finally, Basel II sets minimum risk-based capital requirements at the level of the individual credit exposure, and in doing so sharply differentiates in terms of quality of credit.

5.57 According to a survey published by Ernst & Young[3], processes and systems are expected to change significantly, alongwith the ways in which risks are managed. Over three-quarters of respondents believed that Basel II will change the competitive landscape for banking. Those organisations with better risk systems are expected to benefit at the expense of those which have been slower to absorb change. Eighty-five per cent of respondents believed that economic capital would guide some, if not all, pricing. Greater specialisation was also expected, due to increased use of risk transfer instruments. A majority of respondents (over 70 per cent) believe that portfolio risk management would become more active, driven by the availability of better and more timely risk information as well as the differential capital requirements resulting from Basel II. This could improve the profitability of some banks relative to others, and encourage the trend towards consolidation in the sector.

5.58 For a given amount of capital, more risk-sensitive capital requirements could improve the safety and soundness of the banking system through a number of channels – each of which more closely aligns required capital with associated risks – and provide a required level of capital more likely to absorb unexpected losses. First, holding assets with higher risk under Basel II would require banks to hold more capital relative to lower risk assets. Second, banks with higher risk credit portfolios or greater exposure to operational risk would be required to hold relatively more capital than banks with lower risk profiles. For instance, a bank with a business line more susceptible to fraud, could face relatively higher capital requirements in those areas. Third, although more risk sensitive capital requirements can help enhance safety and soundness, the level of regulatory capital must also be sufficient to account for broader risks to the economy and safety and soundness of the banking system, which will require ongoing regulatory scrutiny.

5.59 In light of recent financial market turbulence, the importance of implementing Basel II capital framework and strengthening supervision and risk management practices, and improving the robustness of valuation practices and market transparency for complex and less liquid products, have assumed greater significance. Moreover, it is essential to have robust and resilient core firms at the centre of the financial system operating on safe and sound risk management practices (Box V.5). The Basel II plays an important role in this respect by ensuring the robustness and resilience of these firms through a sound global capital adequacy framework along with other benefits including greater operational efficiencies, better capital allocation and greater shareholder value through the use of improved risk models and reporting capabilities.

Limitations of Basel II

5.60 The Basel II framework also suffers from several limitations, especially from the angle of implementation in emerging economies. Compared to Basel I, Basel II is considered to be highly complex, making its understanding and implementation a challenge to both the regulators and the regulated entities, particularly in the emerging market economies. The complexity of Basel II arises from

[3] An online survey titled 'Basel II: The Business Impact' was conducted for Ernst & Young by the Economist Intelligence Unit. The survey polled 307 Banking Executives at large banks around the world. Over 40 per cent of respondents were located in Europe, 25 per cent in North America and 24 per cent in the Asia/Pacific region.

Box V.5
Effect of Recent Financial Turmoil on Basel II

The financial turmoil that occurred in mid-2007 - widely known as the sub-prime crisis - has affected the balance sheets of some major global financial institutions and has also resulted in market liquidity crisis. This turmoil was a fallout of an exceptional credit boom and leverage in the financial system. A long period of consistent economic growth and stable financial conditions had resulted in increased risk appetite of borrowers as well as investors. Financial institutions responded by expanding the market for securitisation of credit risk and aggressively developing the originate-to-distribute model for financial intermediation. A slowdown in the US real estate market triggered a series of defaults and this snowballed into accumulated losses, especially in the case of complex structured securities.

The build-up to and unfolding of the financial turmoil took place under the Basel I capital framework as most of the countries have started implementation of Basel II framework only recently. This financial turmoil has, in fact, highlighted many of the shortcomings of the Basel I framework, including its lack of risk sensitivity and its inflexibility to rapid innovations. Basel I created perverse regulatory incentives to move exposures off the balance sheet and did not fully capture important elements of bank's risk exposure within the capital adequacy calculation.

In contrast, the Basel II framework has provision for better risk management practices by closely aligning the minimum capital requirements with the risks that banks face (Pillar 1), by strengthening supervisory review of bank practices (Pillar 2) and by encouraging improved market disclosure (Pillar 3).

Notwithstanding the improvements over the Basel I framework, the current Basel II framework still has certain deficiencies if evaluated in the light of current financial turmoil. Under the first pillar, a relook at the treatment of highly rated securitisation exposures, especially the so-called collateralised debt obligations (CDOs) of asset backed securities (ABS) is necessary. The role of this securitisation process in the current turmoil and its leverage capacity and their systemic implications have come under intense scrutiny in recent times. There is a pressing need to introduce a credit default risk charge for the trading book given the rapid growth of less liquid, credit sensitive products in banks' trading books. These products include structured credit assets and leveraged lending and the VaR-based approach is insufficient for these types of exposures and needs to be supplemented with a default risk charge. Though banks are already required to conduct stress tests of their credit portfolio under the second pillar of the Basel framework to validate the adequacy of their capital cushions, the importance of conducting scenario analyses and stress tests of their contingent credit exposures, both contractual and non-contractual, need to be reemphasised. In Pillar 3, there are opportunities to further leverage off the types of disclosures required under Basel II.

Against this backdrop, several measures have been suggested for mitigating the impact and improving the global financial system. The most noteworthy among these are the proposals made by the Financial Stability Forum (FSF)[1] and ratified in early April 2008 by the G-7 to be implemented over the next 100 days. By the mid-2008, the Basel Committee is expected to issue revised liquidity risk management guidelines and IOSCO is expected to revise its code of conduct for credit rating agencies. By end-2008 or at the latest by 2009, the BCBS is expected to revise capital requirements under Pillar 1 of Basel II (for instance, certain aspects of the securitisation framework), strengthening supervision and management of liquidity risk for banks, ensuring effective supervisory review under Pillar 2, enhancing transparency and valuation, improving the quality of credit ratings for structured products, strengthening authorities' responsiveness to risk and enhancing robust arrangements for dealing with stress in the financial system.

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[1] A forum of select senior representatives of national financial authorities including central banks, supervisory authorities and treasury departments, international financial institutions, international regulatory and supervisory groupings and committees of central bank experts.

several options available. Consequently, many of the countries that have voluntarily adopted Basel I also view these issues with considerable caution. Since the revised Framework has been designed to provide options for banks and the banking systems worldwide, the Basel Committee on Banking Supervision (BCBS) acknowledged that moving toward its adoption in the near future may not be the first priority for all non-G10 supervisory authorities in terms of what was needed to strengthen their supervision. It observed that each national supervisor was expected to consider carefully the benefits of the Basel II framework in the context of its domestic banking system when developing a timetable and approach for implementation. While it is true that the Basel II framework is more complex, at the same time, it has also been argued that this complexity is largely unavoidable mainly because the banking system and related instruments that have evolved in recent times are inherently complex in nature. The risk management system itself has become more sophisticated over the time and applying equal risk weights (as done in the Basel I accord) may not be realistic anymore. Moreover, for banks with straightforward business models and non-complex loan portfolios, the option to use the standardised approach in the Basel II framework is open, which adds very little in the way of complexity to their already existing models.

5.61 In the Basel II framework, rating agencies have been assigned a crucial role. However, rating agencies have limited penetration in many emerging countries. In the absence of reliable ratings for different assets, banking industry will not be able to fully exploit the flexibility of Basel II and most credit risks will tend to end up in the unrated 100 per cent category and as a result there will be little change in capital requirements relative to Basel I. It has also been argued that in the case of standardised approach, unrated borrowers will have a lower risk weight (100 per cent) as compared to the lowest graded borrower (150 per cent) and this may lead to moral hazard problem with lower grade borrowers preferring to remain unrated. This may also lead to adverse selection. Concerns have also been expressed about the quality of rating agencies' judgments. Even in the developed economies, the recent sub-prime crisis has highlighted the problems relating to the role of rating agencies.

5.62 The risk weights/implied correlations for different exposures under standardised or IRB approaches are based upon certain assumptions which may not be applicable in the context of emerging economies. For instance, 35 per cent risk weight for mortgage lending is based upon PD estimates and LGD of developed European/US markets and may not be adequate as the losses in secured real estate lending in countries like Taiwan, Thailand and Indonesia have at times exceeded 35 per cent. Thus, the regulators in developing countries need to independently assess whether all the assumptions of Basel II framework are applicable to their domestic markets and modify them suitably, if required.

5.63 One of the basic requirements of Basel II framework is higher capital allocation for assuming higher credit risk. In such a situation, there are some concerns that small businesses and poor segments of the society would receive no or very costly credit. This problem may prove to be serious, especially in developing countries. The regulatory and supervisory authorities in developing countries were, therefore, required to initiate other steps to ensure adequate supply of credit to these areas.

5.64 The advanced Basel II risk-modeling approaches have the potential to better align capital with risk. However, the advanced approaches themselves are not without limitations, and realising the benefits of these approaches will depend on (i) the adequacy of bank's internal processes and supervisory review surrounding the development and maintenance of models; (ii) the sufficiency of credit default and operational loss event data used as inputs to the regulatory and bank models that determine capital requirements; and (iii) regulators' attention to the appropriate level of risk-based capital. While initial estimates of the potential impact of Basel II showed some decline in minimum required risk-based capital, a considerable amount of uncertainty remains about the potential impact of Basel II on the level of regulatory capital requirements and the degree of variability in these requirements over the business cycle.

Challenges to Effective Implementation of Basel II

5.65 Apart from certain deficiencies of Basel II, its implementation presents several challenges, especially in emerging market economies. One of the major challenges is the availability of long time series data. Good and reliable data and information as also sophisticated IT resources are critical to the proper risk assessment under the Basel II framework. However, this may prove to be a major challenge in developing countries given the level of industry expertise, lack of historical data and absence of adequate technology. In view of these constraints, banks in emerging economies are forced to adopt the standardised approach. Moreover, the cost that medium to small banks may incur on acquiring the

required technology as well as training staff may prove to be enormous given their size.

5.66 Banks need to put in place sound and efficient operational risk management framework since this will be a focus under the Pillar 2 framework. The most important Pillar 2 challenge relates to acquiring and upgrading the human and technical resources necessary for the review of banks' responsibilities under Pillar 1. Other areas of concern include coordination of home and host supervisors in the cross-border implementation of Basel II; issues relating to outsourcing; common reporting templates for easy comparability; and external benchmarks to be made available by the regulator, and to be used for comparison/self-evaluation for the risk components/operational losses.

5.67 Aligning supervisory disclosures under Pillar 3 with international and domestic accounting standards has emerged as a major challenge. There are also issues relating to (i) reporting framework/ disclosures in the context of risk appetite for the stated business objectives and risk management systems in place; and (ii) providing information, on the risks and the risk management systems in place, in the public domain which could be used for comparison among banks. Market discipline is not possible if counterparties and rating agencies do not have good information about banks' risk positions and the techniques used to manage those positions.

5.68 Full implementation of Basel II would require upgradation of skills both at the level of supervisory authority and the banks. Banks would be required to use fully scalable state of the art technology, ensure enhanced information system security and develop capability to use the central database to generate any data required for risk management as well as reporting. The emphasis on improved data standards in the revised accord is not merely a regulatory capital requirement, but rather it is a foundation for risk-management practices that will strengthen the value of the banking franchise.

5.69 Data limitations is a key impediment to the design and implementation of credit risk models. Most credit instruments are not marked to market; hence, the predictive nature of a credit risk model does not derive from a statistical projection of future prices based on comprehensive historical experience. The scarcity of the data required to estimate credit risk models also stems from the infrequent nature of default events and the longer term time horizons used in measuring credit risk. Thus, in specifying model parameters, credit risk models require the use of simplifying assumptions and proxy data. The relative size of the banking book – and the potential repercussions on bank solvency if modelled credit risk estimates are inaccurate – underscores the need for a better understanding of a model's sensitivity to structural assumptions and parameter estimates.

5.70 The validation of credit risk models is also fundamentally more difficult than the backtesting of market risk models. Where market risk models typically employ a horizon of a few days, credit risk models generally rely on a timeframe of one year or more. The longer holding period, coupled with the higher target loss quantiles[4] used in credit risk models, presents problems to model-builders in assessing the accuracy of their models. A quantitative validation standard similar to that in the Market Risk Amendment would require an impractical number of years of data, spanning multiple credit cycles.

5.71 The relative size of the banking book and the length of the relevant planning horizon at most institutions are much greater than those of the trading account. Hence, errors in measuring credit risk are more likely to affect the assessment of the bank's overall soundness. Moreover, it is more likely that significant losses can accumulate unnoticed in the banking book, as they are not marked to market.

5.72 The costs associated with Basel II implementation, particularly costs related to information technology and human resources, are expected to be quite significant for both banks and supervisors. Even in the absence of Basel II, well managed financial institutions and regulatory authorities would have continued to update and improve their IT systems and risk management practices simply to keep pace with the evolving practices in the marketplace. However, Basel II has pushed banks and supervisors for development of human resource skills and IT upgradation. In this context, the challenge that banks are likely to face will have many facets, *viz*., assessing requirements, identifying and bridging the gaps, identifying talents, putting the available talents to optimum use, attracting fresh talents, retention of talents, and change management.

[4] A value which divides a set of data into equal proportion.

5.73 Though the Basel II aims to achieve common standards, its implementation also requires closer cooperation, information sharing and co-ordination of policies among supervisors. The existence of separate supervisory bodies to regulate different segments of the markets within a jurisdiction may create challenges in implementation of Basel II not only within a jurisdiction but also across jurisdictions. This is because when different market participants are regulated by separate supervisors, it is difficult to maintain comparable quality of policy formulation and vigilance. In many developing countries, only the banks are coming under the ambit of Basel II and not other financial services providers, thus creating some scope for regulatory arbitrage.

5.74 The Basel Core Principles (BCPs) for banking supervision were first devised in 1997 and revised in October 2006 to incorporate a number of sound supervisory practices in tune with the changing financial environment, particularly in the areas of risk management and disclosure norms. The Executive Board of the International Monetary Fund (IMF) indicated that premature adoption of Basel II in countries with limited capacity could inappropriately divert resources from the more urgent priorities, ultimately weakening rather than strengthening supervision. Furthermore, they felt that countries should give priority to strengthening their financial systems comprising institutions, markets and infrastructure and focus on achieving greater level of compliance with the Basel Core Principles. In the same vein, it is recognised by the BCBS that while Basel II has been designed to provide options for banks and banking systems worldwide, moving towards its adoption may not be a first priority for all supervisory authorities in terms of what is needed to strengthen their supervision.

5.75 The IMF (jointly with the World Bank), as a part of its financial sector assessment programs, have reviewed countries' compliance with the Basel Core Principles (BCP). In the course of 71 confidential assessments covering 12 advanced, 15 transition and 44 emerging economies, it was found that all advanced economies under consideration complied with the core principles regarding market risk and risk management. In contrast, 66 per cent of emerging economies and 53 per cent of transition economies did not comply with such principles. Given this level of compliance, the challenges that are likely to be faced by the emerging economies in implementing the Basel II framework will be daunting.

5.76 The Reserve Bank of India is committed to the implementation of the Basel core principles on banking supervision. Based on assessment of its own position with respect to the 1997 principles, working groups were set up to make recommendations on strengthening certain areas such as risk management system for banks, amendments to banking legislation, developing a framework for home and host country relations, and enhancing inter-agency and inter-department cooperation. The new BCPs revised in 2006 include several new regulatory issues relating to capital adequacy, risk management, consolidated supervision and lack of supervisory independence, which are the building blocks for Basel II framework. As mentioned earlier, all scheduled commercial banks in India would be implementing the Basel II norms by end-March 2009. By then, several new core principles are expected to be complied with. The Reserve Bank is currently in the process of examining the new BCPs on banking supervision for implementation.

Basel II and Pro-cyclicality

5.77 A robust regulatory and supervisory regime for banks is fundamental to ensuring financial stability and growth. This is because banks continue to be the main source of credit for most businesses and entrepreneurs. While Basel II purportedly intends to improve financial stability, it is argued that the New Basel Capital Framework through greater sensitivity of bank's capital requirement to the risk of its assets, could make bank lending more pro-cyclical, and thus could entail adverse systemic impact.

5.78 The cyclical effects of bank capital regulation have been the subject matter of discussion in literature both at theoretical and empirical levels. The debate has become more animated since 1999 when the revision of the old Accord started to take shape (BIS, 2001).The concerns arising regarding cyclical effects of bank capital regulation have primarily been two-fold. On the one side, there is a belief that since in a downturn, specific provisions and write-offs increase, this would reduce banks' capital and diminish their appetite for making new loans. A second, more generalised concern, especially under the new Accord has been that as the condition of borrowers deteriorates during an economic downturn, they will be downgraded by banks with the consequence that extra capital has to be set aside, potentially exacerbating the capital shortage.

5.79 Business cycle expansions are often supported by increases in the profitability of financial institutions and a greater willingness of these institutions to take on risks and to compete aggressively for new business. In the downward phase

of the cycle, the process can work in reverse. As profitability declines and confidence falls, financial institutions can retreat from risk taking and seek greater compensation for the risks that they are prepared to take. This is especially the case if during the contraction phase, the balance sheet of financial institutions is significantly impaired (BIS, 2002).

5.80 At the theoretical level, an explicit treatment of the impact of capital requirements on the level of economic activity has been provided by Holmstrom and Tirole (1997) within a framework that offers a rationale for applying lower solvency ratios in recessions. Their findings reveal that, in a world where agents, both in the real and financial sector may be capital constrained, market-driven solvency ratios are pro-cyclical, *i.e*., they are higher during expansions and lower during recessions. More precisely, they show that a negative shock to banks' capital negatively impacts the level of economic activity and that the lower level of investment generated by the capital crunch requires a reduction of market-determined solvency ratios. Lack of discrimination between idiosyncratic and macroeconomic shocks may have undesirable effects by negatively affecting bank managers' risk-taking incentives (Dewatripont and Tirole, 1994). Bank managers would, in fact, be punished both for idiosyncratic shocks that are under their control and for macroeconomic shocks that are outside their control, and thus the Basel standards could prove 'excessively tough on bank managers in recessions'.

5.81 The potential of Basel II to amplify the cyclicality of capital requirements is also well-recognised empirically (Danielson, *et al.*, 2001; Lowe, 2002; Ayuso, *et al.*, 2004). Empirical evidence does suggest that the introduction of more severe capital regulation may have reduced bank credit supply across several emerging economies (Chiuri *et al.,* 2001). The literature estimating the cyclicality of capital requirements under Basel II reveals that Basel II impact can be large and economically significant (Kashyap and Stein, 2004). The response of capital ratios to default risks can reduce banks' incentives to lend during a recession and worsen economic activity. In the Indian context, the empirical evidence regarding cyclicality of loan loss provisions based on data of state-owned banks for the period 1997-2002 suggested that state-owned banks, on an average, tended to postpone provisioning when faced with favourable cyclical and income conditions, until negative conditions set in (Ghosh and Nachane, 2003). Thus, capital requirements as envisioned under Basel II could increase macroeconomic instability. However, this assertion is based on risk-based capital requirements considered largely as an isolated instrument, as opposed to merely one component of regulation. The question that arises is whether pro-cyclicality is inevitable under risk-based capital standards or whether there are other features of regulation that may attenuate it (Pennacchi, 2004).

5.82 That the risk-based capital requirements are pro-cycle in nature (more capital is required in recessions because credit risk in banks' portfolios increases in cyclical downturns) was also recognised by the Basel Committee on Banking Supervision (BCBS). In a Consultative Paper issued by the BCBS in 1999, the Financial Stability Forum had raised the question whether several features of the new capital framework discussed by the BCBS could increase the cyclical fluctuations in the economy. In response, the BCBS confirmed that risk-based capital requirements were inevitably pro-cyclical, but could be addressed by different instruments. During the course of consultation, the Basel Committee maintained that various features of the risk weights of the IRB approach under Pillar 1 can be expected to mitigate its pro-cyclical impact. For example, the length of the observation period mandated for estimating PD is at least five years and that for LGD and EAD seven years, with the qualification that if the observations for any of the sources used span a longer period, then the latter should be used. Basel II requires banks to estimate long run average PD and downturn LGD, which to a great extent reduced the variability of capital requirement with respect to business cycles.The greater allowance for eligible provisions can also be expected to reduce the importance in risk-weighted assets of defaulted loans during cyclical downturns, when such loans increase as a proportion of banks' portfolios. The Committee further recommended that national supervisors could also promote the use of internal models leading to lower pro-cyclicality. Measures such as through-the-cycles rating methodologies could also 'filter-out' the imapct of business cycle on borrower rating. Supervisors could also prescribe additional capital under Pillar 2 during a business cycle expansion.

Implementation of Basel II across Countries

5.83 Implementation of the Basel II Framework continues to move forward around the globe in both Basel Committee member and non-member countries. In July 2004, the BIS conducted a survey amongst non-Basel Committee members, which included 115 jurisdictions in Africa, Asia, the Caribbean, Latin America, the Middle East and non-

BCBS Europe with the objective of identifying Basel II implementation plans and determining corresponding capacity building needs in the non-BCBS supervisory community. Out of the 107 responses received, 88 non-BCBS jurisdictions indicated their intentions to adopt Basel II. Therefore, taking into account the 13 BCBS member countries, more than 100 countries worldwide were expected to implement Basel II.

5.84 A survey of select countries reveals that different countries have followed different time schedule for implementing Basel II norms. Japan implemented Basel II norms in 2007. In many other jurisdictions, the necessary infrastructure (legislation, regulation, supervisory guidance, *etc.*) to implement the Framework is either in place or is being put in place. This will allow more countries to proceed with implementation of Basel II in 2008 and 2009. During this timeframe, a little more than 5,000 banks controlling almost 75 per cent of banking assets in 73 non-BCBS jurisdictions are expected to switch over to Basel II. One of the major drivers for moving to Basel II in non-BCBS jurisdictions seems to be the intended implementation of this framework locally by foreign controlled banks or local branches of foreign banks. China would be adopting Basel II norms from 2010.

5.85 Different countries have shown their respective preferences for different approaches. While Singapore has allowed banks to choose any approach commensurate with the bank's risk profile, most countries have prescribed a particular approach/es to be followed by banks. For Pillar 1 - minimum capital requirements - the foundation internal ratings-based (IRB) approach is envisaged to be the most used methodology for calculating capital requirements for credit risk (in terms of banking assets moving to Basel II). The (simplified) standardised approach follows closely behind the foundation IRB. As regards operational risk, the basic indicator approach is expected to be widely employed across regions. The most advanced methodologies for credit and operational risks are expected to be applied in a few cases across jurisdictions (Annex V.1 and Table 5.2).

Table 5.2: Timeline and Approaches for Implementation of Basel II-Select Countries

Country	Implementation Date	Approaches	
		Credit Risk	Operational Risk
1	2	3	4
China	2010	..	..
Hong Kong	2007-2008	SA/F-IRB/A-IRB	BIA/SA/AMA
Indonesia	2009	SA (2009) F-IRB (2010)	BIA (2008) SA/AMA (2010)
Japan	End-March 2007	F-IRB (March 2007) / A-IRB (March 2008)	BIA/SA(2007)/AMA (2008)
Republic of Korea	2008	SA /F-IRB/A-IRB	SA
Malaysia	2008	SA (2008) / F-IRB (2010) / A-IRB (2010)	SA
Philippines	July 2007	SA/F-IRB (2010) / A-IRB (2010)	BIA/SA/AMA
Singapore	January 1, 2008	Any approach commensurate with the bank's risk profile	
Thailand	End-2008	SSA/F-IRB (2009)/A-IRB (2009)	BIA/SA
USA	2008	SA/F-IRB/ A-IRB	SA/AMA
Brazil	2006-2011	..	..
European Union	2007-2008	Capital Requirements Directive (CRD) which broadly follows Basel II.	
Russia	2008 (Pillar 1) 2009 (Pillar 2 and 3)	SSA	BIA
Australia	2007-2008	F-IRB/A-IRB	AMA
New Zealand	January 2008	SA/F-IRB/A-IRB	SA/AMA

.. : Not available.
SSA : Simplified Standardised Approach.
SA : Standardised Approach.
F-IRB: Foundation Internal Ratings Based Approach.
BIA : Basic Indicator Approach.
AMA : Advanced Measurement Approach.
A-IRB: Advanced Internal Ratings Based Approach.

5.86 The implementation plans in regard to Basel II, as far as Asia-Pacific is concerned, may be broadly divided into three ranges – one, where the simplest approaches and the most advanced approaches are available at the time of first implementation (Australia, Korea, Singapore and New Zealand); second, where the simplest approaches are available initially and at least one of the most advanced approaches is available within a year or two thereafter (Hong Kong, Japan, Indonesia and Thailand); and third, where the simplest approaches are allowed initially and the date of availability of the most advanced approaches is yet to be announced or are available after more than two years (China, India, Malaysia and Philippines). Further, one might be able to link the choice of the above broad ranges to the extent of share of foreign banks in the respective banking sectors. It is observed that the banking systems where foreign banks account for a significant share in the banking assets (Singapore and Hong Kong) are reflecting a desire to adopt the advanced approaches ahead of those territories where the foreign bank share is not significant. One might also see a similar trend in respect of countries which might remain on Basel I for a longer period before migrating to Basel II (China) (Annex V.1).

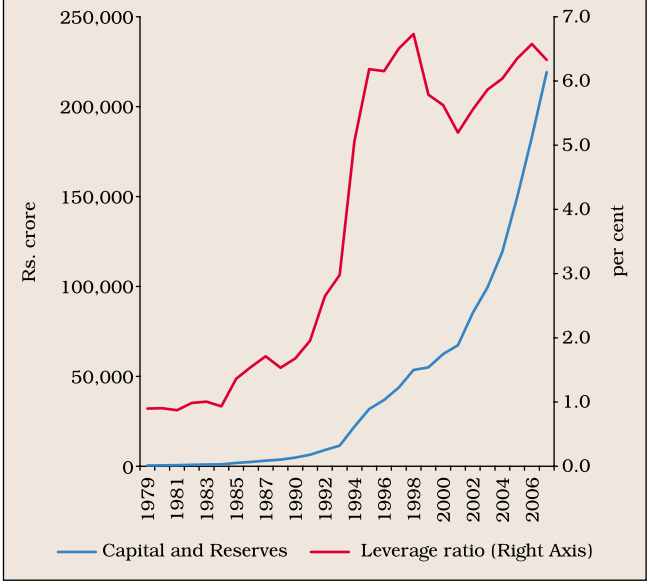
V. MANAGING CAPITAL AND RISK: INDIAN EXPERIENCE

5.87 Capital adequacy has traditionally been regarded as a sign of strength of the financial system in India. In terms of Section 17 of the Banking Regulation Act, 1949, every banking company incorporated in India is required to create a reserve fund[5]. In India, before adoption of Basel I, the only regulatory capital requirement for banks was the minimum capital requirements laid down in the Banking Regulation Act, 1949 and the respective acts governing the functioning of public sector banks.

5.88 In the pre-nationalisation phase of Indian banking, capital standards attracted some attention from the Reserve Bank. The declining ratio of capital (paid-up capital plus reserves) to total deposits from 9 per cent in 1950 to 4 per cent in 1960 for Indian banks, prompted the Reserve Bank to advise banks to aim at a ratio of 6 per cent, through compulsory transfers of 20 per cent of declared profits to reserves (Jagirdar, 1997). In the post-nationalisation period, however, the issue of capitalisation received less attention, and the capital to deposit ratio for public sector banks fell to fairly low levels (less than 2 per cent) in the early 1990s. The capital to debt ratio of the scheduled commercial banks, which was 0.9 per cent in 1979, increased 2.0 per cent by end-March 1991. The ratio increased to 3.0 per cent at end-March 1993 and sharply thereafter to 5.1 per cent in the next year before stabilising at around 6.0 per cent level thereafter (Chart V.2). The sharp increase in the ratio from the year ended March 1993 and onwards was on account of application of capital adequacy norms from the year ended March 1993.

5.89 Though the Government ownership of banks does provide greater comfort to the depositors and investors, internationally regulators do not distinguish between the public sector and private sector banks for the purpose of application of capital adequacy norms so as to ensure a level playing field between public sector and private sector banks. Moreover, there is a need to provide the right incentives to the management of public sector banks so that they can perform in a competitive environment. However, Government ownership makes an indirect favourable impact on the capital position of banks as at the same level of financial indicators, the rating agencies would perhaps accord a better rating to a public sector bank. Also, the customers in many areas still view the public

Chart V.2: Captial and Leverage Ratio for Indian Banks



[5] Recently banks have been advised to transfer a sum equivalent to not less than 25 per cent of its disclosed profits to the reserve fund every year.

sector banks as safer entities for placing their deposits and are ready to forego some higher interest on deposits offered by others.

5.90 The Statutory Liquidity Ratio (SLR), essentially conceived as a prudential safeguard, derives its legal sanction from Section 24 of the Banking Regulation Act, 1949. The definition of liquid assets included cash, gold or unencumbered approved securities, reflecting the concept of immediate mobilisation or liquefaction of the assets. The introduction of SLR was the outcome of the action taken to prevent banks from offsetting the impact of variable reserve requirements by liquidating their Government security holdings, amounting to not less than 20 per cent of the total demand and time liabilities. The Act was, therefore, amended in 1962 by insertion of a new sub-section (2A) in Section 24, requiring all banks to maintain a minimum amount of liquid assets equal to not less than 25 per cent of their demand and time liabilities in India, exclusive of the balances maintained under Section 42 of the Reserve Bank of India Act in the case of scheduled banks, and exclusive of the cash balances maintained under Section 18 of the Banking Regulation Act in the case of non-scheduled banks. Although the SLR was instituted as a prudential requirement, it became an instrument for financing the Government deficit and requirements of certain public sector entities in the 1970s and the 1980s. However, after the initiation of financial sector reforms in 1992, the SLR was gradually reduced to 25 per cent by October 1997, and has remained unchanged since then. Even though, the application of SLR reduces the free liquidity at the disposal of banks at any time for lending, it provides additional cushion to the banking system. To the extent, banks' invest in Government securities, it reduces the need for capital. This is because, unlike commercial loans, such investments carry nominal risk weight (2.5 per cent). Also, SLR investments provide cushion to banks to absorb shocks.

5.91 The Report of the Committee on the Financial System (Chairman: Shri M. Narasimham) suggested that the banks and financial institutions should achieve a minimum of 4 per cent capital adequacy ratio in relation to risk weighted assets by March 1993, of which Tier 1 capital should be not less than 2 per cent. Adopting the general approach of gradualism in harmonising regulations with the global standards, India implemented the Basel norms on capital adequacy in April 1992 spread over three years – banks with branches abroad were required to comply with minimum capital to risk weighted assets requirement of 8 per cent by end-March 1994, while other banks were required to comply by end-March 1996. It was decided in October 1998 to raise the stipulated minimum CRAR by one percentage point to 9 per cent from the year-ended March 2000. Further, India responded to the 1996 amendment to the Basel I framework, which required banks to maintain capital for market risk exposures, initially by prescribing various surrogate capital charges for these risks between 2000 and 2002. These were replaced with the capital charges as required under the Basel I framework in June 2004, which became effective from March 2005. India has gone a step further than the Basel I requirement in at least two respects. One, banks in India are required to maintain 9 per cent CRAR as against the Basel requirement of 8 per cent. Two, banks in India are required to maintain capital charge for market risk also on their 'available for sale' portfolio with effect from the year ended-March 2006, apart from 'held for trading' categories.

5.92 The main difficulty encountered in implementing Basel I was the poor financial health of all banks in India in general and public sector banks in particular. Besides, the lack of a well-developed equity capital market in India at that time and the poor fiscal position of the Central Government also made it difficult for the banks to raise enough capital to comply with the requirements of Basel I. The problem was resolved mainly through the issuance of recapitalisation bonds by the Government of India to public sector banks. The improvement in capital adequacy was not to be brought by capital infusion alone. There was need to increase internal accruals by lowering costs, improving profitability, reducing NPAs and improving recovery. The successful implementation of this strategy also required an overall change in corporate governance, work practices, attitude towards customer service and skill development. There was also need for improving the operating environment of banks in terms of debt recovery laws, development of financial markets, infrastructure facilities, accounting standards and improving competitive efficiency.

5.93 The Board for Financial Supervision (BFS) constituted in November 1994 within the Reserve Bank as one of the committees of the Central Board of Directors of the Reserve Bank played a key role in setting up capital adequacy parameters and disclosure norms in the Indian banking sector

(detailed in Chapter III and X). One of the early initiatives of the BFS was the restructuring of the system of bank inspections with focus on a modified version of the CAMEL model, *viz*., CAMELS which evaluates banks' capital adequacy, asset quality, management, earnings, liquidity and systems and control. Prompt corrective action (PCA), introduced in 2003 as a structured early intervention system, was linked to the capital adequacy ratio. A schedule of corrective actions based on three parameters, *i.e.,* capital adequacy (CRAR), asset quality (net NPAs to net advances) and profitability (return on assets) was put in place. For every trigger point, a set of mandatory and discretionary PCAs were laid down, and banks falling under the trigger zones were advised to take necessary corrective actions from time to time. Under the BFS guidance, the risk based supervision (RBS) process was introduced on a pilot basis in certain select banks during the inspection cycle 2003-04, initially in parallel with the present system of inspection under CAMELS/CALCS. The RBS process envisaged monitoring of banks by allocating supervisory resources and focusing supervisory attention, depending on the risk profile of each institution, and continuous monitoring and evaluation of the appropriateness of the risk management system in the supervised institution in relation to the riskiness of its business strategy and exposures.

Broad Contours of Basel II Implementation in India

5.94 As per normal practice with regard to all changes in the financial sector, and with a view to ensuring a smooth migration to Basel II, a consultative and participative approach was adopted for both designing and implementing Basel II framework. Accordingly, a Steering Committee was constituted comprising senior officials from 14 banks (public, private and foreign) and representatives of the Reserve Bank and the Indian Banks' Association (IBA). On the basis of the recommendations of the Steering Committee, the Reserve Bank released draft guidelines for implementation of Basel II in India on February 15, 2005. The draft guidelines were revised and released on March 20, 2007 for comments/feedback. On the basis of the feedback received, the guidelines were finalised on April 27, 2007 for implementation.

5.95 The final guidelines on Basel II, *i.e*., 'Prudential Guidelines on Capital Adequacy and Market Discipline – Implementation of the New Capital Adequacy Framework (NCAF)' by the Reserve Bank initially covered the Pillar 1 and Pillar 3 requirements under the revised framework released by the BCBS. The Pillar 2 guidelines were released recently on March 26, 2008. Accordingly, foreign banks operating in India and Indian banks having operational presence outside India have adopted the standardised approach (SA) for credit risk and basic indicator approach (BIA) for operational risk for computing their capital requirements under the revised framework with effect from March 31, 2008. All other commercial banks (excluding local area banks and regional rural banks) are required to migrate to these approaches under the revised framework in alignment with them but in any case not later than March 31, 2009. These banks shall continue to apply the standardised duration approach (SDA) for computing capital requirement for market risks under the revised framework. The standardised approach for credit risk is more risk sensitive than the Basel I framework and simpler to implement and supervise than the advanced approaches envisaged under the Basel II framework. The standardised approach could also be viewed as an interim solution to allow the regulators time to further assess the feasibility of the advanced approach. Banks are required to obtain the prior approval of the Reserve Bank to migrate to the internal rating based (IRB) approach for credit risk and the standardised approach or the advanced measurement approach (AMA) for operational risk for computing regulatory capital requirements. The Reserve Bank has advised banks to adopt a certain degree of infrastructure, which at times goes beyond the demands of the Accord. It has been made very clear that minimalistic compliance is not sufficient.

5.96 India has adopted a three-track approach for implementation of Basel II. In India, 79 commercial banks account for about 78 per cent of the total assets of the banking sector; over 3,000 co-operative banks account for 9 per cent; and 91 regional rural banks account for 3 per cent. Taking into account the size, complexity of operations, relevance to the financial sector, need to ensure greater financial inclusion and the need for having an efficient delivery mechanism, the capital adequacy norms applicable to these entities have been maintained at varying levels of stringency. On the first track, the commercial banks are required to maintain capital for both credit and market risks as per Basel II framework; the co-operative banks, on the second track, are required to maintain capital for credit risk as per Basel I framework and through surrogates for market risk; the regional rural banks, on the third track, have a

minimum capital requirement which is, however, not on par with the Basel I framework. Consequently, a major segment of systemic importance of the Indian banking sector will be on a full Basel II framework, a portion of the minor segment partly on Basel I framework, and a smaller segment on a non-Basel framework. Thus, in the post-March 2009 scenario, Basel II, Basel I and non-Basel entities would operate simultaneously in the Indian banking system. Similarly, even amongst the Basel II entities, it is likely that in due course, as and when the avanced approaches are permitted in India, banks will be implementing various combinations of the multiple options available for computing capital requirements for the three major risks. Consequently, Basel II implementation would be a part of a spectrum of frameworks within which there could be progressive enhancement of quality amongst different categories. Given the differential risk appetite across banks and their business philosophies, it is likely that banks would 'self select' their own approach which, in turn, is likely to engender a stabilising influence on the system as a whole (Reddy, 2006).

Pillar 1

5.97 Following the BCBS framework, Pillar 1 prescribes capital charge for three types of risks, *viz*., credit risk, market risk and operational risk. Under the standardised approach adopted for credit risk, the rating assigned by the eligible external credit rating agencies (CRAs), *i.e.,* those recognised by the Reserve Bank for assigning risk weights for capital adequacy purposes as per the mapping furnished in the guidelines, would largely support the measure of credit risk capital. Furthermore, for the purpose of assigning risk weights to on-balance sheet items, the entire fund based and non-fund based claims of the banks are required to be classified as per the counterparty into certain asset heads such as domestic sovereigns, foreign sovereigns, public sector entities, and corporate, among others.

5.98 For external credit rating assessment, four domestic credit rating agencies (*viz*., Credit Analysis and Research Ltd., CRISIL Ltd., Fitch India and ICRA Ltd.) and three international credit rating agencies (Fitch, Moody's and Standard and Poor's) have been accredited by the Reserve Bank (Box V.6).

5.99 The treatment of off-balance sheet exposures largely remains unchanged from the Basel I framework, with a few exceptions. The off-balance sheet items are to be divided into market related and non-market related categories. While the credit equivalent amount in the case of a non-market related off-balance sheet items would be determined by multiplying the contracted amount of that particular transaction by the relevant credit conversion factor specified in the regulation, in the case of a market related off-balance sheet item, whether held in the banking book or trading book, the credit equivalent amount is to be determined by the current exposure method.

5.100 For on-balance sheet securitisation exposures, banks are required to calculate the risk weighted amount exposure by multiplying the principal amount (after deduction of specific provisions) of exposures by the applicable risk weight as prescribed in the guidelines. For the rated off-balance sheet securitisation exposures, banks are required to calculate the credit equivalent amount by multiplying the principal amount of the exposure (after deduction of specific provisions) with a 100 per cent credit conversion factor, unless otherwise specified. If the off-balance sheet exposure is not rated, it must be deducted from capital, except an unrated eligible liquidity facility.

5.101 A wide range of credit risk mitigants for the banking book exposures and counterparty credit risk charges for OTC derivatives and repo-style transactions in the trading book, have been permitted under the revised framework provided these techniques satisfy certain principles and standards, including legal certainty, documentation and disclosure. The treatment for different types of credit risk mitigation (CRM) techniques, *viz*., collateralised transactions, on-balance sheet netting and guarantees, however, differs.

5.102 In India, the market for loan assets sale has a limited member of participants at present. The Reserve Bank had issued guidelines/directives to ARCs, permitting Indian banks and financial institutions to participate in papers issued by ARCs. The Reserve Bank has so far issued certificate of registration (CoR) to six securitisation companies/ reconstruction companies (SCs/ RCs), of which three have commenced their operations. At end-June 2007, the book value of total amount of assets acquired by SCs/RCs registered with the Reserve Bank was at Rs.28,544 crore. There is a large potential for such market to grow which would provide a very effective tool for credit risk management. Banks in the near future, driven by Basel II, would have a better risk profile of their credit portfolios. The imbalances in the portfolios would create a demand for hedging/balancing instruments,

Box V.6
State of Rating Practices in India

Credit-rating in India is relatively new, compared to the developed economies. The first rating agency, CRISIL, was set up in 1987. Credit-rating was made mandatory for commercial papers and debentures from 1991 - when ICRA, India's second credit-rating agency was established. Since then, the rating industry has grown significantly in terms of rated debt issued and subscribed, both at the corporate and retail levels (primarily fixed deposits).

The importance of credit rating agencies in India as information providers, which had been increasing, came to greater focus with the adoption of Basel II framework. The rating agencies in India face two constraints which impact their default statistics. One, they have a small base of rated entities. Two, they lack the geographical diversification benefits which the international rating entities enjoy. The processes and methodologies adopted by rating agencies in India are generally in alignment with those of the international rating agencies. Moreover, despite the above two constraining factors, their default statistics may not be out of sync with the Basel trigger ratios. The domestic rating agencies are equipped to scale up their resources, when required, to cater to a higher demand for ratings consequent upon implementation of Basel II. At present, the ratings in India are issue specific and not issuer specific. The rating agencies, therefore, are also working out methodologies for undertaking issuer ratings. It is, therefore, expected that with the implementation of Basel II in India, the proportion of rated entities is likely to increase over a period – providing the appropriate basis for risk discrimination in the system.

The rating system is required to undergo a validation process consisting of a formal set of activities, instruments and procedures for assessing the accuracy of the estimates of all material risk components and the regular operation, predictive power and overall performance of the IRB system adopted. In the validation process, the bank has to, on an ongoing, iterative basis, verify the reliability of the results generated by the rating system and its continued consistency with regulatory requirements, operational needs and developments in the reference market. Achieving these objectives requires the performance of quantitative and qualitative analyses, the breadth and depth of which is modulated in accordance with the type and scope of the portfolios examined, the overall complexity of the bank, and the reliability of the environment under analysis. The validation instruments and methods need to be periodically reviewed and adjusted in order to ensure that they remain appropriate in a context of continually evolving market variables and operating conditions. The validation process shall not consist solely of a statistical comparison of actual risk measures against the related *ex ante* estimates, but will also involve analysis of all the components of the IRB system, including operational processes, controls, documentation, IT infrastructure, as well as an assessment of their overall consistency. The validation process involves verifying compliance with the quantitative and organisational requirements for the rating systems. Specifically, this should include: (i) assessment of the model development process, with particular reference to the underlying logical structure and the methodological criteria supporting the risk parameter estimates; (ii) performance analyses of the rating system; (iii) parameter calibrations, benchmarking and stress tests verification that the rating system is actually used in the various areas of operations. The results of the validation process should be adequately documented and periodically submitted to the internal control functions and the governing bodies and should specifically address any problem areas.

Non-availability of adequate information, lack of separate departments for bond rating in different type of industries and subjective analysis of qualitative factors are some of the main problems which obstruct the smooth functioning of the working of the rating agencies in India. The objective operationalisation of subjective parameters, development of an independent database for industry-specific information, periodic organisation of training programmes and seminars by financial experts to improve the skills of rating analysts and establishment of private rating agencies to increase the competition and their efficiency which could go a long way for improving the functioning of the rating system.

which would form the core of the credit derivative market in India (Box V.7).

5.103 With regard to market risks, as banks in India are still in a nascent stage of developing internal risk management models, banks were allowed to adopt the standardised method to start with. As duration method is a more accurate method of measuring interest rate risk, it was decided to adopt standardised duration method to arrive at the capital charge.

5.104 The minimum capital requirement for market risks is expressed in terms of two separately calculated charges: (i) 'specific risk' charge for each security which is designed to protect against an adverse movement in the price of an individual security; and (ii) 'general market risk' charge towards interest rate risk in the portfolio, where long and short positions (which is not allowed in India except in derivatives) in different securities or instruments can be offset. Capital charge for specific risk (*akin to* credit

Box V.7
Credit Derivatives and Credit Risk Management

Credit derivatives are instruments that transfer a part or all of the credit risk of an obligation (or a pool of obligations), without transferring the ownership of the underlying asset(s). This is usually achieved by transferring risk on a credit reference asset. Three common forms of credit derivatives are credit default swap (CDS), total return swap (TRS) and credit linked note (CLN). The vast majority of credit derivatives take the form of the *credit default swap* (CDS), which is a contractual agreement to transfer the default risk of one or more *reference entities* from one party to the other. One party, the protection buyer, pays a periodic fee to the other party, the protection seller, during the term of the CDS. If the reference entity defaults, declares bankruptcy, or another *credit event* occurs, the protection seller is obligated to compensate the protection buyer for the loss by means of a specified *settlement* procedure. The reference entity is not a party to the contract, and it is not necessary for the buyer or seller to obtain the reference entity's consent to enter into a CDS.

Credit derivative markets are most active where credit quality measurement and rating systems are transparent and have widespread adoption as in North America and Europe. In addition, the demand for structured credit products in Asia and the Middle East, has been growing. The rapid pace of growth and widespread participation in the credit derivatives market in several countries has transformed the financial landscape. The development and growth of the market for credit derivatives has changed the way banks have been managing their credit risks, for instance by allowing the largest among them to reduce the degree of concentration of loan book exposures to single corporation or industries. Credit derivatives have significance for both banks and investors in mitigating credit risk. For instance, a commercial bank can use credit derivatives to manage the risk of its loan portfolio and an investment bank can use credit derivatives to manage the risks it incurs when underwriting securities. Investors, such as an insurance company, asset manager, or hedge fund, can use credit derivatives to align its credit risk exposure with its desired credit risk profile.

On the positive side, credit derivatives in international markets have effectively helped to enhance the efficiency of the financial system by providing to both bank and non-bank financial institutions access to a broader range of risk-return combinations and a wider pool of underlying risks and enhancing the liquidity of corporate bond markets. In addition, investors continue to effectively discriminate risk across sectors in periods of greater stress. The information revealed through credit derivative mechanism is very useful for supervision and market surveillance.

Credit derivatives, however, pose risk management challenges of their own. Credit derivatives can transform credit risk in intricate ways that may not be easy to understand. Complex credit derivatives rely on complex models, leading to model risk. Credit rating agencies interpret this complexity for investors, but their ratings can be misunderstood, creating rating agency risk. The settlement of a credit derivative contract following a default can have its own complications, creating settlement risk. However, apart from the above mentioned risk, the credit risk remains the core risk in the credit derivative segment. The use of credit derivatives instruments has typically changed the underlying borrower-lender relationship and establish new relationships between lenders that become risk shedders and the new risk takers. This new relationship has the potential for market failure due, for instance, to asymmetric information. The growth of hedge funds, particularly credit-oriented hedge funds, has accelerated market development and credit risk dispersion. While credit derivative markets increasingly facilitate the primary transfer of credit risk, secondary market liquidity is still lacking within some segments, creating the potential for market disruptions. As such, these markets are subject to increased attention from supervisors and policymakers and raise some supervisory concerns.

The role that credit derivatives played in the 2007 subprime crisis is well documented. The macroeconomic environment with a prolonged period of low interest rates, high liquidity and low volatility led to underestimation of risks by financial institutions, breakdown of credit and risk management practices in many financial institutions, and shortcomings in financial regulation and supervision. Banks, especially in the US, increasingly turned to 'originate and distribute' model in which they bundled and sold standardised mortgages as securities. Though favourable credit ratings were obtained for most of these bundled securities by carefully structuring their priority in receiving cash flow from servicing of the original portfolio, many of these were in reality subprime securities. As housing prices in the US declined, the defaults rose in several leading international banks. The kind of problems witnessed in the US sub-prime mortgage market could also surface in other types of lending such as leveraged loans and consumer credit. Furthermore, such problems may not confine to industrial countries, but could surface in other emerging economies as well where financial institutions take excessive risks in the wake of weak lending practices, and where regulatory and supervisory frameworks are found to be inadequate.

In the Indian context, although derivative instruments were introduced in July 1999 in the money/foreign exchange market in the form of forward rate agreements (FRAs) and interest rate swaps (IRS), credit derivatives are yet to be introduced. The Annual Policy Statement 2007-08 announced the introduction of credit derivatives in India in a calibrated manner. In view of certain adverse developments in the international financial markets, especially credit markets, resulting from recent financial turmoil, as also considering the level of risk management systems and possible non-adherence to the regulatory guidelines on complex products such as credit derivatives, it was widely felt that time is not opportune to introduce the credit derivatives in India for the present. As such, the Reserve Bank announced on June 19, 2008 its decision to keep in abeyance the issuance of the final guidelines on introduction of credit derivatives in India.

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risk) as well as general market risk has been stipulated at nine per cent and is to be computed on the banks' gross equity positions (Box V.8).

5.105 To begin with, banks in India are required to compute their capital requirements for operational risk using the basic indicator approach. Under this approach, banks must hold capital for operational risk equal to the average over the previous three years of a fixed percentage (15 per cent at present) of positive annual gross income. If negative gross income distorts a bank's Pillar 1 capital charge for operational risk, the Reserve Bank could consider appropriate supervisory action under Pillar 2.

5.106 The basic indicator approach does not require elaborate computation for arriving at regulatory capital (as compared to the standardised or alternative standardised approaches), or for quantification of operational risk (advanced management approach, *i.e*. AMA). Though the Reserve Bank has mandated only the basic indicator approach to begin with, banks realise that the only way to reduce regulatory capital requirement on account of operational risk is to eventually migrate to AMA. While it might be possible for individual banks to collect loss data for 'high frequency and low severity' events that are sufficient to apply statistical techniques, the same might not be possible for 'low frequency and high severity' events. Hence, the need for sharing loss data among banks is strongly felt. One of the suggestions includes setting up of a data exchange by Indian Banks' Association (IBA) on similar lines as that of the Global

Box V.8
Adoption of Capital Charge for Market Risks in India

The major focus of prudential regulation in India as in other developing countries has traditionally been on credit risk. While banks and their supervisors have grappled with non-performing loans for several decades, interest rate risk is a relatively new problem. The easing of financial repression that took place in many countries in the 1980s and the 1990s generated some experience with interest rate volatility in these countries compared with administered interest rate regime with near-zero volatility. In India, administrative restrictions on interest rates have been steadily eased beginning 1993, leading to increased interest rate volatility. Low inflation, opening up of financial markets, and falling international interest rates resulted in a significant decline in interest rates in India during 2001-04. The drop in interest rates generated substantial trading profits for banks that had a large investment portfolio. This tendency, as well as difficulties in creating sound processes for handling credit portfolios, led some banks to hold Government securities in excess of reserve requirements. However, when the interest rates began to rise beginning October 2004, some of these banks were exposed to high interest rate risk.

This concern was reinforced by the relatively large share of Government securities in assets held by Indian banks. At end-March 2001, Government bond holdings of banks in India stood at 27.2 per cent of assets as against only 4.6 per cent in the United States, a mere 0.3 per cent in the United Kingdom and at 6.9 per cent in the Euro area (Study Group on Fixed Income Markets, 2001). In addition to the cash reserve ratio, banks are required to hold a part of their deposits in the form of liquid assets, comprising mostly Government securities. The statutory liquidity ratio (SLR) has remained unchanged at 25 per cent since October 1997.

While the duration mismatches between loans and advances on the asset side and deposits on the liability side are typically not very large, the bulk of Government bonds are fixed-rate products and have a higher duration than the typical credit portfolio. Movement of interest rates, thus, normally has a bigger impact on the investment portfolio of a bank.

Internationally, banks routinely use interest rate derivatives to hedge interest rate risk. In India, while the Reserve Bank allows banks to use forward rate agreements and interest rate swaps to hedge interest rate risks, these markets are not very liquid.

Interest rate risk, thus, became an important issue for banks in India and for the Reserve Bank. In India, as an initial step towards prescribing capital charge for market risks, banks were advised to: (i) assign an additional risk weight of 2.5 per cent on the entire investment portfolio; (ii) assign a risk weight of 100 per cent on open position limits on foreign exchange and gold; and (iii) build up investment fluctuation reserve up to a minimum of five per cent of investments in HFT and AFS categories in the investment portfolio. The Monetary and Credit Policy Statement announced in April 2002 that it would be appropriate for banks to adopt the BCBS norm on capital charge for market risk. Accordingly, the Reserve Bank through consultative process issued the final guidelines in June 2004, wherein banks were required to maintain capital charge for market risks in a phased manner over a two-year period. Banks were required to maintain capital for market risks on securities included in the HFT category, open gold position limit, open foreign exchange position limit, trading positions in derivatives and derivatives entered into for hedging trading book exposures by March 31, 2005. In addition to above, banks were required to maintain capital for market risk on securities included in the AFS category by March 31, 2006.

Operational Loss Database (GOLD) set up by the British Bankers' Association.

5.107 In the backdrop of increased leveraging of technology in the banking system, business continuity planning (BCP) has become an important part of operational risk management. On April 15, 2005, the Reserve Bank instructed banks to put in place a policy on BCP (Box V.9). More recently, the Reserve Bank in its guidelines on relief measures to be extended by banks in areas affected by natural calamities, advised banks to identify alternate branches for those located in areas prone to natural calamities as a BCP strategy. Banks were also advised to formulate a full-fledged comprehensive BCP rather than having only disaster-recovery (DR) arrangements.

Pillar 2

5.108 The guidelines for Pillar 2 issued by the Reserve Bank on March 26, 2008 identify internal capital adequacy assessment process (ICAAP) and supervisory review and evaluation process (SREP) as the two important components of Pillar 2. The ICAAP comprises a bank's procedures and measures designed to ensure (a) an appropriate identification and measurement of risks; (b) an appropriate level of internal capital in relation to the bank's risk profile; and (c) application and further development of suitable risk management systems in the bank. The SREP by the Reserve Bank would consist of a review and evaluation of the bank's ICAAP, conducting an independent assessment of the bank's risk profile, and taking appropriate prudential and supervisory actions.

5.109 Under the SREP, the Reserve Bank would assess the overall capital adequacy of a bank through a comprehensive evaluation that takes into account all relevant information such as a bank's compliance with regulatory minimum capital requirements, the quality and results of a bank's ICAAP, and supervisory assessment of the bank's risk management processes and control systems. The SREP for banks is required to be periodically conducted by the Reserve Bank, along with the Annual Financial Inspection (AFI) of the banks and the off-site returns received from the banks by the Reserve Bank, in conjunction with the ICAAP document submitted every year by the banks to the Reserve Bank. Through the SREP, the Reserve

Box V.9
Operational Risk and Business Continuity Planning

Business continuity planning (BCP) is a key pre-requisite for minimising the adverse effects of one of the important areas of operational risk – business disruption and system failures. It is imperative that all banks have BCP in place to be in readiness to tackle serious business disruptions. The BCP is a holistic management and governance process supported by senior management and resourced to ensure that the necessary steps are taken to identify the impact of potential losses, maintain viable recovery strategies and plans, and ensure continuity of products/ services through exercising, rehearsal, testing, training, maintenance and assurance.

The term 'disaster recovery' usually refers to the technology recovery effort. Disaster recovery is a component of the business continuity management programme. Other than restoration of technology, business continuity also requires the presence of people who perform critical functions, and the restoration of critical infrastructure and processes to ensure minimum assured level of service.

An effective BCP should take into account the potential for wide-area disasters that impact an entire region and for the resulting loss or inaccessibility of staff. The BCP methodology includes, *inter alia*, identification of critical businesses, owned and shared resources with supporting functions (the BCP template shall include IT Continuity Plan template); structured risk assessment based on comprehensive business impact analysis; formulating recovery time objectives (RTO) based on Business Impact Analysis. It may also be periodically fine-tuned by benchmarking against industry best practices; critical and tough assumptions in terms of disaster so that the framework would be exhaustive enough to address the most stressful situations; and identification of the recovery point objective (RPO) for data loss for each of the critical systems and strategy to deal with such data loss. BCP should also consider and address interdependencies, both market-based and geographic, among financial system participants as well as infrastructure service providers. In most cases, recovery time objectives are now much shorter than they were even a few years ago.

Responsibility in respect of BCP rests with the board of directors and the top management. The board fulfils its responsibilities by approving policy on BCP, prioritising critical business functions, allocating sufficient resources, reviewing BCP test results and ensuring maintenance and periodic updation of BCP. The top management is required to annually review the adequacy of the institution's business recovery, contingency plans and the test results and put up the same to the board, including periodic testing by service providers, whenever critical operations are outsourced.

Bank would evaluate the adequacy and efficacy of the ICAAP of the banks and the capital requirements derived by them therefrom. In addition to the periodic reviews, independent external experts may also be commissioned by the Reserve Bank, if deemed necessary, to perform *ad hoc* reviews and comment on specific aspects of the ICAAP process of a bank. If considered necessary, the SREP could also involve a dialogue between the bank's top management and the Reserve Bank from time to time wherein banks would be expected to defend the ICAAP adopted by them as fully responsive to their size, level of complexity, scope and scale of operations and the resultant risk profile/exposures. The banks are generally expected to hold capital above their minimum regulatory capital levels, while taking into account all material risks. Under the SREP, the Reserve Bank would also seek to determine whether a bank's overall capital remains adequate as the underlying conditions change.

5.110 The evaluation of the effectiveness of the ICAAP by the Reserve Bank would essentially be based on the understanding of the capital management processes and strategies adopted by the banks. Generally, material increases in risk that are not otherwise mitigated should be accompanied by commensurate increases in capital. Conversely, reductions in overall capital (to a level still above regulatory minimum) may be appropriate if risks had materially declined or had been appropriately mitigated. Based on such an assessment, the Reserve Bank could consider initiating appropriate supervisory measures such as requiring a modification or enhancement of the risk management and internal control processes of a bank, a reduction in risk exposures, or any other action as deemed necessary to address the identified supervisory concerns. These measures could also include the stipulation of a bank-specific minimum CRAR that could potentially be even higher, if so warranted by the facts and circumstances, than the regulatory minimum stipulated under the Pillar 1. In cases where the Reserve Bank decides to stipulate a CRAR at a level higher than the regulatory minimum, it would explain the rationale for doing so, to the bank concerned. As and when the advanced approaches envisaged in the Basel II document are permitted to be adopted in India, the SREP would also assess the ongoing compliance by the banks with the eligibility criteria for adopting the advanced approaches.

5.111 The Basel II framework is applicable to all commercial banks (except the local area banks and the regional rural banks) both at the solo level (global position) and at the consolidated level. Accordingly, the ICAAP is required to be prepared, on a solo basis, at every tier for each banking entity within the banking group, as also at the level of the consolidated bank (*i.e.*, a group of entities where the licensed bank is the controlling entity). This requirement would also apply to foreign banks in India and their ICAAP is required to cover their Indian operations only. The ultimate responsibility for designing and implementation of the ICAAP lies with the bank's board of directors, and with the Chief Executive Officer in the case of foreign banks with branch presence in India. As the ICAAP is an ongoing process, a written record including, *inter alia*, the risks identified, the manner in which those risks are monitored and managed, the impact of the bank's changing risk profile on the bank's capital position, details of stress tests/scenario analysis conducted and the resultant capital requirements on the outcome of the ICAAP, is required to be periodically submitted by the banks to their board of directors, which would assess and document whether the processes relating to the ICAAP implemented by the bank successfully achieve the objectives envisaged by the board.

5.112 In terms of the Pillar 2 guidelines, the ICAAP should form an integral part of the management and decision-making culture of a bank. This integration could range from using the ICAAP to internally allocate capital to various business units, to having to play a role in the individual credit decision process and pricing of products or more general business decisions such as expansion plans and budgets. The implementation of ICAAP is required to be guided by the principle of proportionality implying that though banks are encouraged to migrate to and adopt progressively sophisticated approaches in designing their ICAAP, the Reserve Bank would expect the degree of sophistication adopted in the ICAAP regarding risk measurement and management to be commensurate with the nature, scope, scale and the degree of complexity in the bank's business operations.

Pillar 3

5.113 In order to encourage market discipline, the Reserve Bank has over the years developed a set of disclosure requirements which allow the market participants to assess the key areas of information on capital adequacy, risk exposures, risk assessment processes and key business parameters which provide a consistent and understandable disclosure framework that enhances comparability. Banks are also required to comply with the Accounting Standard

(AS I) on Disclosure of Accounting Policies issued by the Institute of Chartered Accountants of India (ICAI). In view of the Pillar 3 disclosure framework of the BCBS, the enhanced disclosures have been achieved through enlarging the scope of disclosures to be made in 'notes on accounts'.

5.114 Banks in India, including consolidated banks, are required to provide all Pillar 3 disclosures, both qualitative and quantitative, as at end-March each year along with the annual financial statements. With a view to enhancing the ease of access to the Pillar 3 disclosures, banks may make their annual disclosures both in their annual reports and their respective websites. Banks with capital funds of Rs.100 crore or more are required to make interim disclosures on the quantitative aspects, on a stand alone basis, on their respective websites at end-September each year. Qualitative disclosures that provide a general summary of a bank's risk management objectives and policies, reporting system and definitions are required to be published only on an annual basis. In recognition of the increased risk sensitivity of the revised framework and the general trend towards more frequent reporting in capital markets, all banks with capital funds of Rs.500 crore or more, and their significant bank subsidiaries, must disclose their Tier 1 capital, total capital, total required capital and Tier 1 ratio and total capital adequacy ratio, on a quarterly basis on their respective websites. The disclosure requirement under Pillar 3 came into force from the reporting period ending March 31, 2008 for those banks which have migrated to Basel II as on that date.

Measures taken for Implementation of Basel II in India

5.115 With a view to ensuring smooth transition to the revised framework and providing opportunity to streamline their systems and strategies, the Reserve Bank has adopted a consultative process for calibrated and phased implementation of Basel II. In this respect, the Reserve Bank's association with the BCBS played a very important role. Reserve Bank of India became a member of the Core Principles Liaison Group of the BCBS in 1998 and subsequently, became a member of the Core Principles Working Group on Capital. Within the Working Group, the Reserve Bank has been actively participating in the deliberations on the Basel II framework. In accordance with the developments at the BCBS, the Reserve Bank issued guidelines from time to time covering several areas of banking operations with the objective of preparing the banking system for Basel II implementations.

5.116 The implementation of Basel II has put as much demand on the resources of regulators/ supervisors of the banking sector as on the banks themselves, if not more. More specifically, the regulators/supervisors have to assume the additional responsibilities. Accordingly, the Reserve Bank had initiated a number of measures with a view to implementing Basel II. The Reserve Bank made an assessment of the preparedness of the banking system in terms of their resources, capital position, state of computerisation, state of management information system (MIS) and risk management systems to switch over to Basel II. Based on such an assessment, a roadmap for switching over to specific approaches (standardised or Advanced) in a time bound manner was planned. Banks were encouraged to adopt better corporate governance and risk management systems and hold capital above the minimum regulatory capital level depending upon their risk profiles. The Reserve Bank also engaged in a constant dialogue with the banking industry and monitored the improvement in the risk management and capital management processes on a continuous basis, as also encouraged banks to improve the qualitative and risk management skills of the staff. Apart from this, the Reserve Bank also engaged in strengthening the skills of its own staff in the regulatory and supervisory departments so as to enable them to perform their respective roles under Basel II effectively. This was done keeping in view the future requirements in development of skills in the context of implementation of advanced approaches as the supervisor will have to approve the risk measurement models used by the banks to compute the capital requirements. In order to develop human resources development, the staff of the Reserve Bank is being trained in its own training establishments and overseas. Special training programmes by the overseas training institutes in the areas of risk management have also been arranged in India. Staffs are also being regularly exposed to international conferences/seminars to keep them abreast with the latest developments and issues involved. A team of 20 officials drawn from the regulatory and supervisory departments of the Reserve Bank, known as 'Basel II – Project Team', has been constituted and the team has been meeting at frequent intervals to discuss various issues involved in the implementation of Basel II. The core objective of the team is to ensure that required capacity to evaluate the banks' readiness for implementing the advanced approaches is built up in-house in time.

5.117 The Reserve Bank has been constantly reviewing the regulatory guidelines issued with regard to the implementation of Basel II norms. In terms of the laid down schedule, foreign banks operating in India and Indian banks having presence outside India have already implemented the Basel II norms during the year ended March 2008. All other banks in India have been gearing themselves up for implementation of Basel II. By and large, in terms of operational supporting systems and additional capital requirements, the respective banks are well positioned to implement Basel II from the year ended March 2009. Some of the banks have also begun to gear up themselves for implementation of advanced approaches in due course.

5.118 With a view to ensuring smooth transition to the revised framework and providing opportunity to banks to streamline their systems and strategies, banks were advised to commence a parallel run of the revised framework with effect from April 1, 2006. During the parallel run, banks were required to apply the prudential guidelines on capital adequacy–both under Basel I framework and Basel II framework, on an ongoing basis and compute their CRAR position under both the scenarios. Banks were advised to place a copy of an analysis on their parallel run to their boards of directors and forward a copy of the same to the Reserve Bank. Further, the banks were advised that the minimum capital maintained by them under Pillar 1, shall be subjected to a prudential floor which is required to be the higher of either the minimum capital in terms of Basel II framework or the specified proportion of minimum capital in terms of the Basel I framework, during the first three years of implementation of the revised Basel II framework by the respective banks (Box V.10).

5.119 The Basel II framework offers the national supervisors discretion in several areas to enable them to adopt the framework to suit their respective banking systems. In India, an objective approach has been adopted while deciding on the items of national discretion. There are several areas where the national discretion exercised by the Reserve Bank is at a more conservative level. One, the State Government guaranteed exposures attract a higher risk weight of 20 per cent, though the Basel framework allows a zero per cent risk weight. Two, exposures to public sector enterprises are treated on par with corporate exposures though the framework allows them to be treated on par with bank or sovereign exposures. Three, the Reserve Bank has the discretion to apply 20 per cent risk weight for exposures to all banks with CRAR above 9 per cent. However, this concessionary risk-weight is applied only to exposures to scheduled banks; exposures to non-scheduled banks are treated separately and assigned a risk-weight of 100 per cent if the CRAR is 9 per cent or above. Four, though the Basel II framework

Box V.10
Migration to New Capital Adequacy Framework:Parallel Run Process

The parallel run consists of several steps. Banks are required to apply the prudential guidelines on capital adequacy – both current guidelines and the guidelines on the revised framework – on an on-going basis and compute their CRAR under both the guidelines. An analysis of the bank's CRAR under both the guidelines is required to be reported to the board at quarterly intervals. While reporting the above analysis to the board, banks should also furnish a comprehensive assessment of their compliance with the other requirements relevant under the revised framework, which, at the minimum, include the following: (i) board approved policy on utilisation of credit risk mitigation techniques, and collateral management; (ii) board approved policy on disclosures; (iii) board approved policy on internal capital adequacy assessment process (ICAAP) along with the capital requirement as per ICAAP; (iv) adequacy of bank's management information system (MIS) to meet the requirements under the New Capital Adequacy Framework, the initiatives taken for bridging gaps, if any, and the progress made in this regard; (v) impact of the various elements/portfolios on the bank's CRAR under the revised framework; (vi) mechanism in place for validating the CRAR position computed as per the New Capital Adequacy Framework and the assessments/findings/ recommendations of these validation exercises; and (v) action taken with respect to any advice/guidance/direction given by the Board in the past on the above aspects. A copy of the quarterly report to the board is required to be submitted to the Reserve Bank.

The parallel run has helped the banks in identifying the gaps in the existing MIS and other relevant areas which were required to be filled in order to ensure smooth transition to Basel II framework with effect from March 31, 2008. The parallel run showed drop in CRAR of most of the banks mainly due to additional capital charge on account of operational risk. A few banks also showed fall in capital charge for credit risk. However, on the whole, the drop was within the manageable limits and it is not expected to cause any problem in the smooth transition to Basel II by the relevant banks.

allows lower risk-weight of 35 per cent for residential mortgages and 75 per cent for personal loans (as part of retail), a higher risk-weight of 75 per cent for residential mortgages and 125 per cent for personal loans has been assigned in the Indian case. These reflect the conservative view of the Reserve Bank as the true level of underlying risk is not known fully.

5.120 Under the Basel II framework, the concept of capital floors for banks is provided as transitional arrangement for banks adopting IRB approach for credit risk or the advanced measurement approaches (AMA) for operational risk. The capital floor is based on application of the 1988 Accord, and is derived by applying an adjustment factor. The adjustment factor for banks using the foundation IRB approach for the year beginning year-end 2006 was 95 per cent. The adjustment factor for banks using either (i) the foundation and/or advanced IRB approaches, and/or (ii) the AMA for the year beginning year-end 2007 was 90 per cent, and for the year beginning year-end 2008 was 80 per cent. The above concept has been modified and applied as a transitional arrangement by banks migrating from Basel I to Basel II. The minimum capital maintained by banks on implementation of Basel II norms is subject to a prudential floor computed with reference to the requirement as per Basel I framework for credit and market risks. In India, the floor has been fixed at 100 per cent, 90 per cent and 80 per cent for the position as at end-March for the first three years of implementation of the revised framework. The adequacy and the need for the capital floors would be reviewed periodically on the basis of the quality and integrity of Basel II implementation in banks. In case, the supervisory assessments indicate satisfactory level and quality of compliance by banks, the capital floor may be dispensed with even before the above period.

5.121 In the Indian context, the prescribed Tier I capital adequacy ratio is 6 per cent by March 31, 2010, which was also recommended by the Committee on Fuller Capital Account Convertibility. The actual holding of Tier I capital was also more than 6 per cent at end-March 2007, except for only three banks, one public sector bank, and two small old private sector banks.

5.122 For Indian banks, Tier 1 capital includes: (i) paid-up equity capital, statutory reserves, and other disclosed free reserves, if any; (ii) capital reserves representing surplus arising out of sale proceeds of assets; (iii) innovative perpetual debt instruments eligible for inclusion in Tier 1 capital which comply with the regulatory requirements as specified; and (iv) any other type of instrument generally notified by the Reserve Bank from time to time for inclusion in Tier 1 capital. Tier 2 capital includes (i) revaluation reserves; (ii) general provisions and loss reserves; (iii) hybrid debt capital instruments; and (iv) subordinated debt. Upper Tier 2 instruments along with other components of Tier 2 capital shall not exceed 100 per cent of Tier 1 capital. Subordinated debt instruments eligible for inclusion in Lower Tier 2 capital are subject to a ceiling of 50 per cent of Tier 1 capital after all deductions. The Reserve Bank on January 25, 2006, allowed banks to raise capital funds through the issue of innovative perpetual debt instruments (innovative instruments), debt capital instruments, perpetual non-cumulative preference shares and redeemable cumulative preference shares (Box V.11). However, Tier 3 capital for meeting a portion of banks' exposures to market risks has not been permitted as an element of regulatory capital in India.

5.123 In order to ensure that the drawdown by banks of their statutory reserves is done prudently and is not in violation of any of the regulatory prescriptions, banks were advised in September 2006, *inter alia*, to take prior approval from the Reserve Bank before any appropriation is made from the statutory reserve or any other reserves; and to ensure that suitable disclosures are made of such drawdown of reserves in the 'notes on accounts' to the balance sheet. Based on the final guidelines issued on April 18, 2007, banks are required to adopt the following business segments for public reporting purposes, from March 31, 2007: (a) treasury, (b) corporate/wholesale banking, (c) retail banking, and (d) other banking operations.

Risk Management Practices in Indian Banks

5.124 Risk management for banks and financial institutions is critically important because they are 'risk engines'; they take risks, they transform them and they embed them in their products and services. There are powerful motives for banks to implement risk-based practices; to provide a balanced view of risk and return from a management point of view, to develop competitive advantages and to comply with regulatory requirements. The broad principles governing risk management are the same for entities in both the real and financial sectors. However, risk management in banks and other financial intermediaries acquires added importance because of their three distinguishing characteristics: (i) they are much more leveraged; (ii) they hold public money; and (iii) payments systems operate through banks (Mohan, 2007).

Box V.11
Enhancement of Banks Capital Raising Options for Capital Adequacy Purposes

Under the Basel II framework, Indian banks are expected to have larger capital requirements as they would need to earmark capital for operational risk, apart for credit and market risks. For smooth transition to Basel II and with a view to providing an additional options for raising capital funds, banks were allowed in January 2006 to augment their capital funds by issuing innovative perpetual debt instruments (IPDI) eligible for inclusion as Tier I capital and debt capital instruments eligible for inclusion as Upper Tier II capital (Upper Tier II instruments). The total amount raised by a bank through IPDIs is not to be reckoned as liability for calculation of net demand and time liabilities for the purpose of reserve requirements and, as such, not to attract CRR/SLR requirements.

The total amount raised by a bank through IPDIs is not to exceed 15 per cent of total Tier I capital, and the eligible amount is required to be computed with reference to the amount of Tier I capital as on March 31 of the previous financial year, after deduction of goodwill and other intangible assets but before the deduction of investments. Banks can augment their capital funds through the issue of IPDI/Upper Tier II instruments in foreign currency without seeking the prior approval of the Reserve Bank, subject to the compliance with certain requirements. One, IPDI/Upper Tier II instruments issued in foreign currency should comply with all the terms and conditions as per instructions issued on January 25, 2006. Two, in the case of IPDI, not more than 49 per cent of the eligible amount could be issued in foreign currency. In the case of Upper Tier II instruments, the total amount issued in foreign currency should not exceed 25 per cent of the unimpaired Tier I capital and to be computed with reference to the amount of Tier I capital as on March 31 of the previous financial year, after deduction of goodwill and other intangible assets but before the deduction of investments. The amount raised by issue of these instruments in foreign currency is in addition to the existing limit for foreign currency borrowings by authorised dealers. Three, investment by FIIs in Upper Tier II Instruments raised in Indian Rupees is outside the limit for investment in corporate debt instruments, *i.e.*, US $ 3 billion. However, this limit is subject to a ceiling of US $ 200 million per registered entity.

With a view to providing a wider choice of instruments to Indian banks for raising Tier I and Upper Tier II capital, banks were allowed in October 2007 to issue preference shares in Indian Rupees, subject to extant legal provisions through issuance of perpetual non-cumulative preference shares (PNCPS) as Tier I capital. The perpetual cumulative preference shares (PCPS), redeemable non-cumulative preference shares (RNCPS) and redeemable cumulative preference shares (RCPS) were allowed as Upper Tier II capital. The perpetual non-cumulative preference shares are treated on par with equity, and hence, the coupon payable on these instruments is treated as dividend (an appropriation of profit and loss account). The Upper Tier II preference shares are treated as liabilities and the coupon payable thereon is treated as interest (charged to profit and loss account). The total amount raised by the bank by issue of PNCPS is reckoned as liability for calculation of net demand and time liabilities for the purpose of reserve requirements and, as such, does not attract CRR/SLR requirements. The total amount raised by a bank through the issue of Upper Tier II instruments is reckoned as liability for the calculation of net demand and time liabilities for the purpose of reserve requirements and, as such, attracts CRR/SLR requirements.

5.125 As is the case globally, banks in India have a very special role to play in promoting better risk management standards and practices. Being the chief repositories of credit risk, the quality of their loan assets depends critically on how effective the risk management policies, processes and procedures of their borrowers are. Among their borrowing clients themselves, there would be differentiated risk-bearing expertise and hence banks are expected to provide professional advice to their clients on risk management. Thus, banks have good business reasons for acquiring specialisation and professional expertise in risk management. This would, however, be possible only if banks themselves are good managers of their own risks (Mohan, 2007). In this context, an efficient credit information system could play a vital role in enhancing the quality of credit decisions and improving the asset quality of banks, apart from facilitating faster credit delivery. A scheme for disclosure of information regarding defaulting borrowers of banks and financial institutions was introduced, and Credit Information Bureau (India) Limited (CIBIL) was set up in 2000 to facilitate sharing of information related to credit matters. Following the Credit Information Act of 2005, the process of setting up of a few more credit information companies in India has been facilitated.

5.126 Risk management practices have undergone significant improvement since the introduction of financial sector reforms in 1992. The process gained momentum with the issue of regulatory guidelines and guidance notes on asset-liability management and management of credit risk, market risk and operational risk issued by the Reserve Bank in 1999. The announcement to implement the revised capital adequacy guidelines brought the issue of risk

management into greater focus. However, in most Indian banks risk management is still a compliance issue rather than a business issue.

5.127 With respect to risk management system, while the regulator's main objective is to ensure systemic stability, the banks look at their risk management system as a means of improving their risk-reward equation. Indian banks have been able to maintain their profitability by managing risk at the macro level as against relying on a fine-grained statistical risk evaluation system. Barring a few private sector and foreign banks, risk management was not viewed as a business opportunity available in terms of risk-return trade-off. Most Indian banks started adopting a structured approach to risk management only after the application of regulatory pressure to comply with the Basel II standards. Banks have gradually started using quantitative techniques and approaches to risk management that are data-centric requiring sufficient historical data for various models to predict PD, LGD and EAD, and also requiring analytical software that can stress test and back-test the models. For banks that are starting to adopt quantitative techniques and models, it is pertinent that their risk managers have a clear understanding of the capabilities and limitations of risk measurement techniques and models that they are employing.

5.128 The non-availability of required data has been a major issue in implementing quantitative approaches in risk management[6]. Three major issues on which most banks in India have faced difficulties are: (i) all activities not automated; (ii) software solutions not tuned to Indian market; and (iii) lack of hedging/transfer mechanisms. Despite these constraints, domestic banks are striving to move from an individual silo system to an enterprise-wide integrated risk management framework. While the organisational set up is in place at almost every bank, the process of integrating risk management with business and strategic processes across the bank is still in infancy at a majority of the banks. Most public sector banks are adopting the consultant route.

5.129 While the first milestone would be risk integration across the entity, the next step would entail risk aggregation across the group both in the specific risk areas as also across the risks. Banks would, therefore, be required to allocate significant resources towards this endeavour. In India, the risk-based approach to supervision is also serving as a catalyst to banks' migration to the integrated risk management systems. The critical need for the management of compliance risk and the reputational risk is also one of the key facets of integrated risk management or enterprise wide risk management framework (Box V.12).

Box V.12
Enterprise-wide Risk Management

The five key elements of enterprise-wide risk management (ERM) for financial institutions are process and practice assessments of risk governance, operational risk, market risk, credit risk and liquidity and funding. In addition, economic capital assessment is also a key component of the ERM assessment process. Market risk assesses risk management practices for both trading risk and for asset-liability management (ALM) or interest rate risk. In credit risk, a firm's underwriting processes, credit risk analytics and portfolio management practices are evaluated. For funding and liquidity risk, funding composition, liquidity management and stress-testing practices are assessed. The methodology to assess and rate ERM is consistent with the Trading Risk Management (TRM) assessment methodology. ERM criteria includes assessment of the quality and robustness of an institution's risk culture, its risk appetite, how it aggregates risk at the enterprise level, its risk disclosure quality and the practices it uses to guard against business, legal and reputation risk.

While economic capital evaluation is presently outside the scope of the ERM assessment process, some banks have developed economic capital model to quantify these different risk types more consistently.

The relative importance of each aspect of ERM in formulating any opinion of the quality of a firm's risk management practices will depend on the complexity, size and range of risk for each individual firm. The factor sets are by no means exhaustive or static. As the ERM practices of organisations evolve, ERM assessment factors will most likely evolve as well.

Reference:

Standard & Poor's. 2006. *"Assessing Enterprise Risk Management Practices of Financial Institutions"*. Commentary at http://www2.standardandpoors.com

[6] 'Current Perspectives on Risk Management: Indian Banking Industry,' IBA-IBS report, April 2006.

5.130 Globally, stress testing is becoming an integral part of banks' risk management systems and is used to evaluate their potential vulnerability to certain unlikely but plausible events or movements in financial variables. The need for banks in India to adopt 'stress tests' as a risk management tool was emphasised in the Annual Policy Statement of April 2006, which was followed by the issuance of the relevant guidelines. Most of the banks have already put in place their stress testing frameworks. An efficient stress test framework is necessary to incorporate a forward looking element in banks' business strategies. Banks would do well to approach stress testing not merely as a regulatory requirement but as an integral part of their risk management processes and Basel II implementation. The stress test results need to be suitably integrated into the risk management processes, business strategies and capital planning.

5.131 Many of the Indian banks have gone for complete computerisation of their branch network and have also integrated their treasury, forex, and lending segments. The information technology initiatives of these institutions provide significant advantage to them in risk management since it facilitates faster flow of accurate and reliable information. It also helps in terms of quicker decision-making from the head office since branches are networked and accounts are considered as belonging to the bank rather than a branch.

5.132 Indian public sector banks have very recently initiated moves to centralise data through core-banking. This has to be supplemented with the establishment of a Data Warehousing/Data Mart for building up historical data and analytics. There would be legacy issues for public sector banks related to the aligning and upgrading of data with the IT systems for consistency and integrity across the organisation. Setting up a Data Warehousing/Data Mart is cost intensive and will have to be effectively utilised for enhancing significantly the business and reducing costs. Costs are thus expected to be heavily focused on IT spending – both hardware & software – in addition to training for personnel. Many banks in developed countries are expected to spend 40 to 80 per cent of their total costs for upgrading their IT systems and interfaces in alignment with the requirements of Basel II.

5.133 Branches of Indian banks are quick to report technology failures but are not equally forthcoming on failures relating to people or processes. Most banks have already put in place, or have at least finalised a 'business continuity plan' and a 'disaster recovery plan' relating to technology system failures. Security policies for IT systems have been formulated by quite a few banks and the others are in the process of formulating them. Information security audits are also being carried out by most banks. Most banks have set up these plans and disaster recovery sites as a part of their core banking system implementation. Very few banks have carried out mock testing of these plans to test their usefulness and availability at all times (Box V.13). All banks are unanimous in reporting that they are not using any metric measure return on investments in technology.

Asset-Liability Management

5.134 Asset-liability management is an important constituent of a risk management system. Asset-liability management essentially refers to the process by which an institution manages its balance sheet in order to allow for alternative interest rate and liquidity scenarios. Asset-liability management models enable institutions to measure and monitor risk, and provide suitable strategies for their management.

5.135 The Reserve Bank has issued asset liability management guidelines in 1999 for dealing with overall asset-liability mismatches taking into account both on and off balance sheet items. In terms of the guidelines, banks were required to manage their liquidity and interest rate risk by calculating the maturity repricing mismatches of their assets and liabilities divided into maturity buckets. The liquidity risk management guidelines were revised on October 24, 2007.

5.136 In terms of the revised guidelines, the short term bucket of fourteen days for structural liquidity has been split into three and frequency of reporting made fortnightly from monthly. Banks are now required to shift from 'traditional gap analysis' to 'modified duration' of groups of assets. The duration gap is required to be applied not only to the trading book but also to the banking book. Modified duration of equity is also to be computed to assess the impact of interest rate shocks. While some of these ALM solutions support 'duration gap analysis' and also 'behavioral analysis' for non-maturing assets and liabilities, many banks are moving to Oracle Financial Services Application (OFSA) for balance sheet simulation, transfer pricing, and better support for embedded options. The recent guidelines for the Reserve Bank are expected to provide an impetus to banks for replacing their aging ALM solutions.

Box V.13
IT Applications in Risk Management Strategies of Banks

The role of information technology is critical in today's banking operations, especially in the areas of communication and business process reengineering. Without the progress in technology, the development of sophisticated market products, smoother enabling infrastructure, implementation of reliable techniques for control of risks and access to distant and diversified markets would have been unthinkable.

The Basel II guidelines envisage even a greater role for technology in banking operations. The implementation of Basel II guidelines requires a substantial on several parameters. Thus consolidated data on parameters such as operational loss incidents, financial instruments, credit losses and general ledger data. Banks that decide to adhere to one of the internal ratings based (IRB) approaches are required to develop databases to carry out the regression tests of their internal models. The Basel II compliant system is expected not only to carry out all the relevant calculations and categorise the calculations but also be able to switch between various Pillar 1 methodologies to allow auditors, regulators and internal users to audit, review and revise these calculations as necessary. Thus efficient storage and evaluation of time series data on alternative scenarios has assumed great importance under the Basel II guidelines. Banks and financial institutions either need to design and develop their own tailor-made software and systems or invest in software products made available by software firms with some changes to suit their specific requirements.

In case of India, the IT revolution in banks started in the mid-1980s, when the banks started computerising their branches. By the early 1990s most of the banks embarked on Total Branch Automation (TBA) packages, driven mainly by the reduction in hardware prices and also availability of reasonably priced PCs and servers, The setting up of the Indian Financial Network (INFINET), a Wide Area based satellite communication and terrestrial lines network using VSAT technology in June 1999, was a landmark in the area of communication technology insofar as the Indian financial system is concerned. The INFINET was the forerunner of an efficient telecommunication backbone for the banking and financial sector. It is a Closed User Group network for the banking sector. The hub and the network management system are located at the Institute for Development and Research in Banking Technology (IDRBT), Hyderabad, which is fully funded by the Reserve Bank. The INFINET, which initially comprised only public sector banks was subsequently opened up for participation by other categories of members.

Similarly, initiation of projects like the Negotiated Dealing System (NDS), Centralised Funds Management System (CFMS) and Structured Financial Messaging Solution (SFMS) gave a major boost to the payment and settlement system. The centralised funds management system (CFMS) has two components - the centralised funds enquiry system (CFES) and the centralised funds transfer system (CFTS). The CFTS, the funds transfer facility of the CFMS in operation since 2005-06, enables banks to better manage their current account balances with the Reserve Bank by electronically moving funds from one office of the Reserve Bank to another office, *i.e.,* from a surplus centre to a deficit centre. At present, nine Reserve Bank offices (Mumbai, Delhi, Chennai, Kolkata, Ahmedabad, Nagpur, Bangalore, Hyderabad and Chandigarh) have been brought under the system.

The real time gross settlement (RTGS) system, in operation since 2004-05, facilitates faster movement of high value transactions. The RTGS system has gained significance in terms of both coverage and value of transactions. As at end-March 2008, 43,512 bank branches were connected to RTGs and the value of RTGs transactions increased by 48 per cent during 2007-08.

Furthermore, core banking solutions (CBS) have been adopted at a large scale by almost all Indian banks. The CBS enables the customers of banks to undertake their transactions from any branch of a bank instead of being attached to a particular branch, thereby resulting in better delivery of various customer services by the banks. At end-March 2007, 45 per cent of the branches of the public sector banks were interlinked using the CBS. Internet banking, which has witnessed a sporadic growth in recent times, is another area where the technology plays a crucial role.

According to the 'IT Benchmarking Survey' carried out by the McKinsey & Co. in 2007, the IT effectiveness of top Indian banks compares well with the best banks internationally. Indian banks are, at present, some of the most technologically advanced banks with vast networks of branches empowered by the strong banking system. Most banks in India have used IT to achieve superior business performance, driven mainly by the cost advantage in India, the focus on avoiding legacy systems, superior IT governance that often entails competent outsourcing. However, there exist vast differences between the new private and foreign banks, on the one hand, and the old private and public sector banks, on the other. However, foreign and private sector banks used technology more effectively with a view to promoting growth while remaining operationally efficient. According to the findings of the survey, while foreign and new private sector banks focus on innovations rather than daily operations, the public sector banks focus on application development directed more towards augmenting their existing systems. This policy of old private and public sector banks has resulted in low value addition to their businesses. The new private sector banks and foreign banks focus more on value added activities like building new infrastructure for ATM networks and core banking solutions, customer service channels, including call centres, internet banking and mobile banking. The survey concludes that even though the Indian banks have a strong competitive advantage in several dimensions, including alignment between IT and business heads, management processes and the ability to streamline administrative overheads and to channel investments, several improvement opportunities do exist.

Reference:

McKinsey & Co. 2007. *Indian Banking: Towards Global Best Practices - Insights from Industry Benchmark Surveys*.

5.137 Support for OTC derivatives is available in solutions for Reuters, Murex and Sungard. Banks, which are on the solutions, use Quadryx from Credence Analytics for OTC derivatives. Some of the treasury solutions do not have a market risk management module and multiple third-party software solutions are being used to price these derivatives.

Corporate Governance

5.138 Governance and controls constitute one of the most fundamental aspects of risk management at banking organisations, and, thus, constitute the foundation for a sound financial system. To a large extent, many risk management failures reflect a breakdown in corporate governance which arise due to poor management of conflict of interest, inadequate understanding of key banking risks, and poor board oversight of the mechanisms for risk management and internal audit. Banks may have to cultivate a good governance culture building in appropriate checks and balances in their operations. There are four important forms of oversight that should be included in the organisational structure of any bank in order to ensure appropriate checks and balances: (i) oversight by the board of directors or supervisory board; (ii) oversight by individuals not involved in the day-to-day running of the various business areas; (iii) direct line supervision of different business areas; and (iv) independent risk management, compliance and audit functions. In addition, it is important that key personnel are fit and proper for their jobs.

5.139 Senior management must take on a very active and involved role in risk management. However, if the information is not adequately distributed both vertically and horizontally, this would prevent senior managers from developing an enterprise-wide perspective on risks to the whole entity. More so, if the risks of the different activities undertaken by the firm could, first, become correlated in times of stress and, second, result in high concentrations of risk exposures. To be specific, in a few cases, senior management was not fully aware of the firm's latent concentrations to U.S. subprime mortgages, because they did not realize that in addition to the subprime mortgages on their books, they had exposure through off-balance sheet vehicles holding mortgages, through claims on counterparties exposed to subprime, and through certain complex securities. Information must move up to senior management. Top executives must disseminate their views and analysis back down through the business lines. Senior managers should encourage risk managers to dig deep to uncover not only risks within each business unit, but also risk concentrations that can arise from the set of activities undertaken by the firm as a whole as well as latent risks – such as hidden risk concentrations that can arise from correlation of risk in times of stress.

5.140 Appropriate incentives reward good behavior and penalise inappropriate behavior. Naturally, in very large organisations, it is difficult for senior management to monitor each individual, so incentives need to be consistent, permeate even the lowest levels of the organisation. Limits and controls can be useful tools for creating the right incentives and sending appropriate signals, but they of course need to be tailored individually to each firm. Problems can arise when incentives are not properly structured and appropriate 'risk discipline' is not exercised.

5.141 In India, several measures have been taken to strengthen corporate governance practices in recent years. These include 'fit and proper' criteria for owners and directors of banks and diversified ownership.

Management of Capital and Future Requirements of Capital

5.142 The regulatory pressure on banks to maintain capital levels has, by and large, been effective in raising the capital levels of banks and in recent years, banks have been maintaining capital at a level well above the regulatory capital requirements, which implies that the safety of Indian banking system has improved (Box V.14).

5.143 In 1992, when India decided to adopt the Basel capital adequacy norms, the capital levels of Indian banks, especially public sector banks (PSBs) were very low. In order to enable public sector banks meet the eight per cent CRAR, the Government recapitalised weak PSBs beginning from 1993-94. The recapitalisation continued up to 1998-99. The total amount injected by the Government for strengthening the capital base of nationalised banks amounted to Rs.22,092 crore. Since capital infusion by the Government was inadequate, the Government allowed public sector banks to approach the capital market directly subject to 51 per cent public ownership as detailed in Chapter III. However, in view of an oversized equity base as against the projected streams of earnings coming in the way of tapping the capital market, some banks returned capital to the

Box V.14
Banks' Response Towards Capital Requirements: Indian Experience

Although the literature on capital regulation and bank behaviour is more than two decades old, adequate systematic and structured work has not been done in the Indian context. The question of whether banks respond to capital regulation hinges on two issues. One, whether regulatory capital requirements lie above the level that the market would require for at least some banks. Two, whether the penalties for falling below regulatory guidelines are large enough to induce banks to raise their capital ratios. Several studies examined the effectiveness of capital regulations in the US in the period before numeric standards were adopted in 1981 (Peltzman, 1970; Mingo, 1975; and Kimball and James, 1983). These results, although mixed, tend to indicate that regulators were ineffective in influencing banks' capital ratios. A problem with interpreting the results of these studies was that the regulatory requirements for any given bank organisation were set on a case-by-case basis and the factors used to evaluate capital adequacy were likely to be highly correlated with those used by the market.

A well-known fact is that most banks tend to hold a significant amount of capital above the regulatory requirement in practice, either for efficiency reasons or because the capital cushion is established as a precaution against contingencies such as adverse events or regulatory penalties (Barrios and Blanco, 2003). Some researchers suggest that the existence of capital buffers can potentially mitigate the volatility in total capital (Koopman *et al.*, 2005). By contrast, the empirical evidence in Germany (Stolz and Wedow, 2005) and Spain (Ayuso *et al*., 2004) shows that capital buffers are also anti-cyclical.

The expression 'capital crunch' was coined in the early 1990s to characterise the simultaneous shortage of capital and the contraction in the supply of new loans that affected banks in New England during the early 1990s recession in the United States (Bernanke and *et al.,* 1991; Peek and Rosengren 1995). A capital crunch could result in the reduction of total bank assets or alternately, in a shift towards less risky assets such as Government bonds. A survey of emprical studies by the Basel Committee observed that the bank capital pressures during cyclical downturns in the US and in Japan might have limited lending in those periods and contributed to economic weakness in some macroeconomic sectors (BIS, 1999).

In the context of Indian banks, Nachane *et al.* (2000) studied the impact on capital changes of regulatory pressures, alongwith a host of other variables that are expected to influence capital holding of banks. On the basis of their empirical analysis employing data for Indian public sector banks (PSBs) over the period 1997 Q1 to 1999 Q4, they concluded that regulatory prescriptions did influence Indian banks' capital ratio choices. However, they did not observe any significant shift from high-risk towards low-risk asset category by banks. To the extent that PSBs constitute a sufficiently heterogeneous sample and comprise the bulk of the banking system in India, an analysis based on PSBs suffices to draw broad inferences about the issue outlined above. In particular, the primary question is whether pressure from supervisory authorities affects bank capital dynamics when capital ratios approach their regulatory minimum. The study suggests that the capital requirements significantly affect bank behaviour, and among other factors, the profit variable seems to play an important role in influencing capital ratios. In the Indian context, the findings are reassuring that capital requirements over and above banks' own internally generated capital targets do seem to affect banks' behaviour. This fact assumes all the more importance in view of the growing concerns about banking stability. In simple terms, higher levels of capital can be useful in preventing systemic distress, which is an important lever in the hands of policymakers. However, in view of the fact that banks may respond to capital regulation in a variety of ways, regulators, while formulating such regulations, need to be clear about the response that they want to elicit. Moreover, regulators also need to put in place corrective measures if the increase in capital requirement is expected to result in reduced credit and/or reduced output in the economy.

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Table 5.3: Public Sector Banks – Recapitalisation

(Amount in Rupees crore)

Period/ Year	Capital Contributed by the Government	Capital Returned
1	2	3
1985-86 to 1992-93	4,000	–
1993-94	5,700	–
1994-95	4,363*	–
1995-96	850	–
1996-97	1,509	842
1997-98	2,700	138
1998-99	400	–
1999-2000	–	–
2000-01	–	48
2001-02	1,300	176
2002-03	770	386
2003-04	–	110
2004-05	–	88
2005-06	500	–

– : Nil.
* : Excluding Rs.925 crore as a part of Tier II capital.
Source : Union Budgets and the Reserve Bank.

Government. The total amount returned aggregated Rs.1,789 crore (Table 5.3).

5.144 Scheduled commercial banks, both in public and private sectors, have raised large resources from the capital market since 1993-94. In all, there have been 37 equity issues by 16 public sector banks for an aggregate amount of Rs.34,679 crore, with several PSBs accessing the market more than once (Table 5.4).

5.145 Private sector banks have also raised capital from the capital market (Table 5.5). Since 1995-96, there have been 34 equity issues by private sector banks for an aggregate amount of Rs.23,330 crore in the capital market. Some public and private sector banks have also raised funds by way of ADRs/GDRs issues in the international capital market.

5.146 As a result of public sector banks accessing the capital market, the equity held by the Government has got diluted. As at end-September 2007, the holding by general public in nine banks ranged between 40 and 49 per cent (Table 5.6). Only in two banks, the Government holding was more than 90 per cent. In three public sector banks, the Government holding was close to 51 per cent. These include Oriental Bank of Commerce (51.1 per cent), Dena Bank (51.2 per cent), and Andhra Bank (51.6 per cent).

Table 5.4: Public Issues by Public Sector Banks

(Amount in Rupees crore)

Year	Equity	
	No. of Issues	Amount
1	2	3
1993-94	2	2,218
1994-95	1	374
1995-96	4	281
1996-97	3	1,705
1997-98	3	491
1998-99	–	–
1999-2000	1	125
2000-01	3	361
2001-02	1	164
2002-03	3	773
2003-04	5	1,104
2004-05	2	3,336
2005-06	6	5,413
2006-07	1	782
2007-08	2	17,552

5.147 Apart from equity issues banks also raised resources by way of discounted subordinated debt (Tier II), which increased sharply from Rs.18,482 crore at end-March 2003 to Rs.63,814 crore at end-March 2007. Another source of strengthening the capital position by public sector banks has been the ploughing back of profits and generation of resources. Public sector banks, as a group, which incurred net

Table 5.5: Public Issues by Private Sector Banks

(Amount in Rupees crore)

Year	Equity	
	No. of Issues	Amount
1	2	3
1995-96	8	404
1996-97	–	–
1997-98	2	206
1998-99	6	262
1999-2000	3	136
2000-01	–	–
2001-02	–	–
2002-03	1	36
2003-04	–	–
2004-05	4	3,946
2005-06	5	5,653
2006-07	2	284
2007-08	3	12,403

Table 5.6: Ownership Structure of Public Sector Banks
(As at end-September 2007)

(Per cent)

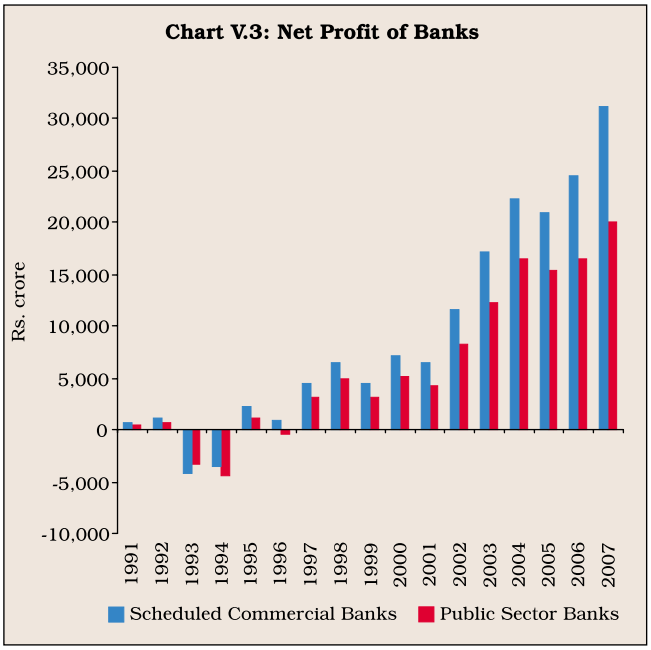
Banks	Government/ RBI Share	Share of Others	CRAR
1	2	3	4
Nationalised Banks			
Oriental Bank of Commerce	51.1	48.9	13.4
Dena Bank	51.2	48.8	11.3
Andhra Bank	51.6	48.4	11.1
Bank of Baroda	53.8	46.2	12.9
Vijaya Bank	53.9	46.1	11.3
Allahabad Bank	55.2	44.8	13.0
Union Bank of India	55.4	44.6	11.6
Corporation Bank	57.2	42.8	13.8
Punjab National Bank	57.8	42.2	13.1
Indian Overseas Bank	61.2	38.8	13.4
Syndicate Bank	66.5	33.5	12.2
Bank of India	69.5	30.5	12.6
Canara Bank	73.2	26.8	13.9
UCO Bank	75.0	25.0	11.5
Bank of Maharashtra	76.8	23.2	13.6
Central Bank of India	80.2	19.8	12.4
Indian Bank	80.0	20.0	13.9
Punjab & Sind Bank	100.0	0.0	13.3
United Bank of India	100.0	0.0	13.8
SBI and its Associates			
State Bank of India*	59.7	40.3	12.9
State Bank of Bikaner and Jaipur	100.0#	–	13.3
State Bank of Travancore	100.0#	–	12.9
State Bank of Mysore	100.0#	–	11.1
State Bank of Indore	100.0#	–	12.8
State Bank of Hyderabad	100.0#	–	12.2
State Bank of Patiala	100.0#	–	12.5
State Bank of Saurashtra	100.0#	–	12.1

* : Equity held by the Reserve Bank in SBI has since been transferred to the Government.
\# : Predominantly held by SBI.
– : Nil/Negligible.

losses in the three out of four years between 1992-93 and 1995-96, have made consistently large profits thereafter (Chart V.3).

5.148 Reserves generated by banks increased sharply in the post-reform period (Chart V.4).

5.149 The risk-weighted assets of scheduled commercial banks grew at an average annual rate of



22.4 per cent between end-March 1997 and end-March 2007 (Chart V.5).

5.150 The risk-weighted assets, in particular, increased sharply, *i.e.*, nearly three times between end-March 2003 and end-March 2007 (Table 5.7). To a large extent, the increase was on account of credit expansion and application of market risk norms. The increase in risk-weighted assets was also on account of increase in the risk weights by the Reserve Bank on certain categories of advances as

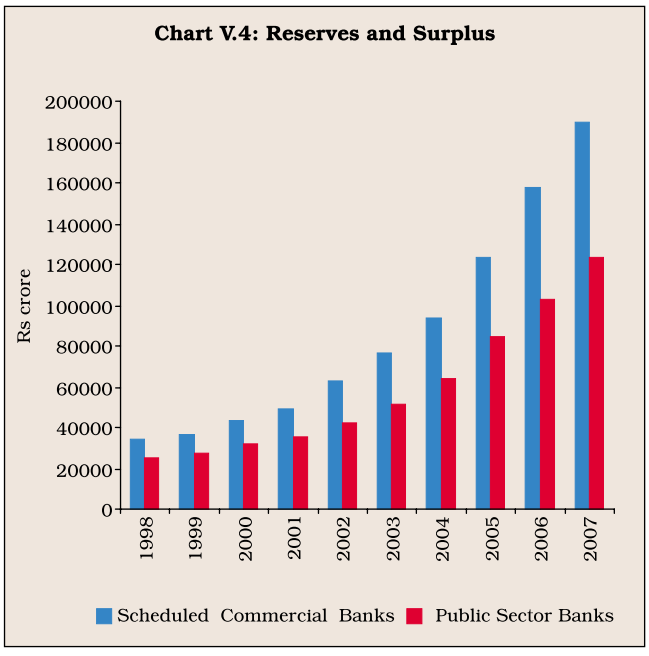


Chart V.5: Total Risk Weighted Assets

(As at end-March)

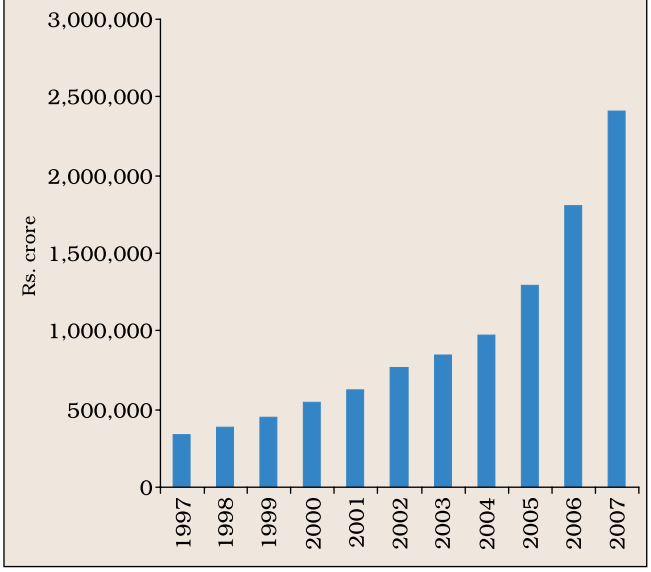
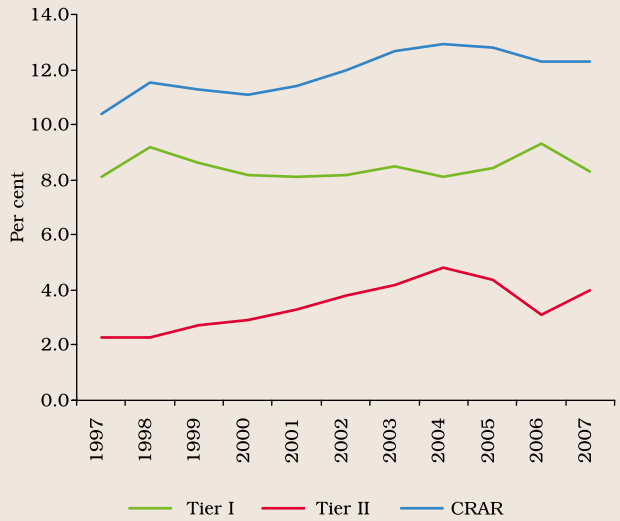


Chart V.6: CRAR of Scheduled Commercial Banks

(As at end-March)



a prudential measure to protect the balance sheets of banks during the phase of rapid credit growth expansion.

5.151 Despite the sharp increase in risk-weighted assets, banks were able to maintain the CRAR. In fact, the CRAR for the industry remained above 10 per cent from end-March 1997 and above 12 per cent from end-March 2002 (Chart V.6). The Tier I capital ratio declined somewhat to 8.3 per cent at end-March 2007 from 9.3 per cent a year ago. This was mainly due to relatively slower growth of reserves and surplus, while paid-up capital increased significantly. However, the Tier II capital increased significantly in contrast to decline in the previous year. As a result, the Tier II CRAR increased to 4.0 per cent from 3.1 per cent last year (Chart V.6). Despite the decline during the year, Tier I CRAR at 8.3 per cent was more than the present requirement of 4.5 per cent and also above the 6.0 per cent norm prescribed in the final guidelines for implementation of Basel II released by the Reserve Bank on April 27, 2007.

Table 5.7: Scheduled Commercial Banks – Capital Funds and Risk-Weighted Assets

(End-March)

(Amount in Rupees crore)

Item / Year	2003	2004	2005	2006	2007
1	2	3	4	5	6
A. Capital Funds (i+ii)	1,07,058	1,25,249	1,65,928	2,21,363	2,96,191
i) Tier I Capital	71,416	78,550	1,08,949	1,66,538	2,00,397
of which:					
Paid up Capital	21,594	22,022	25,724	25,142	29,489
Reserves	57,648	65,948	91,320	1,41,592	1,63,988
Unallocated/Remittable Surplus	4,194	4,983	6,937	11,075	20,387
Deductions for Tier-I Capital	11,646	14,403	15,031	11,271	13,573
ii) Tier-II Capital	35,643	46,699	56,979	54,825	95,794
of which:					
Discounted Subordinated Debt	18,482	20,011	26,291	43,214	63,814
B. Risk-weighted Assets	8,44,402	9,69,886	12,96,223	17,97,207	24,12,320
of which:					
Risk-weighted Loans and Advances	5,65,799	6,59,921	9,19,544	12,38,163	17,16,945

Source: Based on off-site returns submitted by banks.

Table 5.8: Capital Adequacy Ratio - Bank Group-wise
(As at end-March)

(Per cent)

Bank Group	2000	2001	2002	2003	2004	2005	2006	2007
1	2	3	4	5	6	7	8	9
Scheduled Commercial Banks	11.1	11.4	12.0	12.7	12.9	12.8	12.3	12.3
Public Sector Banks	10.7	11.2	11.8	12.6	13.2	12.9	12.2	12.4
Nationalised Banks	10.1	10.2	10.9	12.2	13.1	13.2	12.3	12.4
SBI & its Associates	11.6	12.7	13.3	13.4	13.4	12.4	12.0	12.3
Old Private Sector Banks	12.4	11.9	12.5	12.8	13.7	12.5	11.7	12.1
New Private Sector Banks	13.4	11.5	12.3	11.3	10.2	12.1	12.6	12.0
Foreign Banks	11.9	12.6	12.9	15.2	15.0	14.0	13.0	12.4

Source: Report on Trend and Progress of Banking in India, various issues.

5.152 The CRAR of all the bank groups, in general, has remained significantly above the minimum prescribed level. The CRAR of foreign banks, which usually remained much above the other bank groups, declined from 13.0 per cent at end-March 2006 to 12.4 per cent at end-March 2007 to converge with the industry average (Table 5.8).

5.153 At the individual bank level, only one bank could not meet the prescribed CRAR requirement at end-March 2007, which was subsequently amalgamated with a large private sector bank. The CRAR of all banks was above 10 per cent, except two banks whose CRAR was in the range of 9 to 10 per cent (Table 5.9).

5.154 Banks in India have managed their capital requirements in an efficient way. The capital requirements of banks in India are expected to increase on implementation of Basel II. Foreign banks and Indian banks with international presence migrated to the Basel II requirements since the year ended March 2008, and other scheduled commercial banks would adopt these norms not later than March 31, 2009. Ever since the Reserve Bank put the draft guidelines for adopting the revised framework in the public domain in 2005, several agencies and researchers have estimated the capital requirements of Indian banks in the light of the transition from Basel I to Basel II framework (Box V.15). It is generally believed that under the simpler approaches adopted in India, if the additional capital required under operational risk is not offset by the capital relief under credit risk, the overall regulatory requirements for banks would in most likelihood go up. With respect to credit risk, there is also a view emphasising that the adoption of standardised approach for credit risk under Pillar 1 of Basel II is not likely to be very different from the Basel I norms as most of the banks' customers still do not possess an external rating, in which case a risk weight of 100 per cent would be applied. Apart

Table 5.9: Distribution of Scheduled Commercial Banks by CRAR

(Number of banks)

Bank Group	End-March 2007			
	Below 4 per cent	Between 4-9 per cent	Between 9-10 per cent	Above 10 Per cent
1	2	3	4	5
Nationalised Banks*	–	–	–	20
SBI & its Associates	–	–	–	8
Old Private Sector Banks	–	–	2	14
New Private Sector Banks	–	–	–	8
Foreign Banks	–	–	–	29
Total	**–**	**–**	**2**	**79**

– : Nil/Negligible.
* : Including data for other public sector banks.
Source : Based on off-site returns submitted by banks.

Box V.15
Estimates of Capital Requirements of Indian Banks under Basel II by various Agencies

The Basel Committee on Banking Supervision (BCBS) has undertaken the Fifth Quantitative Impact Study (QIS-5) to assess the impact of adoption of the New Capital Adequacy Framework. Eleven Indian banks, accounting for about 50 per cent of market share (by assets), participated in the QIS-5 exercise. Preliminary analysis indicated that the combined capital adequacy ratio of these banks was expected to come down by about one per centage point when these banks apply Basel II norms for Standardised Approach for credit risk and Basic Indicator Approach for operational risk. Although none of these banks would be breaching the minimum capital adequacy ratio under the new framework, the net impact reflected a wide range.

Given the likely growth of the economy, the banking system itself will have considerable need for new capital. One estimate suggests that, in order to raise the bank credit ratio from 60 per cent to 80 per cent of GDP by 2010, the banking system will require extra capital of the order of 1¼ per cent of GDP (Lahiri, 2006). Raising such an amount of capital will require significant increases in profitability and efficiency in the sector.

According to the estimate made by the CRISIL, the overall impact of Basel II would decline by 1.6 percentage points in the CRAR. This is the combined effect of a 0.7 percentage point gain for credit risk, a 1.2 percentage points decline on account of market risk, and a 1.1 percentage points decline for operational risk. The CRISIL is of the view that the proposed framework will have a positive impact on the banking sector, and will place a modest capital demand on the banking sector.

In ICRA's estimates, Indian banks would need additional capital of up to Rs.120 billion (12,000 crore) to meet the capital charge requirement for operational risk under Basel II. Most of this capital would be required by PSBs (Rs.90 billion, or Rs.9,000 crore), followed by the new generation private sector banks (Rs.11 billion, or Rs 1,100 crore), and the old generation private sector bank (Rs.7.5 billion, or Rs.750 crore). In ICRA's view, given the asset growth witnessed in the past and the expected growth trends, the capital charge requirement for operational risk would grow 15-20 per cent annually over three years, which implies that the banks would need to raise Rs.180-200 billion (Rs 18,000-20,000 crore) over the medium term.

Reference:

Lahiri, A. 2006. "Financial Sector Reforms in India Step and Effects in International Financial System". Presentation to the Programme of Seminars *Asia in the World*, IMF/World Bank Annual Meeting, Singapore, September.

from the three types of risk, the growth of the real economy is also expected to impact on the growth of the risk-weighted assets and hence, the regulatory capital requirement of banks. Another widely discussed issue with regard to regulatory capital requirement under Basel II is about the ability of public sector banks to meet the growing capital requirements. This is because the shareholding of the Government in public sector banks cannot go below 51 per cent.

5.155 An attempt is made to arrive at the capital requirements over the five year period from 2007-08 to 2011-12, keeping in view (i) implementation of Basel II leading to a refined measurement of credit risk and an additional operational risk; and (ii) likely growth in banks' balance sheets. The CRAR estimates have been made under two scenarios. In the baseline scenario, it is assumed that banks would maintain the overall minimum capital ratio of 9 per cent and a Tier-I capital at 4.5 per cent. In the second scenario, it is assumed that banks would maintain CRAR at 12 per cent with 6 per cent Tier-I capital.

5.156 An estimation of capital requirements essentially requires estimation of risk-weighted assets (Box V.16).

5.157 Assuming that banks would maintain CRAR of 12 per cent, the total capital requirements for the banking sector are projected to go up to Rs.4,07,686 crore at end-March 2008 and Rs.8,64,935 crore at end-March 2012 from Rs.2,96,191 crore at end-March 2007 (Table 5.11). Thus, the banking sector would require additional capital of Rs.5,68,744 crore in the next five years. The estimated capital requirements for each year are fairly distributed at about Rs.1 lakh crore except for the year 2011-12 when the capital requirements are projected to increase sharply to Rs.1,39,802 crore. The capital requirements decline significantly, if CRAR is to be maintained at 9 per cent (Table 5.10). All bank groups would be required to raise their capital level from the first year (*i.e.*, 2007-08) itself mainly due to inclusion of operational risk under Basel II.

5.158 Of the total capital requirements at 12 per cent CRAR, Rs.3,69,115 crore (64.9 per cent of total banking sector) would be required by public sector

Box V.16
Estimation of Capital Requirements for Banks in India – Methodology

Capital requirements (both overall and Tier-I) as required under Basel II have been worked out by taking into consideration the increase in the risk-weighted assets (RWAs) for credit, market and operational risks. This, in turn, required estimation of expansion of credit for which the following methodology was adopted. It was assumed that real GDP would grow by 9 per cent (target growth given by the Planning Commission for the Eleventh Five Year Plan). Based on assumed real GDP growth, M3 growth was worked out by using the income elasticity of money demand plus inflation. Assuming a steady growth in currency (calculated on the basis of ARIMA model), deposits were arrived as a residual. From deposits, net demand and time liabilities (NDTL) were worked out. After deducting the pre-emptions in the form of CRR and SLR from NDTL, the credit was arrived at. Risk-weighted assets were estimated from credit by assuming stable relationship between them.

Assumptions for the Projections

1) Projection of M3

M3 was projected to grow at 18.5 per cent based on 9 per cent real GDP growth. Estimated income elasticity of demand for money was 1.5 and inflation rate was assumed at five per cent.

2) Forecasting Currency with the Public

Within the framework of Box-Jenkins' ARIMA model, the autocorrelation (ACF) and partial autocorrelation (PACF) functions were examined for the monthly series on currency with public (natural logarithm transformed) in four different forms: (i) first difference without seasonal adjustment; (ii) first difference with seasonal adjustment; (iii) annualised growth rate without seasonal adjustment; and (iv) annualised growth rate with seasonal adjustment. It was ascertained that the monthly currency with the public series could be modeled appropriately in terms of its seasonally adjusted annualised growth rate. In this form, the ACF showed the tendency of tapering off to zero, while the PACF cut off rapidly after the first lag. This suggested that the best ARIMA model was the first auto-regressive (AR) process along with a seasonal moving average term (SMA). The estimated ARIMA model for the currency variable showed that the dynamically forecast of monthly growth rate over a five-year horizon would hover around the structural component of its annual growth rate of 12.7 per cent.

3) Projection of Credit

The projected currency with public growth was deducted from the overall money supply to arrive at the residual total deposit amount. From deposits, net demand and time liabilities were arrived at based on stable relationship between the two. From NDTL, pre-emptions on account of CRR and SLR requirements were deducted and balance was taken as credit.

4) Projection of Enhanced Risk-weighted Assets

i) The risk-weighted assets for credit risk and market risk (at end-March 2007 actual data) were enhanced by including risk-weighted assets on account of operational risk. At end-March 2007, risk weighted assets were 1.4 times of outstanding credit.

ii) The ratio of risk-weighted assets to credit for 2006-07 was applied to the subsequent years on projected credit to estimate the risk-weighted assets.

5) Projections for Individual Banks

The market share of RWA for individual banks in total risk-weighted assets of the banking sector was arrived for 2006-07 based on their share in total assets and the same share was applied in the next five years.

banks, Rs.23,319 crore (4.1 per cent of total) by old private sector banks Rs.1,13,180 crore (19.9 per cent of total) by new private sector banks and Rs.63,131 crore (11.1 per cent of total) by foreign banks. Since banks are maintaining Tier I capital significantly above the required level, Tier I capital requirements for the banking sector were estimated to increase to Rs.2,33,564 crore during the period 2007-12, in which case the balance would have to come from Tier II capital. Tier I capital requirements for the next 5 years were estimated at Rs.1,55,569 crore by public sector banks, Rs.8,178 crore by old private sector banks, Rs.49,278 crore by new private sector banks and Rs.20,540 crore by foreign banks. Foreign banks and new private sector banks might not require additional capital for the year ended March 2008 to meet the 9 per cent CRAR, as their existing capital funds might be sufficient to meet Tier I requirements. However, they might need to raise Tier II capital funds.

5.159 Tier I capital requirements for public sector banks are projected to be small for 2007-08 at 12 per cent CRAR. However, they become larger in every successive year in the next 5 years (Table 5.11).

5.160 Insofar as the financing of capital requirements of nationalised banks is concerned, it was observed that in the past five years the increase in Tier I capital requirement was largely met by ploughing back of profits, while the increase in Tier II capital was predominantly through discounted subordinated debt. Reserves accounted for 86.0 per

Table 5.10: Risk-weighted Assets and Capital Requirements – Projection under Scenario I (9 per cent CRAR)

(Rupees crore)

End-March / Bank Group	Projected Risk-weighted Assets	Scenario II (Capital Requirement - 9 per cent Overall and 4.5 per cent Tier I)			
		Projected Capital Requirement	Projected Tier I Capital Requirement	Enahncement in Total Capital Required	Enhancement in Tier I Capital Required
1	2	3	4	5	6
Scheduled Commercial Banks					
2008	33,97,383	3,05,764	1,52,882	20,024	799
2009	42,39,008	3,81,511	1,90,755	69,541	8,821
2010	50,61,643	4,55,548	2,27,774	93,070	25,829
2011	60,41,344	5,43,721	2,71,860	1,09,604	40,031
2012	72,07,788	6,48,701	3,24,350	1,22,830	50,964
Public Sector Banks					
2008	22,12,938	1,99,164	99,582	7,786	430
2009	27,61,143	2,48,503	1,24,251	46,582	5,866
2010	32,96,979	2,96,728	1,48,364	48,225	17,832
2011	39,35,122	3,54,161	1,77,080	57,433	27,124
2012	46,94,903	4,22,541	2,11,271	68,380	33,893
Old Private Sector Banks					
2008	1,38,005	12,420	6,210	1,254	370
2009	1,72,192	15,497	7,749	2,582	388
2010	2,05,609	18,505	9,252	2,931	522
2011	2,45,405	22,086	11,043	3,550	1,065
2012	2,92,787	26,351	13,175	4,239	1,655
New Private Sector Banks					
2008	6,69,855	60,287	30,143	3,771	0
2009	8,35,796	75,222	37,611	14,430	2,353
2010	9,97,993	89,819	44,910	14,598	6,626
2011	11,91,159	1,07,204	53,602	17,385	8,632
2012	14,21,144	1,27,903	63,951	20,699	10,349
Foreign Banks					
2008	3,76,586	33,893	16,946	3,827	0
2009	4,69,876	42,289	21,144	7,428	214
2010	5,61,062	50,496	25,248	7,786	849
2011	6,69,658	60,269	30,135	9,301	3,209
2012	7,98,953	71,906	35,953	11,177	5,067

cent of total Tier I capital in 2006-07 (Table 5.12). It is, therefore, likely that banks in the next five years are able to increase their Tier I capital fund requirements largely through reserves.

5.161 Some banks also have headroom available as the Government shareholding in these banks was significantly above the minimum requirement of 51 per cent. Total headroom available to nationalised banks was Rs.2,637 crore, implying the nationalised banks could access the market to the extent of Rs.5,171 crore and still retain Government shareholding of 51 per cent (Table 5.13). However, of 20 nationalised banks (including IDBI), this headroom to a significant extent (above Rs.100 crore) was available to only six banks.

5.162 Since a significant proportion of banks' capital requirement in the next five years is estimated to be met by internal resources, *viz.*, growth in reserves and surplus, banks would be required to tap the capital market only for the residual small amount of capital. As per the estimates under scenario I, public sector banks would need around

Table 5.11: Growth in Risk-weighted Assets and Capital Requirements – Projection under Scenario II (12 per cent CRAR)

(Rupees crore)

End-March / Bank Group	Projected Risk- weighted Assets	Scenario II (Capital Requirement - 12 per cent Overall and 6 per cent Tier I)			
		Projected Capital Requirement	Projected Tier I Capital Requirement	Enhancement in Total Capital Required	Enhancement in Tier I Capital Required
1	2	3	4	5	6
Scheduled Commercial Banks					
2008	33,97,383	4,07,686	2,03,843	1,13,617	17,273
2009	42,39,008	5,08,681	2,54,341	1,00,407	41,697
2010	50,61,643	6,07,397	3,03,699	98,220	47,189
2011	60,41,344	7,24,961	3,62,481	1,17,083	57,943
2012	72,07,788	8,64,935	4,32,467	1,39,802	69,462
Public Sector Banks					
2008	22,12,938	2,65,553	1,32,776	71,418	11,510
2009	27,61,143	3,31,337	1,65,669	65,785	28,740
2010	32,96,979	3,95,637	1,97,819	64,300	31,443
2011	39,35,122	4,72,215	2,36,107	76,577	38,289
2012	46,94,903	5,63,388	2,81,694	91,174	45,587
Old Private Sector Banks					
2008	1,38,005	16,561	8,280	4,845	900
2009	1,72,192	20,663	10,332	4,058	956
2010	2,05,609	24,673	12,337	3,986	1,417
2011	2,45,405	29,449	14,724	4,747	2,142
2012	2,92,787	35,134	17,567	5,661	2,763
New Private Sector Banks					
2008	6,69,855	80,383	40,191	23,362	4,444
2009	8,35,796	1,00,296	50,148	19,913	9,713
2010	9,97,993	1,19,759	59,880	19,464	9,732
2011	11,91,159	1,42,939	71,470	23,180	11,590
2012	14,21,144	1,70,537	85,269	27,598	13,799
Foreign Banks					
2008	3,76,586	45,190	22,595	13,993	419
2009	4,69,876	56,385	28,193	10,651	2,288
2010	5,61,062	67,327	33,664	10,470	4,597
2011	6,69,658	80,359	40,179	12,579	5,923
2012	7,98,953	95,874	47,937	15,369	7,313

30 per cent of Tier I capital requirements to be raised from sources other than growth in reserves and surplus in the next five years in order to meet the minimum Tier I capital requirement of 4.5 per cent. This requirement is estimated to increase somewhat to 40 per cent under scenario II wherein the Tier I capital requirement to be met by PSBs is assumed at 6.0 per cent. This requirement could be fulfilled using the headroom available under innovative perpetual debt instruments (IPDI) and perpetual non-cumulative preference shares (PNCPS). In addition, some banks could make use of the headroom available for raising capital from the market where the Government holding is in excess of 51 per cent.

5.163 Banks are also allowed to raise capital by way of innovative perpetual debt instruments and perpetual non-cumulative preference shares to the extent of 40 per cent of Tier I capital (15 per cent IPDI and 25 per cent PNCPS; banks could utilise the entire 40 per cent limit for PNCPS, in which case they may not be able to raise IPDI). Total headroom

Table 5.12: Composition of Capital - Nationalised Banks

Item / Year	2002-03	2003-04	2004-05	2005-06	2006-07	2002-03	2003-04	2004-05	2005-06	2006-07
	Amount in Rs. crore					Share in Respective Total (per cent)				
1	2	3	4	5	6	7	8	9	10	11
A.Capital Funds (i+ii)	44,676	55,483	75,422	97,749	129,089	100.0	100.0	100.0	100.0	100.0
i) Tier I Capital	28,066	32,827	46,050	72,172	84,190	62.8	59.2	61.1	73.8	65.2
of Which:										
a) Paid up Capital	13,140	13,640	14,423	11,444	11,381	46.8	41.6	31.3	15.9	13.5
b) Reserves	21,172	25,291	37,984	61,233	72,400	75.4	77.0	82.5	84.8	86.0
c) Unallocated/ Remittable Surplus	741	763	1,748	2,729	3,417	2.6	2.3	3.8	3.8	4.1
d) Deductions for Tier I Capital	6,986	6,866	8,105	3,234	3,006	24.9	20.9	17.6	4.5	3.6
e) Share Premium (during the year)	383	940	3,040	5,004	696	1.4	2.9	6.6	6.9	0.8
ii) Tier II Capital	16,610	22,656	29,372	25,577	44,899	37.2	40.8	38.9	26.2	34.8
of Which:										
a) Discounted Subordinated Debt	9,452	10,764	14,444	20,157	27,936	56.9	47.5	49.2	78.8	62.2
b) Investment Fluctuation Reserve	4,121	8,827	10,751	72	–	24.8	39.0	36.6	0.3	0.0

available under these instruments for nationalised banks was Rs.33,676 crore at end-March 2007 (Table 5.14). However, headroom available would get reduced to the extent some banks have already raised capital under these instruments. Thus, as against Tier I capital projected requirements of Rs.102,875 crore

Table 5.13: Government Equity and Headroom Available - Nationalised Banks
(End-March 2007)

(Amount in Rupees crore)

Bank	Government/RBI Shareholding (per cent)	Total Paid- up Capital	Total Paid-up Capital held by Government	Government Holding in Excess of 51 per cent	Capital Raising Option by Dilution of Government Equity up to 51 per cent
1	2	3	4	5	6
Nationalised Banks		**11,381**	**8,441**	**2,637**	**5,171**
Allahabad Bank	55.2	447	247	19	37
Andhra Bank	51.6	485	250	3	6
Bank of Baroda	53.8	366	197	10	20
Bank of India	69.5	488	339	90	177
Bank of Maharashtra	76.8	431	331	111	218
Canara Bank	73.2	410	300	91	178
Central Bank of India	100.0	1,124	1,124	551	1,080
Corporation Bank	57.2	143	82	9	17
Dena Bank	51.2	287	147	1	1
IDBI Ltd.	52.7	724	382	12	24
Indian Bank	80.0	830	664	241	472
Indian Overseas Bank	61.2	545	333	56	109
Oriental Bank of Commerce	51.1	251	128	0	0
Punjab & Sind Bank	100.0	743	743	364	714
Punjab National Bank	57.8	315	182	21	42
Syndicate Bank	66.5	522	347	81	159
UCO Bank	75.0	799	600	192	376
Union Bank of India	55.4	505	280	22	44
United Bank of India	100.0	1,532	1,532	751	1,472
Vijaya Bank	53.9	434	234	13	25

Table 5.14: Capital Required (2007-08 to 2011-12) and Headroom Available – Nationalised Banks

(Rupees crore)

Bank	Total Enhancement in Capital Required at 9 per cent	Total Enhancement in Capital Required at 12 per cent	Total Enhancement in Tier-I Capital Required at 4.5 per cent	Total Enhancement in Tier-I Capital Required at 6 per cent	Headroom Available by Diluting Government Equity	Headroom Available under IPDI and Preference Shares
	End-March 2007 to End-March 2012				End-March 2007	
1	2	3	4	5	6	7
Nationalised Banks	**1,51,509**	**2,45,041**	**56,109**	**1,02,875**	**5,171**	**33,676**
Allahabad Bank	6,302	10,233	2,344	4,310	37	1,421
Andhra Bank	4,899	7,721	1,091	2,502	6	1,257
Bank of Baroda	13,142	20,945	4,097	7,998	20	3,043
Bank of India	13,647	21,633	6,155	10,148	177	2,330
Bank of Maharashtra	3,687	5,915	1,844	2,958	218	600
Canara Bank	14,670	24,485	6,873	11,780	178	3,140
Central Bank of India	8,579	13,242	3,705	6,037	1,080	1,316
Corporation Bank	4,706	7,654	759	2,233	17	1,465
Dena Bank	2,759	4,367	1,326	2,130	1	435
IDBI Ltd.	11,600	19,498	3,819	7,768	24	3,211
Indian Bank	3,763	6,407	344	1,666	472	1,449
Indian Overseas Bank	7,226	11,982	2,781	5,159	109	1,741
Oriental Bank of Commerce	7,308	11,864	1,725	4,002	0	2,043
Punjab and Sind Bank	1,738	2,850	480	1,036	714	475
Punjab National Bank	16,211	26,159	5,015	9,989	42	3,963
Syndicate Bank	7,735	12,311	3,679	5,966	159	1,274
UCO Bank	6,746	10,689	3,372	5,344	376	1,017
Union Bank of India	9,093	14,877	3,648	6,540	44	2,011
United Bank of India	3,629	5,817	1,397	2,491	1,472	754
Vijaya Bank	4,068	6,394	1,655	2,818	25	733

for nationalised banks during next five years at 12 per cent CRAR, banks have headroom to the extent of Rs.38,847 crore already and as their Tier I capital goes up, more headroom would be available under IPDI and PNCPS. Most importantly, banks in the past relied to a large extent (around 86 per cent Tier I capital requirements were met by reserves at end-March 2007) on ploughing back of profits, as alluded to earlier, and it is likely that banks continue to do so in future.

VI. THE WAY FORWARD

5.164 Basel II defines a new risk-sensitive framework consisting of three mutually reinforcing pillars that are expected to contribute to the safety and soundness of a financial system. Though the Indian banking sector has benefited from a supportive institutional and regulatory environment as reflected in their healthy and stable financial profile, certain weaknesses still need to be addressed, particularly in the light of the ongoing process of implementing Basel II standards.

5.165 India has currently adopted the standardised approach for credit risk and the basic indicator approach under Pillar 1. After adequate skills are developed, both by the banks and also by the Reserve Bank, some banks may be allowed to migrate to the advanced approaches available under Basel II framework. Capacity building, both in banks and the Reserve Bank is a serious challenge, especially with regard to adoption of the advanced approaches. Besides, there are several other issues that need to be addressed to ensure that the benefits of Basel II are maximised.

Implementation of Basel II across Banks

5.166 Commercial banks, co-operative banks and regional rural banks are placed at different levels insofar as capital adequacy norms are concerned. The non-Basel entities [RRBs and rural co-operatives such as state co-operative banks (StCBs) and district central co-operative banks (DCCBs)] constitute a small share of the financial system and are, therefore, not significant from the systemic perspective. However, the three track approach to Basel II

implementation, which has been adopted in India, might give rise to scope for regulatory arbitrage within the banking system. Non-Basel entities accept deposits from the public, enjoy deposit insurance and are part of the payment system. Going forward, therefore, the objective of the policy should be to reduce the scope for regulatory arbitrage and at the same time maintain a delicate balance so as to ensure that this does not constrain the non-Basel entities from discharging their respective specified roles in the national economy, *viz.*, achieving greater financial inclusion, playing a developmental role, and acting as conduits for credit delivery to the neglected sectors. As a first step in reducing regulatory arbitrage, it is felt that the non-Basel institutions be subjected to Basel I norms. Urban co-operative banks (UCBs) are already on Basel I for credit risk. Other banks such as RRBs and rural co-operatives could be given more flexibility to introduce new products and businesses when they decide to comply with Basel I. The package of recapitalisation and reform is under implementation for rural co-operatives wherein apart from recapitalisation through budgetary support from Central and State Governments, phased achievement of Basel I capital requirements is being contemplated. Furthermore, initiatives are being undertaken with a view to strengthening the rural co-operative structure as well as ensuring that these banks maintain financial discipline and also put in place an early warning mechanism so that the problems of depleting capital are addressed sufficiently early. After gaining the experience of implementation of Basel II norms for scheduled commercial banks, a view would need to be taken for applying Basel II norms for other banks. When these banks comply with Basel II norms, they would need to be provided the same treatment as the commercial banks.

5.167 Another likely scenario, which might arise post-Basel II implementation, is the asymmetry in regulatory regime amongst the competing broad segments of the financial sector, *viz.*, banking, securities and insurance sectors. With the commercial banking sector on Basel II, some scope for regulatory arbitrage amongst the three broad segments, especially between the banking and the insurance sectors would exist. The Joint Forum[7] has taken some initiatives in this direction, which may have to be pursued further to achieve parity in the level of regulatory burden across the three sectors, which compete amongst themselves for the business of financial intermediation.

Mitigation of Pro-cyclicality

5.168 An adverse consequence of implementation of Basel II could be pro-cyclical behaviour of banks. There is, therefore, need to guard against its adverse impact on India's macroeoconomy. One such way is to hold capital based on more stressed economic situations. This would ensure that banks maintain adequate capital during periods of economic downturns. Basel II contains a stress-testing requirement in which banks must simulate their portfolios in order to understand how economic cycles, especially downturn conditions, affect risk-based capital requirements. Also, under the prompt corrective action (PCA) framework that links supervisory actions closely, *inter alia*, to a bank's capital ratio, the Reserve Bank is required to take increasingly stringent forms of corrective action against banks as their risk-based capital ratios decline. The purpose is to ensure that timely regulatory action is taken to address problems of financially troubled banks. There is, therefore, a strong incentive for banks to maintain the minimum capital requirements significantly above the prescribed ratio as several banks have done in the past. It is expected that banks in future will manage their regulatory capital position in such a way that they remain adequately capitalised during economic downswings so that they are not required to raise capital. This would ensure that bank capital would be relatively stable while the cushion between required capital and actual capital held would vary during the economic cycle.

Safeguards before introducing Advanced Approaches

5.169 The Reserve Bank has already indicated that advanced approaches would be allowed in due course. Given the considerable costs and complexity of the advanced approaches and their attendant uncertainties and risks, there is a need to put in place adequate safeguards before allowing such approaches. One, the appropriateness of the capital requirements generated by the Basel II models depends in part on the sufficiency of the data inputs used by banks. Banks would also need data on

[7] The Joint Forum was established in 1996 under the aegis of the Basel Committee on Banking Supervision (BCBS), the International Organisation of Securities Commissions (IOSCO) and the International Association of Insurance Supervisors (IAIS) to deal with issues common to the banking, securities and insurance sectors, including the regulation of financial conglomerates.

stressed economic period for calibrating their models. However, to address these data sufficiency challenges and their effect on the ability of banks to use the advanced approaches for all portfolios, the Reserve Bank would have to decide whether and how to identify the banks to permit migration to the advanced approaches when adequate data to assess the risks of certain portfolios are limited. There would be need to address the limited data availability and lack of industry experience in incorporating economic downturn conditions into LGD estimates before allowing banks to follow advanced approaches. Two, while advanced approaches allow capital to be used more efficiently, it is possible that the capital requirements fall significantly even if banks continue to maintain the prescribed ratio of nine per cent. That is, even if banks continue to maintain the minimum prescribed ratio of nine per cent in relation to risk weighted assets, the absolute amount of capital the banks would hold may decline significantly under advanced approaches. It may, therefore, perhaps be desirable to prescribe minimum leverage ratio (capital in relation to total assets) to ensure that the capital held by banks has some proportion to the total size of its operations, irrespective of the measurement approaches. Some may argue that this defeats the very purpose of stipulating risk-sensitive capital requirements. However, the leverage ratio and the risk-sensitive ratios should be viewed as complementary. Just as the risk sensitive ratio offsets the weakness of the simple leverage ratio, the leverage ratio has the potential to offset the weaknesses of the risk-based ratio. For instance, some banks under the Basel II framework may not lend to the agriculture and the SME sectors as they are perceived to be risky and banks may choose to have only low risk portfolio. In those cases, the leverage ratio, by mitigating some of the risk sensitivity, could encourage banks to lend to the sectors which are perceived risky. The leverage ratio for the bank with low-risk profile could be higher than the risk sensitive Basel II requirements. Here, it may also be noted that the US has historically adopted the leverage ratio (simple capital to on-balance sheet assets ratio) and it continued to apply the leverage ratio even after Basel I and has stated that banks under Basel II would continue to be subject to the leverage ratio. The Reserve Bank has advised banks that the minimum capital maintained by them should be subject to a prudential floor. However, such requirement is only during the first three years of the revised Basel II framework. Once banks are also subjected to some leverage ratio, it would ensure that the capital maintained by them does not fall below a certain level. Three, in the implementation of advanced approaches, the Reserve Bank would have to deal with the increased complexity of issues. The Reserve Bank would have to exercise judgment on increasingly complex issues, including validating the models adopted by the banks. It would also be a challenge to apply Basel II requirements consistently across banks because of the flexibility allowed. To successfully meet this challenge, it would be necessary to develop appropriate human resource skills with a focus on quantitative techniques. Thus, while moving forward with advanced approaches could potentially entail certain risks, the proposed safeguards and stipulation of the leverage ratio should help mitigate potential negative effects.

Role of Rating Agencies

5.170 Under the standardised approach for credit risk adopted in India, the external rating assessment of portfolio has to play an important role. In view of the limited penetration of ratings and the absence of reliable ratings for different assets, the Indian banking industry will not be able to fully exploit the flexibility of Basel II. The role of rating agencies has also come under scrutiny in the recent sub-prime mortgage loan crisis. Some confusion surrounding the actual scope of the rating has also arisen. While rating agencies consider themselves responsible only for assessing credit risk, many fund managers, in particular short-term investment funds, might expect that ratings would cover all the risks (notably liquidity risk) that weigh on their investments. The second source of misunderstanding stems from the metric used by the rating agencies for rating structured products, which is identical, in terms of presentation, to that used for traditional bond products. The consequences of assigning a AAA rating to a CDO and to a corporate bond are not the same. The potential volatility of a AAA rating for a structured product, in particular, is far greater than that for a traditional product (for a shock, all other things are equal, of the same magnitude). Structured products are built on correlations and leverage. If one of the riskier tranches is affected by a default, the value (and the rating) of the other tranches will also be affected by contagion, through the decrease in their subordination level. Keeping these in view, in future, the possible improvements could be considered in three areas, among others. First, there should be greater transparency of rating methods and the overall role of rating agencies in the securitisation process. Second, a marked difference should be instituted in the metric used for rating bonds and structured

products, in order to distinguish the significance of ratings, either by adopting another rating scale for structured products (with another symbol for example) or by including an additional measure in the credit rating, in particular on its volatility in times of market or liquidity stress. Furthermore, a specific rating for liquidity risk also needs to be explored, although there are difficulties in such an exercise. The issues have also been raised about potential conflicts of interest in the activities of rating agencies as they are paid by the same entities which they rate. Therefore, there is need to change the incentive structure of rating agencies.

Constant Upgradation of Risk Management Systems

5.171 Though banks in India have been upgrading their risk management systems guided by the Reserve Bank's regulatory initiatives, under Basel II framework, the implementation of sound risk management practices should not be seen as an end in itself, but as a means whereby the risk management systems in banks are constantly upgraded to address the changing environment. The significance of this has been clearly borne out by the recent turmoil, which brought to light the interactions between credit, market liquidity and funding liquidity risks that many regulated financial institutions did not anticipate. On valuation, risk disclosure and accounting, the recent turmoil has exposed shortcomings in the transparency and valuation of complex products. It has also raised concerns about principles and practices for the consolidation of related off-balance sheet entities. There are a number of risk management challenges inherent in banking that require careful identification and attention. One of the most basic risk management challenges relates to concentration of risks. As risk management techniques grew over the centuries, bankers became more adept at identifying, measuring and managing risk concentrations, but the original problem presented by concentrations – that losses could occur all at the same time – still exists, usually unfavourable consequences. Risk concentrations can be hidden during normal times and may only manifest themselves during times of stress when activities or instruments that might in normal times have little or negative correlation suddenly become correlated, such as with a market-wide increase in the demand for liquidity as observed in the recent financial market crisis.

Strengthening Liquidity Risk Management

5.172 Effective liquidity risk management usually emerges as a challenge during periods of financial stress, when many markets become less liquid, making it difficult for some entities to fund themselves. In recent months, some of the well-known challenges associated with liquidity risk management became evident in the light of the US sub-prime crisis and the failure of the Northern Rock bank in the UK. Even banks with strong capital base experienced liquidity problems as they did not have a strong liquidity risk management system in place.

5.173 Under Basel II, though liquidity risk is not reckoned explicitly as Pillar 1 risk, it is provided that a bank's Pillar 2 assessment should cover the full range of risks facing an institution, including liquidity risks. The adequate stress and scenario testing for potential asset expansions arising from liquidity shocks becomes crucial to communicate to market participants about their risk profiles. The BCBS has already initiated the process of assessment of the weaknesses identified by the recent crisis with a view to setting global standards for liquidity risk management and supervision, and integrating it more closely with other risk management disciplines.

Role of Technology

5.174 Basel II framework is having a significant impact on the IT infrastructure of financial institutions as the bank managements are required to align the business needs of their enterprises with technologies that support them. The implementation of core banking solutions by some banks without assessing its scalability or adaptability to meet Basel II requirements could be an area of concern. The challenge in this regard for banks is to ensure that they derive maximum advantage out of their investments in technology and to avoid wasteful expenditure which might arise on account of uncoordinated and piecemeal adoption of technology; adoption of inappropriate/inconsistent technology; and adoption of obsolete technology. Apart from the technology, the existing levels of skills of human resources would also require to be supplemented/ upgraded at the bank level.

Building up of Supervisory Skills

5.175 The Reserve Bank faces several human capital challenges in implementing Basel II. Although the skills needed to oversee Basel II implementation are similar to the skills needed for all kinds of risk management oversight, there would be need for additional quantitative skills. The supervisory staff would need to be trained in several areas, including internal control reviews, economic capital, operational risk and validation of credit rating. The Reserve Bank

has already initiated several measures to develop its human resource skills in tune with the requirements of Basel II norms. Going forward, the need would be to constantly review human resource skill requirements and initiate timely measures.

Common Reporting Templates

5.176 Under Pillar 2, banks take the lead in developing internal risk management processes that support robust estimates of regulatory and economic capital. Under Pillar 2, the common reporting template prescribed by the Reserve Bank in the ICAAP document would ensure easy comparability across banks. In future, external benchmarks could also be made available by the Reserve Bank for comparison/self-evaluation of the risk components/ operational losses.

Greater Transparency

5.177 Through enhanced transparency and market discipline, Pillar 3 will become more important as banks increasingly access the capital markets. Banks are in the process of putting in place a system for assessing the appropriateness of their disclosures, including validation and frequency. Besides, banks are required to design reporting framework/disclosures in the context of stated business objectives and provide information on the risks and the risk management systems in the public domain. This information could be used by the Reserve Bank for comparison among banks.

Co-ordination of Home-Host Issues

5.178 There are several domestic banks which are internationally active. Several foreign banks also operate in India. Basel II implementation may pose challenge of home-host co-ordination on account of differences in concerns and objectives of supervisors across different countries. While host country supervisors face the costs of adjusting to differences the way in which foreign banks will implement Basel II, banks and home country supervisors are concerned about host supervisors' intrusions, questions and special rules (Bernanke, 2004). The ideal solution for managing a complex task of this nature is through mutual co-operation amongst the supervisors. They have indeed made strong progress to coordinate home-host implementation issues at the level of individual banks, particularly for Pillar 1 (minimum capital requirements). The Accord Implementation Group (AIG) at BCBS is now focusing its attention on Pillar 2 (supervisory review process) and it also will begin work on Pillar 3 (market discipline). Bilateral and multilateral cross-border implementation of Basel II alongwith the ongoing supervisory arrangements such as 'supervisory colleges,' are likely to result in a more effective cooperation and information exchange among supervisors. Nevertheless, going forward, home-host coordination issues could at times create tensions and it would be a challenge to deal with them appropriately (see also Chapter X).

VII. SUMMING UP

5.179 Basel I has served regulators and banks well for many years and it continues to do so for many smaller institutions. However, for large and complex banking organisations, it increasingly failed to adequately align regulatory capital required with the underlying risks. Basel II represents a fundamental shift in the regulatory capital framework by aligning the capital requirements with underlying risks through enhanced risk measurement techniques and encouraging banks to develop a more disciplined approach to risk management. Basel II, therefore, will help in promoting the safety and soundness of the banking system. However, in view of the recent financial market turmoil, a number of modifications have been suggested in the Basel II framework. These measures need to be evaluated in terms of their ability to prevent future crises. Direct regulatory interventions such as mandating more capital could entail economic costs, and it is in this context that the proposal of capital insurance, wherein it would be possible to transfer more capital onto the balance sheets of troubled banking firms, has been mooted (Kashyap, Rajan and Stein, 2008).

5.180 The Reserve Bank had announced the use of the standardised approach for credit risk and basic indicator approach for operational risk in the case of foreign banks operating in India and Indian banks having overseas presence from the year ended March 2008. Other banks are expected to adopt Basel II not later than March 2009. Measures were initiated to ensure smooth migration to Basel II norms. In fact, banks that were to apply such norms from the year ended March 2008 have already done so successfully. The parallel runs for other banks continue. As banks would have to maintain capital for operational risk, overall capital requirements are expected to go up, even if there is decline in the capital required on account of credit risk. Most of the banks in India at present are operating at higher capital adequacy ratio than the prescribed level. Therefore, meeting the Basel II requirements for the immediate future should

not be an issue. However, going forward, meeting the capital requirements would be a major challenge, especially for public sector banks.

5.181 Total capital requirements in the next five years (from end-March 2008 to end-March 2012) are projected to go up by Rs.5,69,129 crore assuming that banks maintain CRAR at 12 per cent. The total capital requirements by public sector banks are projected to go up by Rs.3,69,254 crore. However, in the past, more than 85 per cent of the capital requirements were met by generating reserves and it is likely that banks continue to do so in future. Besides, banks also have some headroom available for diluting Government equity and raising funds under innovative instruments (IPDI) and preference shares.

5.182 The implementation of Basel II would also pose several implementation challenges. Besides, several other issues would have to be addressed going forward. India has followed a three track mode, whereby as commercial banks, co-operative banks and regional rural banks are placed at different levels insofar as capital adequacy norms are concerned. Although this does not raise any concern from the systemic viewpoint, it does give rise to regulatory arbitrage. Non-Basel institutions therefore, need to be subjected to Basel I norms. Subsequently, based on the experience of implementing Basel II framework in respect of commercial banks, a view could be taken on the application of Basel II norms for other banks. A serious fallout of the Basel II norms could be pro-cyclical behaviour of banks. To mitigate the impact of such a behavior, it may be desirable for banks to hold capital above the prescribed minimum so that their lending to various sectors during downswings is not adversely affected and that they do not find it difficult to raise capital from the market. The Reserve Bank has already indicated that banks could be allowed to move to advanced approaches in due course. Advanced approaches are more risk sensitive and would, therefore, help promote financial stability. However, there are also uncertainties and risks attached to such approaches. It is, therefore, necessary to take enough safeguards before advanced approaches are adopted. These include developing human resource skills and prescribing the leverage ratio so that the capital held does not fall significantly. There are also certain issues relating to the rating agencies that need to be addressed. The issues have also been raised about potential conflicts of interest in the activities of rating agencies. Although banks have adopted risk management practices, going forward, the need would be to constantly upgrade such system in tune with the changing demands. Technology will continue to play a major role in the operations of banks. The challenge in this regard for banks is to ensure that they derive maximum advantage out of their investments in technology and that they avoid wasteful expenditure which might arise on account of uncoordinated and piecemeal adoption of technology, adoption of inappropriate/inconsistent technology, and adoption of obsolete technology. Banks, therefore, need to ensure that the technology adopted by them suit their requirements and is cost-effective. The implementation of Basel II norms is likely to create tensions on home-host coordination issues and it would be a challenge to mitigate such tensions. The Basel II is a significant improvement over Basel I, which became increasingly inadequate with the passage of time. Basel II norms by making capital requirements sensitive are expected to promote the safety and soundness of the banking system. However, its full benefits could be realised only by taking appropriate safeguards against some of its deficiencies.

Annex V.1: Basel II Implementation: Cross-Country Status

Country	Status of Implementation
Australia	The Australian Prudential Regulation Authority (APRA) finalised the Basel II prudential standards in 2005 after extensive industry consultations. Presently, majority of authorised deposit-taking institutions (ADIs) in Australia are using the standardised approaches available under the Basel II framework. The reporting requirements for these ADIs broadly replicate the previous capital reporting requirements, with some additions in areas such as operational risk and securitisation. In December 2007, the APRA announced a list of ADIs that have been given approval to adopt, from January 1, 2008, the advanced approaches available under Basel II framework. Subsequently, in February 2008, the APRA released its reporting requirements for ADIs under the new Basel II capital adequacy regime. These guidelines deal with the calculation of minimum regulatory capital for credit risk, market risk, operational risk and for ADIs approved by APRA to use the Basel II advanced approaches, interest rate risk in the banking book.
Brazil	In December 2004, Banco Central do Brasil issued a schedule for Basel II implementation in Brazil. This five-phased process is scheduled to culminate in 2011.
China	Big Chinese banks with large overseas operations, such as Industrial and Commercial Bank of China, will have to implement the new standard by 2010. Banks can apply for a deadline extension of up to three years. It was reported that the Chinese regulator has been pressing big local lenders to start developing the advanced internal ratings based system (A-IRB) as well.
European Union	The European Union has already implemented the Basel II framework via EU Capital Requirements Directives (CRD). Many European banks have already started reporting their capital adequacy ratios according to the new system. All the credit institutions are scheduled to adopt the framework by 2008.
Hong Kong	Hong Kong-based banks have begun implementation of the Basel II rules in a two-stage programme that extended from the beginning of 2007 to January 2008. The Capital and Disclosure Rules came into effect on January 1, 2007. In 2007, the Hong Kong Monetary Authority (HKMA) gave approval to four authorised institutions (AIs) to migrate to more advanced approaches. The HKMA also established a structured process for review of applications to adopt Standardised Approach or Alternative Standardised Approach for operational risk. The first round of Supervisory Review Process on local AIs under Pillar 2 was completed in 2007. The HKMA plans to continue to process Basel II applications in 2008. A review for enhancement of risk management practices after adoption of Basel II is also on cards.
Indonesia	Bank of Indonesia will introduce the standardised, internal rating-based and advanced approaches starting from 2009. These approaches will be phased in over time. The decision on the approach to be used will be made by individual banks with approval from the supervisor. If a bank has already used the internal rating based or advanced approach, it will not be permitted to replace the approach in use with the standardised approach without approval from the bank supervisor.
Japan	The Basel II was implemented by Financial Services Agency (FSA) from end of March 2007. At the end of March 2007, the FSA had approved the adoption of the F-IRB Approach by a total of 23 groups and 19 financial institutions. The adoption of the A-IRB Approach is scheduled for approval from the end of March 2008. For the measurement of operational risk, financial institutions are also allowed to choose the approach best suited for them from three options: the basic indicator approach, the Standardised Approach and the Advanced Measurement Approach. Financial institutions wishing to adopt the Standardised Approach or the Advanced Measurement Approach are required to obtain prior approval from the regulatory authorities. Regarding the Standardised Approach, the FSA granted approval for the use thereof to 22 groups and 45 financial institutions in March 2007. the Advanced Measurement Approach regarding operational risk is scheduled for introduction from end-March 2008.
Malaysia	In April 2007, the Bank Negara Malaysia issued the guidelines for revised capital framework for the banking institutions and insurers. This revised capital framework was implemented on a trial run basis beginning April 2007. The revised capital framework for banking institutions is based on the standardised approaches under Basel II, effective from 1 January 2008. Banking institutions that have made significant progress in developing robust internal rating standards would be given the flexibility to adopt IRB approach in 2010 without having to comply with the standardised framework. The revised capital framework for insurers will be effective from January 1, 2009. Insurers which possess the capacity to adopt the framework earlier will be given the flexibility to migrate to the framework in 2008.
New Zealand	Locally incorporated New Zealand banks are required to hold capital based on Basel II requirements from the first quarter of 2008. Banks may, if accredited, use the internal models approach to calculate their capital requirements under Basel II or otherwise must use standardised approach. For banks registered as branches in New Zealand, Basel II developments will have disclosure implications only.
Philippines	In June 2006, the Monetary Board of the Bangko Sentral ng Pilipinas (BSP) approved major revisions to the risk-based capital adequacy framework, to align the then existing Basel I-compliant framework with the new Basel II standards, effective from July 1, 2007. Accordingly universal/commercial banks (UBs/KBs) have started complying with the standardised

Annex V.1: Basel II Implementation: Cross-Country Status *(Concld.)*

Country	Status of Implementation
	approach for credit risk, and the basic indicator or standardised approaches for operational risk since 2007. By 2010, these banks may move to the F-IRB or A-IRB approaches for credit risk and advanced measurement approaches for operational risk. Implementation of Basel II for thrift banks (TBs) and rural/cooperative banks are at different stages of implementation.
Republic of Korea	As scheduled the implementation of Basel II has begun in 2008 for domestic banks. Of the 18 domestic banks, one bank (Kookmin) has received regulatory approval for the use of IRB approach; the 17 others are to begin with the standardised approach. Both the Industrial Bank of Korea and the Korea Development Bank are also working on regulatory approval for the use of IRB approach in 2009.
Russia	Basel II is expected to be implemented in Russia in 2008-2009, with Pillar 1 envisaged for implementation in 2008, and Pillars II and III in 2009. By this deadline, the Simplified Standardised Approach is expected to be implemented within the framework of Pillar 1 for the purpose of calculating regulatory capital for credit risk and the basic indicator approach for operational risk. For credit risk, the possibility and appropriateness of adopting the standardised approach based on the international rating agencies' ratings is being evaluated.
Singapore	Monetary Authority of Singapore (MAS) issued the Basel II guidelines for Singapore in December 2007. The Basel II framework for all Singapore incorporated banks has been implemented by the MAS on January 1, 2008. As per the guidelines, the banks are not required to adopt specific approaches from among those that are available under Pillar 1, but each bank is expected to adopt the approaches that are commensurate with its risk profile. The minimum Tier I and total capital adequacy ratios of 6 per cent and 10 per cent, respectively, have not been changed by the introduction of the Basel II rules in Singapore.
Thailand	The Basel II capital charge is expected to commence in Thailand at the end of 2008 for all approaches except for the AIRB Approach which will commence at the end of 2009. According to their risk profile, size and complexity, banks are free to choose appropriate credit risk capital calculation approaches. Banks that adopt advanced approaches, namely the F-IRB Approach and A-IRB Approach, are subjected to pre-requisites and the Bank of Thailand' s (BOT) approval. The BOT only allows retail banks to use the Simplified Standardised Approach (SSA). The BOT currently does not allow banks to adopt the Advanced Measurement Approaches (AMA) for operational risk capital calculation since risk measurement techniques in this area remains to be further validated with the local data. In addition, the BOT also believes that banks that adopt the IRB Approach for credit risk should have sufficient resources atleast adopting the SA for operational risks. Therefore, IRB banks are not allowed to use the Basic Indicator Approach (BIA) for operational risk.
USA	In the US, Basel IA was proposed initially as an intermediate between the Basel I framework and the Basel II framework. Basel IA would have been more risk sensitive than Basel I but would not be as complex as the advanced approach under Basel II. On July 20, 2007 however, by an understanding between the various US banking regulators (The Federal Reserve, the Office of the Controller of the Currency and the Office of Thrift Supervision and the Federal Deposit Insurance Corporation), it was decided to drop the proposed Basel IA and allow Basel II standardised approach in its place. Smaller banks who do not wish to move to Basel II Advanced or Basel IA approach could continue to operate under Basel I. The Federal Reserve Board also approved final rules to implement new risk-based capital requirements in the United States for large, internationally active banking organisations (so-called "core" banking organisations with at least $250 billion in total assets or at least $10 billion in foreign exposure) for whom Basel II would be mandatory. As per the rules, the core banking organisations would be required to have rigorous processes for assessing their overall capital adequacy in relation to their total risk profile and to publicly disclose information about their risk profile and capital adequacy. As a safeguard, the rules suggested that banking organisations satisfactorily complete a four-quarter parallel run period before operating under the Basel II framework. Following a successful parallel run period, a banking organisation would have to progress through three transitional periods (each lasting at least one year), during which there would be floors on potential declines in risk-based capital requirements. Those transitional floors would limit maximum cumulative reductions of a banking organisation's risk-based capital requirements to 5 per cent during the first transitional floor period, 10 per cent during the second transitional floor period, and 15 per cent during the third transitional floor period. A banking organisation would need approval from its primary federal regulator to move into each of the transitional floor periods, and at the end of the third transitional floor period to move to full Basel II. The federal banking agencies will publish a study after the end of the second transition year that examines the new framework for any material deficiencies. The agencies intend to issue a proposed rule that would provide all non-core banking organisations, which are not required to adopt Basel II's advanced approaches, with the option to adopt a standardised approach under Basel II. The proposed rule is intended to be finalised before the core banking organisations start their first transition period year under Basel II.

Source : Web-sites of respective regulators as well as news reports, available upto end-February 2008.