REPORT ON CURRENCY AND FINANCE 2002-03

RESERVE BANK OF INDIA

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FOREWORD

During the 1990s, India has witnessed wide-ranging economic reforms encompassing various sectors of the economy. A comprehensive assessment of the reforms process was undertaken last year in the Report on Currency and Finance, 2001-02. A critical ingredient of the reform process has been the reform of India's external sector.

With the opening up of the economy since the early 1990s, issues relating to the open economy macroeconomics have become more relevant for macroeconomic policy. With financial liberalisation and increasing globalisation, capital movements have come to play an important role in influencing the exchange rate and interest rate arithmetic of the financial markets on a day-to-day basis. The volatile nature of the capital flows triggering instability and the subsequent contagion effect has been demonstrated in various episodes of financial crises across the world during the 1990s. The growing interaction between the fiscal deficits, capital flows, exchange rates and interest rates have posed a number of macroeconomic policy challenges.

India's approach has been cautious in opening of the capital account, contingent on achieving certain preconditions to ensure an orderly process of liberalisation and ensuring macroeconomic stability. This approach has been vindicated in recent years with the growing incidence of financial crises elsewhere in the world. All the same, over the years, the policy regime in India in regard to current and capital account inflows and outflows has witnessed very significant change. The trade regime has been significantly liberalised with the abolition of quantitative restrictions and reduction in tariff rates. Non-debt creating flows are being encouraged. Moreover, building of institutions, financial infrastructure and putting in place appropriate supervisory and regulatory frameworks have helped to maintain financial stability in India while it has opened its economy very substantially since the early 1990s. The success of the policy reforms is evident in the strength and resilience built up in the external sector.

Against this backdrop and in recognition of the growing importance of the external sector in driving the economy, this Report is focused on the theme: "Management of the External Sector in an Open Economy Framework". The Report addresses issues related to the structural change and improvement in the current account, the continuing debate on the appropriateness of exchange rate policies pursued by emerging market economies, building up of reserves, the speed and sequencing of capital account liberalisation and the framework of international financial architecture. The Report attempts to provide India's perspective on several of these issues. The Report is timely and topical particularly in view of the large accretion to foreign exchange reserves that has taken place in India and other Asian countries in the last couple of years. Furthermore, the emerging confidence being displayed by Indian companies in an increasingly open economy calls for continuing analysis of these issues. I hope that some of the suggestions emanating from the analysis offered in the Report will provoke further debate and continue to aid policy formulation. Comments and suggestions on the Report would be welcome.

The Report has been prepared in the Department of Economic Analysis and Policy (DEAP) under the overall guidance, supervision and editing by Narendra Jadhav, Principal Adviser of the Department.

Coordination responsibilities were entrusted to a core team of economists led by Rajiv Ranjan. The core team comprised Snehal Bandivadekar, Sumit Basu, Subhra Bhattacharjee, Bhaskar Chatterjee, S. Chinngaihlian, B.S. Choudhary, S.C. Dhal, Ramesh Golait, Sanjay Hansda, A. K. Jha, Avijit Joarder, Muneesh Kapur, Rajesh Kumar, Atri Mukherjee, Brijesh Pazhayathodi, N.C. Pradhan, Ajay Prakash, Anupam Prakash, M. Ramaiah, Arindam Roy, Satyananda Sahoo, Bhupal Singh and S. Suraj.

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Some of the issues raised in the Report are still evolving and it would take some time for them to settle down. The theme is challenging and could expand into covering the whole arena of macroeconomics in an open economy framework. The task of getting the right balance between theory and practice was difficult. The group of young economists, who undertook the challenge of drawing a fine balance, did so, with courage, determination and forthrightness. I would like to record my deep appreciation to the team led by Narendra Jadhav for their dedication and hard work in producing this analytical and thought provoking Report.

Rakesh Mohan
Deputy Governor

January 24, 2004

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ABBREVIATIONS

ADB	–	Asian Development Bank
ADRs	–	American Depository Receipts
ADs	–	Authorised Dealers
AEZs	–	Agri Export Zones
AIFIs	–	All India Financial Institutions
ARCH	–	Auto Regressive Conditional Heteroscedasticity
ASEAN	–	Association of South East Asian Nations
ASIDE	–	Assistance to States for Infrastructural Development for Exports
BCBS	–	Basel Committee on Banking Supervision
BCI	–	Business Confidence Index
BIS	–	Bank for International Settlements
BoP	–	Balance of Payments
BPO	–	Business Process Outsourcing
CA	–	Current Account
CAC	–	Capital Account Convertibility
CACs	–	Collective Action Clauses
CAD	–	Current Account Deficit
CBLO	–	Collateralised Borrowing and Lending Obligation
CCI	–	Current Competitiveness Index
CCIL	–	Clearing Corporation of India Limited
CCL	–	Contingent Credit Line
CD	–	Certificates of Deposit
CGFS	–	Committee on the Global Financial System
CII	–	Confederation of Indian Industry
CII-ASCON	–	Confederation of Indian Industry-Associations Council
CIP	–	Covered Interest Parity
CIS	–	Commonwealth of Independent States
CMIE	–	Centre for Monitoring Indian Economy
CPI	–	Consumer Price Index
CPI-IW	–	Consumer Price Index for Industrial Workers
CPLG	–	Core Principles Liaison Group
CPSS	–	Committee on Payment and Settlement System
CRAR	–	Capital to Risk-Weighted Assets Ratio
CRR	–	Cash Reserve Ratio
CV	–	Coefficient of Variation
DCCB	–	District Central Co-operative Bank
DEAR	–	Daily Earnings At Risk
DEM	–	Deutsche Mark
DEPB	–	Duty Entitlement Pass Book
DGCI & S	–	Directorate General of Commercial Intelligence and Statistics
DGNI	–	Debt to Gross National Income Ratio
DSE-ECRI	–	Delhi School of Economics-Economic Cycles Research Institute
DSR	–	Debt Service Ratio
DTA	–	Domestic Tariff Area
D*v*P	–	Delivery *versus* Payment
EBRD	–	European Bank for Reconstruction and Development
ECAIs	–	External Credit Assessment Institutions
ECBs	–	External Commercial Borrowings
EFM	–	Emergency Financing Mechanism

EMEs	–	Emerging Market Economies
EMG	–	Effective Market Growth
EPZs	–	Export Processing Zones
ERM	–	Exchange Rate Mechanism
ESAF	–	Enhanced Structural Adjustment Facility
ESOP	–	Employees' Stock Option Plan
ET-NCAER	–	Economic Times - National Council of Applied Economic Research
EXIM	–	Export-Import
FAO	–	Food and Agricultural Organisation
FATF	–	Financial Action Task Force
FCCBs	–	Foreign Currency Convertible Bonds
FCNR(A)	–	Foreign Currency Non-Resident (Account)
FCNR(B)	–	Foreign Currency Non-Resident (Bank)
FDI	–	Foreign Direct Investment
FEDAI	–	Foreign Exchange Dealers Association of India
FEMA	–	Foreign Exchange Management Act
FER	–	Foreign Exchange Reserves
FF	–	French Franc
FH	–	Feldstein-Horioka
FICCI	–	Federation of Indian Chambers of Commerce and Industry
FI	–	Financial Institution
FII	–	Foreign Institutional Investor
FMCG	–	Fast Moving Consumer Goods
FRL	–	Full Reservoir Level
FSAP	–	Financial Stability Assessment Programme
FSF	–	Financial Stability Forum
FSSA	–	Financial System Stability Assessment
FTAs	–	Free Trade Agreements
FTP	–	Financial Transaction Plan
GATS	–	General Agreement on Trade in Services
GCI	–	Growth Competitiveness Index
GDCF	–	Gross Domestic Capital Formation
GDDS	–	General Data Dissemination System
GDP	–	Gross Domestic Product
GDPFC	–	Gross Domestic Product at Factor Cost
GDRs	–	Global Depository Receipts
GFD	–	Gross Fiscal Deficit
HIPC	–	Heavily Indebted Poor Country
IAIS	–	International Association of Insurance Supervisors
IASB	–	International Accounting Standards Board
IASC	–	International Accounting Standards Committee
IASs	–	International Accounting Standards
IBS	–	International Banking Statistics
ICCs	–	International Credit Cards
ICRA	–	Investment and Credit Rating Agency
IDBs	–	India Development Bonds
IEO	–	Independent Evaluation Office
IFAC	–	International Federation of Accountants
IFC	–	International Financial Corporation
IFRSs	–	International Financial Reporting Standards
IIF	–	Institute of International Finance

IIP	–	Index of Industrial Production
ILOLR	–	International Lender of Last Resort
IMDs	–	India Millennium Deposits
IMF	–	International Monetary Fund
IMFC	–	International Monetary and Financial Committee
IOSCO	–	International Organisation of Securities Commissions
IRB	–	Internal Ratings Based
IRDs	–	Interest Rate Derivatives
ISR	–	Interest Service Ratio
IT	–	Information Technology
ITS	–	International Trade Statistics
JF	–	Joint Forum
JPY	–	Japanese Yen
JVs	–	Joint Ventures
LAN	–	Local Area Network
LBS	–	Locational Banking Statistics
LERMS	–	Liberalised Exchange Rate Management System
LOLR	–	Lender of Last Resort
LPA	–	Long Period Average
M_3	–	Broad Money
MDGs	–	Millennium Development Goals
MFN	–	Most Favoured Nation
MNCs	–	Multinational Companies
MPIs	–	Macro Prudential Indicators
MTES	–	Medium Term Export Strategy
NAB	–	New Agreement to Borrow
NAFTA	–	North American Free Trade Area
NAP	–	National Agriculture Policy
NCAER	–	National Council of Applied Economic Research
NDS	–	Negotiated Dealing System
NELM	–	New Economics of Labour Migration
NFA	–	Net Foreign Assets
NPAs	–	Non-Performing Assets
NR(E)RA	–	Non-Resident (External) Rupee Account
NRE	–	Non-Resident External
NRO	–	Non-Resident Ordinary
NSE	–	National Stock Exchange
NSSF	–	National Small Savings Fund
OCBs	–	Overseas Corporate Bodies
OD	–	Overdrafts
OECD	–	Organisation for Economic Co-operation and Development
OGL	–	Open General Licence
OMS	–	Open Market Sales
OWS	–	Other Welfare Schemes
PCAOB	–	Public Company Accounting Oversight Board
PGP	–	Public Guaranteed Debt
PEM	–	Public Expenditure Management
PINs	–	Public Information Notices
PIOs	–	Persons of Indian Origin
PPP	–	Purchasing Power Parity
PRSPs	–	Poverty Reduction Strategy Papers
QFCs	–	Quasi-Fiscal Costs
QRs	–	Quantitative Restrictions
RBI	–	Reserve Bank of India
RBICC	–	Reserve Bank Credit to the Centre
RCA	–	Relative Comparative Advantage
RFC	–	Resident Foreign Currency
RIBs	–	Resurgent India Bonds
ROSCs	–	Reports on the Observance of Standards and Codes

RTAs	–	Regional Trade Agreements
RTP	–	Reserve Tranche Position
SAP	–	Structural Adjustment Programme
SARFAESI	–	Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest
SCBs	–	Scheduled Commercial Banks
SDDRF	–	Sovereign Debt Dispute Resolution Forum
SDDS	–	Special Data Dissemination Standard
SDRM	–	Sovereign Debt Restructuring Mechanism
SDRs	–	Special Drawing Rights
SEBI	–	Securities and Exchange Board of India
SERCs	–	State Electricity Regulatory Commissions
SEZs	–	Special Economic Zones
SHGs	–	Self-Help Groups
SITC	–	Standard International Trade Classification
SLR	–	Statutory Liquidity Ratio
SOX	–	Sarbanes-Oxley
SRF	–	Supplementary Reserve Facility
SSIs	–	Small-Scale Industries
StCBs	–	State Co-operative Banks
STD	–	Short-Term Debt
TD	–	Total Debt
TFPG	–	Total Factor Productivity Growth
TNCs	–	Transnational Corporations
TPDS	–	Targeted Public Distribution System
TRIPS	–	Trade Related Intellectual Property Rights
UCBs	–	Urban Co-operative Banks
UIP	–	Uncovered Interest Parity
VAR	–	Vector Autoregression
VAT	–	Value Added Tax
WEO	–	World Economic Outlook
WMA	–	Ways and Means Advances
WOSs	–	Wholly Owned Subsidiaries
WPI	–	Wholesale Price Index
WSS	–	Weekly Statistical Supplement
WTO	–	World Trade Organisation

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

I THEME OF THE REPORT

1.1 The Indian economy witnessed wide ranging reforms in trade, industrial, financial, monetary and fiscal sectors during the 1990s. A comprehensive assessment of the reforms process with a focus on the underlying rationale of the reforms, their content, impact and emerging lessons for the future was undertaken last year in the Report on Currency and Finance, 2001-02. With the institution of structural reforms, the entire gamut of trade, exchange rate, industrial, foreign investment, fiscal and monetary policies began to be operated under the open economy macroeconomic framework. The pressure of globalisation called for a careful monitoring of capital account transactions with a view to maintain sustainability of the balance of payments and overall macro economic stability.

1.2 A striking feature of the structural reforms in India has been the strength and resilience built up in the external sector. Over the 1990s, the current account deficit in the balance of payments remained sustainable, averaging around 1 per cent of GDP, before turning into a small surplus in 2001-02 and 2002-03 after a gap of 25 years. The turnaround from persistent current account deficits of the 1980s occurred on account of a strong improvement in the ability to earn foreign exchange through both merchandise and invisible exports. India's market share in global exports improved *albeit* modestly. New sources of export competitiveness, such as, software have emerged, where India is among the world leaders. Substantial increase in capital flows with significant shifts in composition has occurred. Up to the end of the 1980s, the bulk of capital flows into India were mainly debt flows in the form of external assistance. Since the mid-1990s, more than half of net capital flows have been in the form of foreign investment, reflecting the high degree of international investors' confidence in the Indian economy. Indian corporates are listing on international stock exchanges and are engaged in acquisition of companies abroad. In the last three years alone, the foreign exchange reserves have increased dramatically crossing US $ 100 billion mark in December 2003. Indeed, the Indian economy has come a long way since 1991 when the foreign currency assets had dwindled below US $ 1 billion. It is also noteworthy that contemporaneous policy efforts to consolidate external debt have brought down the debt/GDP ratio and the debt service ratio to levels associated by the World Bank with the status of 'least indebted' countries. Significantly, short-term debt constitutes barely 5 per cent of total external debt and less than 7 per cent of the level of reserves.

1.3 The distinct improvement in the external sector in India has enabled a progressive liberalisation of the exchange and payments regime. The exchange rate is market-determined. Exchange rate management is flexible without fixed or pre-announced targets or bands, with interventions primarily to ensure orderly market conditions. India's exchange rate policy is perceived to be realistic and the exchange rate is among the least volatile in emerging market economies. Quantitative restrictions on merchandise trade have been abolished and tariffs are progressively being brought down to international levels. Payments restrictions on all current account transactions have been removed with the acceptance of the obligations of Article VIII of the IMF's Articles of Agreement. A cautious and calibrated policy has been pursued for management of capital account liberalisation. Non-debt creating flows in the form of foreign direct and portfolio investment, and long maturity commercial borrowings have been encouraged, while short-term debt, banking capital and non-resident deposits have been modulated. In the recent period, significant relaxations have been allowed for capital outflows in the form of direct and portfolio investments, non-resident deposits, repatriation of assets and funds held abroad. Indian residents can now open foreign currency accounts with banks in India. The sequence and pace of liberalising capital transactions has been determined by the strength of the macro-economic fundamentals and by the evolving international environment.

1.4 Against the backdrop of the significant transformation of external sector of the Indian economy and in recognition of the growing importance of the external sector in driving the economy, this Report attempts to address the theme

"Management of the External Sector in an Open Economy Framework". The focus of the Report is on the changing contours of the management of the external sector in India in a progressively open economy framework. The rest of the Report is organised as follows.

1.5 The Chapter II entitled "Recent Economic Developments" presents an update on the developments during 2003-04 highlighting the strong recovery in economic activity as seen in various sectors of the economy. The update on the economy is analysed against the background of the developments last year.

1.6 Chapter III on "Conduct of Macroeconomic Policy in an Open Economy" attempts to look into the changed context and paradigm of policymaking for an economy proceeding towards greater degrees of openness. The changing contours of the policy framework under the process of opening up of the economy has been analysed at an aggregative level embracing the three major arms of monetary, fiscal and financial policies. A discussion of the synchronicity of business cycles across economies provides the context for the sections on the real sector. Increasing openness of the economy complicates task of fiscal policy formulation because of the uncertainties about the magnitude, speed and direction of the trade and capital flows. The Chapter, therefore, dwells on agenda for public policy in an open economy which includes, reforming the tax system and administration, facilitating comprehensive expenditure reform, providing quality infrastructure and services of social nature including health and education. As regards monetary policy formulation, central banks need to take into account, *inter alia*, developments in the global economic situation, the international inflationary situation, interest rate situation, exchange rate movements and capital movements while formulating their policy response. Openness should, however, be preceded, by deregulation and strengthening of institutional framework in order to limit contagious influences.

1.7 Against the background of a noticeable increase in world trade along with structural and compositional shifts in production towards higher technology intensive products, particularly in Asia, the Chapter IV entitled "International Trade Dynamics" examines the changing structure and composition of India's trade. The Chapter examines, *inter alia*, the relevance of reservation of products for small scale industries (SSI) in an open economy context. Issues like trade openness, competitiveness of exports, foreign investment and trade and pass-through of exchange rate have been highlighted in the Chapter. The Chapter also dwells in detail on developments in the WTO and regional fora.

1.8 Chapter V entitled "Current Account Dynamics in an Open Economy" highlights the issues of sustainability of current account deficits and twin deficits in the international context as well as with reference to India. Other issues covered in the Chapter include saving-investment relationship in an inter-temporal framework; desirability of financing the required rate of investment in a developing economy through the current account deficits when the domestic savings rate is low; and competitiveness of services exports. The sources of current account balances emerging from public or private saving-investment gap which have implications for future sustainability are also dealt with in the Chapter. Finally, the Chapter also focuses on workers' remittances, their sources and the determinants.

1.9 Chapter VI entitled "Management of Capital Flows" focuses on the capital account of the balance of payments against the background of noteworthy expansion of capital flows *vis-à-vis* trade flows. The Chapter dwells on the surge in the overall capital flows, the compositional shift towards private and equity flows, the volatility associated with these flows and linkages of capital flows with demography and growth. Specific components of capital flows, such as, foreign direct investment, portfolio investment, external commercial borrowings, non-resident deposits and external assistance are covered. India's transactions with the IMF highlighting on India becoming member of the IMF's Financial Transaction Plan are discussed. The Indian experience with management of large and sustained capital flows, their implication for monetary management and the policy options are presented in this Chapter. The Chapter also highlights the usefulness of the balance sheet approach, which is helpful in identifying financial inter-linkages, imbalances, vulnerabilities and risks for the economy.

1.10 The need for a more dynamic and pragmatic approach towards management of exchange rates, reserves and external debt, keeping in view the country specific circumstances, is increasingly being

felt by many countries after several crises of the 1990s. Chapter VII, which is entitled "Foreign Exchange Reserves, Exchange Rate and External Debt Management" focuses on these three major areas. The need for maintaining foreign exchange reserves has been strongly felt with increased globalisation and large and volatile cross border capital flows. An attempt is made to assess the costs and benefits of holding reserves. India's foreign exchange management practices are benchmarked against the cross-country experience. The Chapter encompasses a review of the debate relating to choice of exchange rate regime. It is highlighted that in the face of large capital flows and their reversal, flexibility and pragmatism are needed in exchange rate policy in developing countries, rather than adherence to strict theoretical rules**.** The Chapter then dwells on various issues relating to exchange rate management practices in India. Interest parity conditions have also been tested in the Indian conditions. A cross-country comparison of external debt is undertaken followed by an analysis of India's external debt over the years.

1.11 Chapter VIII entitled "Approach to Capital Account Convertibility" focuses on capital account liberalisation in India and abroad against the background of large and volatile capital flows. Country experiences on capital controls are covered with focus on four broad group of countries which applied capital controls based on various motives. Speed and sequencing of capital account liberalisation, their costs and benefits are also discussed. Approaches of the multilateral institutions like the IMF, the World Bank, OECD and European Union to capital account liberalisation are also presented in the Chapter. The Indian experience of capital account liberalisation is covered in detail with special reference to the recommendations of the Report of the Committee on Capital account Convertibility.

1.12 Inadequacies in the international financial architecture have, time and again, underscored the need for a new framework. Against this backdrop, Chapter IX entitled "International Financial Architecture" presents, in detail, the international financial architecture in the pre-East Asian crisis period and the one that has been evolving after the crisis. The Indian perspective on the new international financial architecture is covered delineating some of the issues for further reform.

1.13 The final Chapter entitled "Assessment of the External Sector" undertakes an assessment of the external sector reforms and the challenges ahead.

II RECENT ECONOMIC DEVELOPMENTS

Introduction

2.1 The Indian economy is now poised for a higher growth profile. Reflective of the growing investor confidence, the growth projections for the financial year 2003-04 made by various agencies/institutions have been successively revised upward. This was triggered by the confluence of several favourable factors, including an above-normal and widespread monsoon leading to an across-the-board increase in production of all major *kharif* crops, and an equally buoyant *rabi* forecast, as well as a continuing recovery in industrial production (Table 2.1). The sharp upturn in the economy was confirmed by the robust second quarter (July-September) growth rate of 8.4 per cent in the real gross domestic product (GDP), which demonstrated that buoyancy has spread across all the sectors of the economy and is not confined merely to agriculture. The Reserve Bank also revised its growth projection for 2003-04 upwards in January 2004 to around 7.0 per cent with a continued upward bias, from around 6.0 per cent in April 2003 and 6.5-7.0 per cent with an upward bias in November 2003. The signs of widespread revival in economic activity are also distinctly discernible in the improved investment climate, pick up in non-food bank credit, improvement in bottom-lines of corporates, buoyant stock markets, optimistic results of various industrial outlook surveys and a healthy external sector. The foreign exchange reserves have increased significantly, crossing the US $ 100 billion mark in December 2003.

2.2 The inflation conditions have been generally benign during the current year so far. A good *kharif* crop and comfortable food stocks, adequate foreign exchange reserves and a stronger rupee in an environment of subdued global inflationary expectations kept inflation low. Besides, modulation in monetary policy consistent with the long-term goal of achieving price stability and growth has also helped contain the inflationary expectations in the economy. The Mid-Term Review of the Monetary and Credit Policy in November 2003 had placed the inflation projections for policy purposes in the range of 4.0 per cent to 4.5 per cent with a possible downward bias. It was also mentioned that the Reserve Bank would continue to closely monitor the price behaviour leaving no room for complacency on the inflation front. The annual rate of inflation was 6.7 per cent at the time the April 2003 policy projections were made and continued in the range of 6.3-6.9 per cent till May 2003. It, however, declined to around 4.0 per cent in August, before climbing back to 5.0 per cent or more since September 20, 2003. Inflation has risen further since the Mid-Term Review and on January 3, 2004, the point-to-point inflation rate was 6.1 per cent. The inflation trends in the last two months have not been unexpected but the magnitude of price rise has been above the original expectations. This increase in inflation appears to be mainly on account of mineral oil, cotton textiles and oil seeds. Two important international factors have contributed to the more than unanticipated upward pressure on prices. First, international oil prices have remained firm. The average price of the OPEC basket had reached US $ 29.5 a barrel at the end of 2003, while US prices were hovering around US $ 32 a barrel. The global oil prices were, thus, about 10 per cent higher than they were at the time of the Mid-Term Policy Review. The outlook

Table 2.1: Real Gross Domestic Product Growth Forecasts for India: 2003-04

(Per cent)

Agency	Initial	Revised/Latest	
1	2	3	
Centre for Monitoring Indian Economy	6.5	8.2	(early January 2004)
Confederation of Indian Industry	6.5-6.8	7.2	(early November 2003)
National Council of Applied Economic Research	5.8	8.0	(mid-January 2004)
Ministry of Finance, Government of India	6.0	7.0	(mid-November 2003)
Reserve Bank of India	Around 6.0	Around 7.0 (with a continued upward bias)	(early January 2004)
International Monetary Fund@	5.1	6.5-7.0	(mid-November 2003)
Investment and Credit Rating Agency	6.0	6.5-6.9	(end-October 2003)

@ IMF staff estimates. In September, the IMF projected 5.6 per cent.

for oil prices in the near term appears highly uncertain. Second, world primary commodity prices have also increased in 2003. These trends, along with revival of growth and falling excess capacities in several advanced economies, have brought about a noticeable shift in the outlook for prices. The fear of deflation in advanced economies has been replaced by a possible upward pressure, led by increases in commodity prices. These international developments enhance the probability of transmission of inflation from abroad to India. At the same time, there are three favourable factors to counter these recent adverse global developments. First, in the normal course, it is expected that the inflation rate would fall in the period mid-January to March 2004. Second, there are cushions, in terms of food stocks and ample forex reserves. Third, the Indian economy has, in recent years, shown remarkable resilience in absorbing shocks. In view of all these factors, it is possible that the downward bias may not be attainable but it appears that the range of 4.0 per cent to 4.5 per cent for inflation indicated in the Mid-Term Review continues to be relevant for policy purposes unless there are unanticipated severe shocks.

2.3 Monetary conditions remain easy. Broad money (M_3) growth is in line with the projections in the April 2003 Monetary and Credit Policy Statement, notwithstanding strong capital flows. Credit off-take has begun to pick up in recent months. At the same time, the overhang of liquidity along with cuts in the policy rates has made the easing of the interest rate structure possible. Notwithstanding a slight steepening at the long-end of the yield curve, the behaviour of the fixed income market remains in consonance with the monetary policy stance. The upbeat mood is evident from the broad-based rally in the stock markets, not seen in recent times. The stability in financial markets has been buttressed by an improvement in both the profitability and the health of the commercial banking system.

2.4 The prospects for the world economy have also improved since April 2003, though there are uncertainties regarding the monetary policy stance in some advanced countries, including the US. According to projections of the IMF, the world economy is expected to grow at the rate of 3.2 per cent during 2003 and 4.1 per cent during 2004. The growth rates experienced by India in the recent period have been among the highest in the emerging market economies (EMEs). Notwithstanding the general recovery worldwide, there is a possibility that India may emerge as one of the fastest growing countries among the EMEs as the expected growth rate during 2003-04 is next only to China (Table 2.2).

Table 2.2: Growth in Real Gross Domestic Product: Cross-Country Comparison

(Annual percentage change)

Country	Average 1995-2003	1995	1996	1997	1998	1999	2000	2001	2002	2003P
1	2	3	4	5	6	7	8	9	10	11
World	3.5	3.7	4.0	4.2	2.8	3.6	4.8	2.4	3.0	3.2
Advanced Economies	2.7	2.8	3.0	3.5	2.7	3.4	3.9	1.0	1.8	1.8
Developing Countries	5.0	6.1	6.6	5.9	3.5	3.9	5.7	4.1	4.6	5.0
Of which:										
Argentina	0.1	-2.8	5.5	8.1	3.8	-3.4	-0.8	-4.4	-10.9	5.5
Bangladesh	5.1	4.8	5.0	5.3	5.0	5.4	5.6	4.8	4.9	5.4
Brazil	2.2	4.2	2.7	3.3	0.1	0.8	4.4	1.4	1.5	1.5
Chile	4.4	10.8	7.4	6.6	3.2	-0.8	4.2	3.1	2.1	3.3
China	8.3	10.5	9.6	8.8	7.8	7.1	8.0	7.5	8.0	7.5
India	**6.0**	**7.6**	**7.5**	**4.8**	**6.5**	**6.1**	**4.4**	**5.6**	**4.3**	**7.0 #**
Indonesia	2.7	8.2	8.0	4.5	-13.1	0.8	4.9	3.4	3.7	3.5
Malaysia	4.8	9.8	10.0	7.3	-7.4	6.1	8.6	0.3	4.1	4.2
Mexico	2.6	-6.2	5.2	6.8	5.0	3.6	6.6	-0.2	0.7	1.5
Pakistan	3.6	4.9	2.9	1.8	3.1	4.0	3.4	2.7	4.4	5.4
Philippines	4.0	4.7	5.8	5.2	-0.6	3.4	4.4	4.5	4.4	4.0
Sri Lanka	4.3	5.5	3.8	6.4	4.7	4.3	6.0	-1.5	4.0	5.5
Thailand	2.7	9.2	5.9	-1.4	-10.5	4.4	4.6	1.9	5.3	5.0

P IMF projections.

\# With a continued upward bias (RBI projection). For India, the source is Central Statistical Organisation and the data pertain to financial year (April-March).

Source: World Economic Outlook, September 2003.

Table 2.3: Sectoral Growth Rates of Real Gross Domestic Product

(Per cent)

	Sector	Growth Rate					
		1997-98	1998-99	1999-00	2000-01 P	2001-02 *	2002-03 #
	1	2	3	4	5	6	7
1.	**Agriculture and Allied Activities**	**-2.4**	**6.2**	**0.3**	**-0.4**	**5.7**	**-3.2**
	1.1 Agriculture	-2.8	6.9	-0.1	-0.6	5.7	..
2.	**Industry**	**3.0**	**3.2**	**4.1**	**6.5**	**3.2**	**5.7**
	2.1 Mining and Quarrying	9.8	2.8	3.3	2.4	1.0	5.0
	2.2 Manufacturing	1.5	2.7	4.0	7.3	3.4	6.1
	2.3 Electricity, Gas and Water Supply	7.9	7.0	5.2	5.0	4.3	3.9
3.	**Services**	**9.9**	**8.1**	**9.9**	**5.7**	**6.5**	**7.1**
	3.1 Construction	10.2	6.2	8.0	6.9	3.7	7.2
	3.2 Trade, Hotels, Restaurants, Transport and Communication	7.8	7.7	8.5	6.9	8.7	7.8
	3.3 Financing, Insurance, Real Estate and Business Services	11.6	7.4	10.6	3.5	4.5	6.1
	3.4 Community, Social and Personal Services	11.7	10.4	12.2	5.6	5.6	6.8
4.	**GDP at factor cost**	**4.8**	**6.5**	**6.1**	**4.4**	**5.6**	**4.3**

P Provisional. * Quick Estimates. # Revised Estimates. .. Not Available.

Source: Central Statistical Organisation.

2.5 The improved prospect for global recovery could provide fresh impetus to export growth. In tandem, the external sector remains comfortable as exports continue to grow at a steady pace and the buoyancy in capital flows is maintained. As a result, there is a record accretion to reserves. At end-December 2003, India was among the six countries in the world to hold reserves (including gold) of more than US $ 100 billion.

2.6 The objective of this chapter is to provide an account of developments during 2003-04 so far against the background of the developments last year. The rest of the chapter is organised as follows. Section I covers developments in the real sector – agriculture, industry and services. The following section on the fiscal situation focuses on Central and State Governments' finances during the current year. Section III dwells on the monetary and credit trends as well as the inflation outcome during 2003-04. The developments in financial markets – the money market, Government securities market, foreign exchange market and capital market – are covered in Section IV. This section also includes the latest position with respect to the financial sector. Section V covers the external sector including global outlook, trade, invisibles, current account, capital flows, foreign exchange reserves and external debt. Finally, the chapter ends with concluding observations.

I. REAL SECTOR

2.7 A broad-based industrial revival along with the continued growth of the services sector sustained economic activity in 2002-03. Though the growth of industry and services, driven mainly by exports, made room for higher economic growth, severe drought conditions impacted adversely, resulting in lower GDP growth during 2002-03. In industry, there was an acceleration driven by robust performances in 'mining and quarrying' and manufacturing. In addition, with a sustained broad-based performance, the services sector clocked a high growth rate during 2002-03, which helped to sustain the overall growth against the backdrop of a significant fall in agricultural GDP (Table 2.3).

2.8 The rebound in agriculture witnessed in the first quarter of 2003-04 accelerated sharply in the second quarter of 2003-04, aided by a salubrious spatial distribution of rainfall and the best monsoon in a decade, culminating into an impressive growth of real GDP at 8.4 per cent. The revival in industrial activity, which set in during the second quarter of 2002-03, has been broadly maintained in the first two quarters of 2003-04. The industrial upturn in 2002-03 has been led by manufacturing, supported by mining and quarrying. Manufacturing, in particular, has registered a sustained increase since the second quarter of 2002-03 after five quarters of very low growth. This momentum is now reinforced by improved prospects for real activity worldwide. The revival of manufacturing has led to an improvement in the corporate profitability, which appears to be reflected in the current upsurge in the stock markets. The services sector recorded a robust performance, particularly during the second and the last quarters of 2002-03, which was sustained in the first two quarters of 2003-04, driven by all its sub-sectors (Table 2.4).

Table 2.4: Quarterly Sectoral Growth Rates of Real Gross Domestic Product

(Per cent)

Sector	2001-02				2002-03				2003-04	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
1	2	3	4	5	6	7	8	9	10	11
1. Agriculture and Allied Activities	**2.6**	**5.6**	**5.9**	**8.3**	**2.7**	**-3.5**	**-7.6**	**-2.8**	**1.7**	**7.4**
2. Industry	**2.4**	**3.0**	**3.5**	**4.0**	**4.3**	**6.2**	**6.2**	**6.2**	**5.8**	**6.3**
2.1 Mining and Quarrying	-2.5	-0.2	3.6	2.7	7.7	6.0	3.8	3.2	3.1	2.2
2.2 Manufacturing	2.9	3.1	3.4	4.1	3.8	6.5	6.7	7.1	6.4	7.3
2.3 Electricity, Gas and Water Supply	3.5	5.0	3.4	5.0	4.4	4.0	5.0	2.4	4.8	2.9
3. Services	**6.0**	**5.8**	**7.7**	**6.3**	**6.8**	**7.8**	**6.4**	**7.5**	**7.4**	**9.6**
3.1 Construction	0.3	1.3	5.5	7.5	6.2	8.5	6.7	7.5	5.7	6.4
3.2 Trade, Hotels, Restaurants, Transport and Communication	7.7	9.0	8.4	9.7	6.9	8.1	7.2	8.8	9.6	11.9
3.3 Financing, Insurance, Real Estate and Business Services	4.5	5.0	4.8	3.8	6.7	7.0	6.3	4.4	7.1	7.3
3.4 Community, Social and Personal Services	6.8	3.1	10.3	3.1	6.9	7.8	4.6	7.7	4.3	8.9
4. GDP at factor cost	**4.4**	**5.1**	**6.3**	**6.3**	**5.3**	**5.2**	**2.3**	**4.9**	**5.7**	**8.4**

Source: Central Statistical Organisation.

2.9 The economy has undergone a structural transformation during the 1990s as reflected in the changing composition of GDP. The conventional economic development paradigm is evident in India in a declining trend in the share of the agricultural sector and an upward drift in the share of industry and the services sector (Table 2.5). A matter of concern, however, is that the shift to industry has slowed down in the 1990s, unlike in other countries.

Saving and Investment

2.10 Most countries in the East Asian region have had a discernible rise in the rate of gross domestic savings over the last 2-3 decades. The rise in the rate of savings in India has been lower as compared with most of the East Asian countries like Singapore, Malaysia, Korea and Thailand. While India's private savings are comparable with that in East Asia, it is the public sector savings that are now exceedingly low and even negative. The large current account surplus in the region is symptomatic of the comparatively lower level of investment (Table 2.6).

2.11 In India, the rate of gross domestic savings has improved modestly during 2001-02 though it remained below the peak level of 1995-96. This improvement was mainly on account of an increase in the rate of household saving in the form of increased holdings in financial and physical assets. While the increase in household financial saving was due to increases in holdings of all instruments, it was mainly driven by deposits and provident and pension funds. The rate of savings of the private corporate sector declined marginally in 2000-01 and 2001-02. Public sector dis-savings deteriorated further owing to an increase in dis-savings of Government administration, especially since 1998-99, reflecting, in part, the impact of the implementation of the recommendations of the Fifth Pay Commission. Alongside the improvement in the rate of gross domestic savings, the rate of investment declined in 2001-02. This resulted in a marginal surplus in the overall saving-investment balance in 2001-02 after a long time – since 1975-78. The saving-investment surplus was reflected in a modest surplus in current account in the balance of payments in 2001-02, which increased further in 2002-03. The rate of

Table 2.5: Sectoral Composition of Real Gross Domestic Product

(Per cent)

Sector	1950s	1960s	1970s	1980s	1990s	2000-01 P	2001-02*	2002-03 #
1	2	3	4	5	6	7	8	9
1. Agriculture and Allied Activities	56.1	47.8	42.8	36.4	29.1	23.8	23.9	22.1
2. Industry	11.7	15.1	16.9	19.5	21.9	22.0	21.5	21.8
3. Services	32.6	37.3	40.3	44.0	49.0	54.1	54.6	56.1
4. GDP at factor cost	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

P Provisional. * Quick Estimates. # Revised Estimates.

Source: Central Statistical Organisation.

Table 2.6: Savings and Investment of Select East Asian Countries and India

(Per cent of GDP)

Country	Gross Domestic Saving				Gross Domestic Investment			
	1971-80	1981-90	1991-96	1997-2003	1971-80	1981- 90	1991-96	1997-2003
1	2	3	4	5	6	7	8	9
China	35.8	30.8	40.3	39.2	33.9	30.5	39.6	38.0
Hong Kong	28.4	33.5	32.8	32.2	27.8	27.2	30.4	27.5
India	**20.5**	**21.2**	**22.2**	**23.5**	**20.5**	**22.4**	**23.6**	**24.0**
Indonesia	21.6	30.9	30.2	24.1	19.3	29.3	31.3	17.5
Korea, Republic of	22.3	32.4	35.2	31.5	28.6	30.6	37.0	27.1
Malaysia	29.1	33.2	37.6	44.7	24.9	30.6	38.8	27.5
Philippines	26.5	22.2	16.5	20.8	27.8	22.0	22.2	18.3
Singapore	30.0	41.8	48.1	47.7	41.2	41.7	35.1	29.3
Thailand	22.2	27.2	34.6	31.8	25.3	30.7	41.0	24.1

Source: Asian Development Outlook, Asian Development Bank, various issues.

capital formation in the private corporate sector continued to decline since 1998-99 owing to a decrease in saving originating from this sector (Table 2.7). The latest available data, with the Reserve Bank, reveal that there was a marginal increase in the rate of household financial saving (net) in 2002-03 as compared with that of 2001-02 mainly reflecting increases in the rates of contractual saving (life insurance, provident and pension funds) and shares and debentures.

2.12 The movements in the inter-sectoral saving-investment balances indicate that the widening public sector resource gap has been completely financed by the surplus of the private sector. This surplus, in part, also reflects the subdued investment climate. As the surplus in the saving-investment position of the private sector is financing the public sector dis-savings, the high fiscal deficit has not put pressure on interest rates or for that matter, on monetary policy and the current account balance. Moreover, in 2001-02, the private sector surplus bridged the public sector deficit, and also spilled over into the external accounts (Table 2.8).

Table 2.7: Gross Domestic Saving and Investment

(Per cent of GDP at current market prices)

	Variable	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01P	2001-02*
	1	2	3	4	5	6	7	8	9	10	11	12
1.	Gross Domestic Saving (GDS) (2+3+4)	22.0	21.8	22.5	24.8	25.1	23.2	23.1	21.5	24.1	23.4	24.0
2.	Household Sector	17.0	17.5	18.4	19.7	18.2	17.0	17.6	18.8	20.8	21.6	22.5
	2.1) Financial Assets	9.5	8.7	11.0	11.9	8.9	10.4	9.6	10.4	10.5	10.4	11.2
	2.2) Physical Assets	7.4	8.8	7.4	7.8	9.3	6.7	8.0	8.4	10.3	11.2	11.3
3.	Private Corporate Sector	3.1	2.7	3.5	3.5	4.9	4.5	4.2	3.7	4.4	4.1	4.0
4.	Public Sector	2.0	1.6	0.6	1.7	2.0	1.7	1.3	-1.0	-1.0	-2.3	-2.5
5.	Gross Domestic Capital Formation (GDCF)#	22.6	23.6	23.1	26.0	26.9	24.5	24.6	22.6	25.2	24.0	23.7
6.	Saving-Investment Balance (GDS-GDCF)	-0.5	-1.8	-0.6	-1.2	-1.7	-1.3	-1.5	-1.0	-1.1	-0.6	0.2
7.	Gross Capital Formation (GCF) (8+9+10)	21.9	23.8	21.3	23.4	26.5	21.8	22.6	21.4	23.7	22.5	22.4
8.	Household Sector	7.4	8.8	7.4	7.8	9.3	6.7	8.0	8.4	10.3	11.2	11.3
9.	Private Corporate Sector	5.7	6.5	5.6	6.9	9.6	8.0	8.0	6.4	6.5	4.9	4.8
10.	Public Sector	8.8	8.6	8.2	8.7	7.7	7.0	6.6	6.6	7.1	6.4	6.3

Adjusted for errors and omissions. P Provisional. * Quick Estimates.

Source: Central Statistical Organisation.

Table 2.8: Saving-Investment Balance

(Per cent of GDP at current market prices)

Item	1990-1991	1991-1992	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002
1	2	3	4	5	6	7	8	9	10	11	12	13
Saving - Investment Balance (GDS - GDCF)	-3.2	-0.5	-1.8	-0.6	-1.2	-1.7	-1.3	-1.5	-1.0	-1.1	-0.6	0.2
Private Sector Balance*	7.3	7.0	4.9	8.9	8.5	4.2	6.8	5.8	7.7	8.4	9.5	10.3
Public Sector Balance*	-8.2	-6.9	-7.0	-7.6	-7.0	-5.6	-5.4	-5.3	-7.6	-8.0	-8.7	-8.8
Current Account Balance	-3.1	-0.3	-1.7	-0.4	-1.0	-1.7	-1.2	-1.4	-1.0	-1.1	-0.8	0.2

* Private and public investment refer to gross capital formation (GCF), unadjusted for errors and ommissions.
GDS : Gross Domestic Saving.
GDCF : Gross Domestic Capital Formation.
Note : Derived from CSO and the Reserve Bank data. Components do not add up to totals because of errors and omissions.

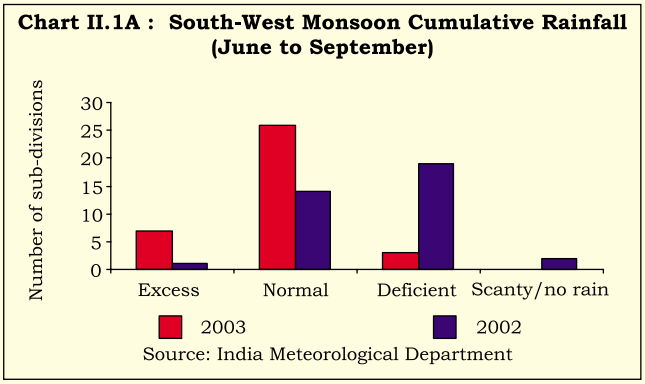
2.13 The investment climate has improved in recent months, with the persistence of easy monetary conditions, a reasonably steady order of inflation, improved corporate profitability and a revival of the capital market. While investment demand, *per se,* is yet to pick up, there has been an increase in non-oil imports and capital goods production, leading indicators of industrial activity, as well as higher sanctions and disbursements by financial institutions. Resource mobilisation by corporates in the primary market in the form of debt, equity and euro issues has, however, shown a moderate increase during the year. This could, in part, reflect a shift towards internal resource generation.

Agriculture

2.14 Indian agriculture is poised for an impressive turnaround during 2003-04 as a result of a satisfactory South-West monsoon, distributed equitably over space and time and comfortable water storage in the major reservoirs (Chart II.1A). The total foodgrain production target for 2003-04, at 220 million tonnes, is likely to be achieved, which would surpass the all-time high of 212 million tonnes attained in 2001-02. Crop production (measured by the Index of Agricultural Production) is expected to post a significant growth during the current year in sharp contrast to a decline of 12.6 per cent witnessed in 2002-03, due to drought conditions (Table 2.9). The astute foodgrains management reflects the comfortable levels of stock of rice and wheat with the Food Corporation of India (FCI)/ government agencies.

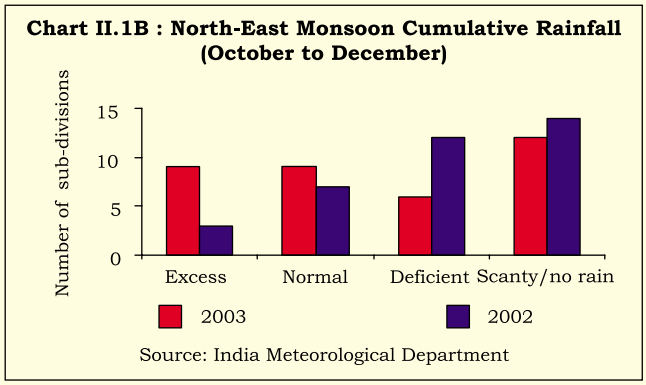
2.15 According to the India Meteorological Department (IMD), the cumulative area-weighted rainfall during the South-West monsoon season 2003 was two per cent above the Long Period Average (LPA). The temporal distribution of the rainfall was satisfactory with the months of June, July, August and September 2003 recording a rainfall of 109 per cent, 107 per cent, 95 per cent and 96 per cent of the LPA, respectively. The rainfall in month of July is crucial as it augments the surface and ground water stock for sowing activities undertaken during the *kharif* season - the failure of the *kharif* crop last year was mainly due to deficient rain (51 per cent of LPA) in July 2002. This also highlights the continued rain dependency

Chart II.1A : South-West Monsoon Cumulative Rainfall (June to September)



Source: India Meteorological Department

Chart II.1B : North-East Monsoon Cumulative Rainfall (October to December)



Source: India Meteorological Department

Table 2.9: Agriculture on a Rebound

	Indicator	2002-03	2003-04
	1	2	3
1.	South-West Monsoon	19 per cent below normal	2 per cent above normal
2.	Spatial Rainfall Distribution (in 36 meteorological sub-divisions)	Excess/normal in 15 sub-divisions	Excess/normal in 33 sub-divisions
3.	Progress of North-East Monsoon	33 per cent below normal	9 per cent above normal
4.	Live Water Storage (as on January 2, 2004)	37 per cent of the FRL	45 per cent of the FRL
5.	Foodgrains (million tonnes)	182.6	220 @
6.	Oilseeds (million tonnes)	15.8	24.7 @
7.	Sugarcane (million tonnes)	278.6	261.4 *
8.	Cotton (million bales)	9.3	13.1 *

@ Target. * First Advance Estimates. FRL : Full Reservoir Level.

of Indian agriculture. The spatial distribution of the rainfall was also satisfactory with 33 out of the 36 meteorological sub-divisions receiving excess/normal rainfall (Table 2.10).

2.16 Consequent upon an above-normal South-West monsoon, the area coverage under the *kharif* crops was satisfactory. The area sown under major *kharif* crops (as on September 22, 2003) was above normal in the case of both maize and pulses; almost normal for coarse cereals and oilseeds but below normal for cotton, rice, and sugarcane.

Kharif 2003

2.17 The strategies for *kharif* 2003-04 were drawn with a particular emphasis on efforts to augment production. These include measures such as effective transfer of crop production technology backed by efficient and timely input supply, larger area coverage under location-specific high-yielding varieties and balanced use of fertilisers along with bio-fertilisers/ organic manures. A renewed thrust was also placed on the crop-specific schemes and Technology Missions on various crops besides enhancing the outlay for the programme on varietal diversification and popularisation of recently evolved technologies.

Table 2.10: Cumulative Rainfall

Category	No. of sub-Divisions			
	South-West Monsoon		North-East Monsoon	
	2003	2002	2003	2002
	(June 1 to Sept. 30)		(Oct. 1 to Dec. 31)	
1	2	3	4	5
Excess	7	1	9	3
Normal	26	14	9	7
Deficient	3	19	6	12
Scanty/no rain	0	2	12	14

Source : India Meteorological Department, Pune.

The buoyant monsoon together with the policy initiatives resulted in an impressive production during *kharif* 2003-04. According to the First Advance Estimates released by the Ministry of Agriculture, the production of foodgrains during the *kharif* season 2003-04 is slated to increase significantly across all foodgrains crops, though lower than the peak of over 111 million tonnes attained in 2001-02. Among the non-foodgrains, while the output of oilseeds, cotton and jute and *mesta* is expected to be close to or even surpass the target for the season; sugarcane production, however, is expected to be lower than the previous year due to the unsatisfactory spread of rainfall in Maharashtra (Table 2.11).

2.18 The progress of the North-East monsoon was satisfactory, with the all-India area-weighted rainfall for the season, being nine per cent above normal. The spatial spread of the rains indicate excess/normal rains in 18 sub-divisions (10 in the corresponding period last year) out of 36 meteorological sub-divisions; with deficient/scanty/no rains in the remaining (Chart II.1B). Favourable precipitation and the consequent ground water recharging enabled the present live water storage (as on January 2, 2004) in the major reservoirs to reach 45 per cent of the Full Reservoir Level (FRL) (which is 122 per cent of last year's level and 76 per cent of last 10 year's average).

Rabi 2003-04

2.19 The adverse impact of drought in 2002-03 also affected the *rabi* season last year on account of acute moisture scarcity. The satisfactory South-West monsoon in the current year, its delayed withdrawal and subsequent moderate temperature in the North coupled with an above normal performance of the North-East monsoon have created congenial conditions for the *rabi* crops, mainly oilseeds and pulses. The area sown under

Table 2.11: Season-wise Agricultural Production

(Million tonnes)

Crop	*Kharif*			*Rabi*	
	2002-03	2003-04		2002-03	2003-04
	A	T	AE	A	T
1	2	3	4	5	6
Rice	66.5	78.6	75.1	9.2	14.4
Wheat	NA	NA	NA	69.3	78.0
Coarse cereals	20.1	27.1	28.0	6.1	7.0
Pulses	3.8	6.0	5.4	7.5	9.0
Total Foodgrains	**90.5**	**111.7**	**108.5**	**92.1**	**108.3**
Oilseeds	9.2	14.7	14.7	6.5	10.0
Sugarcane	278.6	320.0	261.4	NA	NA
Cotton*	9.3	15.0	13.1	NA	NA
Jute & Mesta**	10.8	12.0	10.8	NA	NA

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

the *rabi* crops, as on November 24, 2003, was satisfactory. Consequently, foodgrains production in *rabi* 2003-04 is expected to grow by about 18 per cent, consistent with the target set by the Ministry of Agriculture. Besides, the strategies drawn to augment *rabi* production include, *inter alia*, ensuring the availability of good quality seeds of desired varieties, balanced and adequate use of fertilisers, use of soil ameliorants for *alkali* soils, addition of organic farming, efficient water management, adequate and appropriate farm mechanisation. Furthermore, work plans for the various schemes subsumed under the Macro-Management Mode and Technology Missions have been firmed up. Taking into account the First Advance Estimates for *kharif* and targets set for *rabi*, the total foodgrain output during 2003-04 is slated to post a new high (Table 2.12).

Procurement, Off-take and Stocks of Foodgrains

2.20 Procurement operations by the Food Corporation of India and the other Government agencies during 2003-04 (up to end-December 2003) have been lower than in the corresponding period of the previous year. However, the off-take of foodgrains (April-October 1, 2003) has been higher than the corresponding period of the previous year. Among the various components, the off-take under the Targeted Public Distribution System (TPDS) during the year was highest, followed by the other welfare schemes (OWS), exports and open market sales (OMS). The higher off-take under TPDS and other welfare schemes could be attributed to the higher allocation made under the *Jawahar Rozagar Yojana* and drought relief work programmes.

Table 2.12: Crop-wise Targets / Achievements

(Million tonnes)

Crop	2001-02		2002-03		2003-04
	T	A	T	A	T
1	2	3	4	5	6
Rice	92.0	93.1	93.0	75.7	93.0
Wheat	78.0	71.8	78.0	69.3	78.0
Coarse cereals	33.0	33.9	33.0	26.2	34.0
Pulses	15.0	13.2	16.0	11.3	15.0
Total Foodgrains	**218.0**	**212.0**	**220.0**	**182.6**	**220.0**
Oilseeds	28.0	20.8	27.0	15.8	24.7
Sugarcane	325.0	300.1	320.0	278.6	320.0
Cotton*	14.5	10.1	15.0	9.3	15.0
Jute & Mesta**	11.0	11.6	12.0	10.8	12.0

T Target. A Achievement.
* In million bales of 170 kilogrames each. ** In million bales of 180 kilogrames each.
Source: Ministry of Agriculture, Government of India.

Table 2.13: Management of Foodstocks

(Million tonnes)

Month	Opening Stock of Foodgrains	Buffer Stocking Norm $	Foodgrain Procure-ment	Foodgrain off-take				Closing Stock	Food Credit @
				PDS	OWS	OMS	Exports		
1	2	3	4	5	6	7	8	9	10
2002-03									
April	51.0		14.3	1.2	0.4	0.2	0.2	62.6	52,483
May	62.6		6.1	1.5	0.8	0.1	1.2	64.8	60,669
June	64.8	24.3	2.5	1.6	1.4	0.2	0.2	63.1	61,008
July	63.1		0.5	1.5	0.7	0.4	1.1	59.9	59,077
August	59.9		0.4	1.8	0.6	1.1	1.5	55.4	56,401
September	55.4	18.1	0.2	1.5	0.5	0.7	1.4	51.4	53,362
October	51.4		7.5	1.8	1.3	0.7	0.9	53.6	52,705
November	53.6		0.9	1.5	0.8	0.5	0.8	51.5	54,346
December	51.5	16.8	1.5	2.0	1.1	0.4	0.9	48.2	51,947
January	48.2		2.0	1.8	1.2	0.8	0.8	40.1	49,784
February	40.1		1.4	2.1	1.1	0.4	0.9	36.2	50,227
March	36.2	15.8	0.9	1.8	1.8	0.3	1.1	32.8	49,479
2003-04									
April	32.8		13.1	1.6	1.0	0.2	0.6	41.3	44,589
May	41.3		3.6	2.0	1.6	0.3	0.9	39.8	51,047
June	39.8	24.3	1.0	1.5	2.5	0.2	1.1	35.2	50,066
July	35.2		0.2	2.2	1.4	0.1	2.2	30.5	43,277
August	30.5		0.2	1.5	0.8	0.1	0.9	27.9	41,283
September	27.9	18.1	0.2	1.9	1.0	0.1	0.8	23.7	37,465
October	23.7		7.2	1.0	0.8	0.1	0.9	22.1	36,020
November	22.1		1.6	–	–	–	–	–	36,461

$ The total minimum stocks to be maintained by the public sector agencies on the first day of the quarter under the new buffer stocking policy with effect from October 30, 1998.

@ Outstanding in Rupees crore as on the last reporting Friday of the month.

PDS Public Distribution System. OWS Other Welfare Schemes. OMS Open Market Sales. – Not Available.

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

2.21 In the recent years, conscious efforts have been made to encourage off-take and liquidate excess stocks. During 2001-02, various measures were introduced, which included, open market sales at prices much below the economic cost, lowering of issue prices under TPDS for Above Poverty Line (APL) families, increasing the monthly allocation for APL, Below Poverty Line (BPL) and *Antyodaya* families and utilisation of foodgrains for various welfare schemes. These measures, coupled with subdued procurement operations over time facilitated in reducing the stocks substantially. The decline in foodgrain stocks resulted in lower levels of food credit availed by the FCI (Table 2.13).

Industry

2.22 The buoyancy in industrial GDP witnessed in 2002-03 has been sustained in the current financial year 2003-04 so far. Industrial GDP recorded higher growth in the first and second quarters of 2003-04 as against the corresponding period of 2002-03. Industrial production, according to the index of industrial production (IIP), also accelerated during 2003-04 (up to November 2003) (Chart II.2 and Table 2.14). The increase in industrial production was led by the manufacturing sector. On the other hand, the lower growth in electricity could be attributed to the fact that a number of thermal and hydro power plants were kept under maintenance. Lower demand for power in agriculture in the wake of a better monsoon and critical coal stock position at some thermal power plants also contributed to lower electricity generation. The lower growth in mining was largely on account of the adverse impact of the monsoon on coal production.

2.23 The recovery in manufacturing during 2003-04 (up to November) has been widespread as in the previous year. Moreover, there has been a general sustenance of the growth momentum at the two-digit level in the present year so far. The improved industrial performance at the aggregate level coupled with a revival in agriculture was reflected in higher growth

Table 2.14: Sector-wise Growth of IIP

(Per cent)

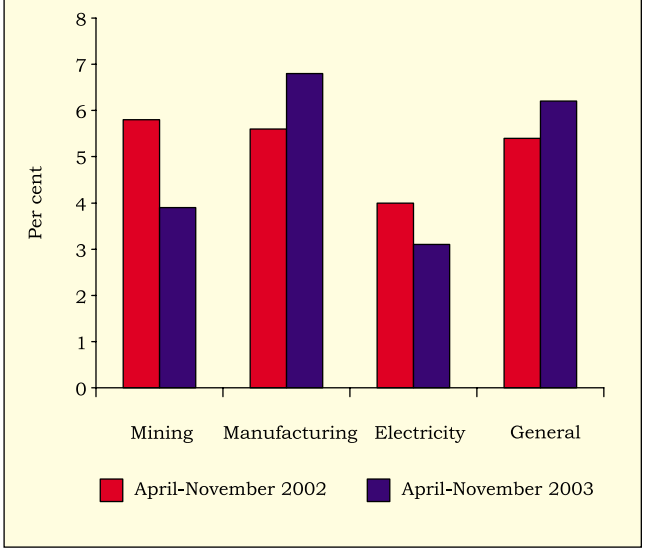
Month / Sector weight	General (100.00)		Electricity (10.17)		Mining & Quarrying (10.47)		Manufacturing (79.36)	
	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04
1	2	3	4	5	6	7	8	9
April	4.1	4.2	5.2	1.9	3.6	6.3	4.0	4.3
May	4.1	6.4	2.2	5.2	7.9	4.7	4.0	6.7
June	4.5	6.7	3.8	5.4	9.0	5.7	4.2	6.9
July	7.1	6.6	6.1	-1.4	12.1	2.9	6.7	8.0
August	6.2	5.7	4.1	1.2	5.7	1.3	6.5	6.7
September	6.2	7.1	-0.4	6.0	1.0	4.6	7.6	7.5
October	7.0	5.4	7.1	2.6	4.2	2.2	7.3	6.1
November	4.1	7.4	3.5	4.3	3.7	4.1	4.3	8.1
December	6.2		2.8		6.1		6.6	
January	6.7		4.5		2.3		7.2	
February	7.0		0.6		7.2		7.1	
March	5.9		-0.6		7.6		6.4	
April-November	**5.4**	**6.2**	**4.0**	**3.1**	**5.8**	**3.9**	**5.6**	**6.8**

Source : Central Statistical Organisation.

of the input producing intermediate sector. Capital goods recorded a significant growth, maintaining the buoyancy witnessed in the previous year, and reflecting positive investment sentiment among the producers. The recovery of consumer durables has been facilitated by an increase in retail lending and softening of interest rates. The lower growth of basic goods, on the other hand, reflected the subdued performance of electricity and mining sectors (Table 2.15).

2.24 Sustenance of the industrial recovery, particularly in the manufacturing sector, during 2003-04 so far, is attributable to various industry-specific factors besides an overall rising business confidence as revealed in the various industrial outlook surveys, improvement in corporate profitability, corporate restructuring-induced productivity gains, better monsoon and softening of interest rates. As a result, 13 out of 17 two-digit manufacturing groups with a combined weight of 69.3 per cent in the IIP exhibited positive growth during April-November 2003 *vis-à-vis* 13 similar groups that had a combined weight of 67.4 per cent in the previous year (Table 2.16).

Chart II.2 : Sector-Wise Growth of IIP



2.25 During April-November 2003, the contributions of transport equipment, basic metals and machinery and equipment to manufacturing growth were relatively high. The high export demand continued to support the growth in sectors like steel, ferro chrome, passenger cars and auto components. The high growth in commercial vehicles was also on

Table 2.15: Use-based Classification of Industrial Production

Sector	Weights in IIP	Growth Rates (Per cent)		
		2002-03	2002-03 (April-November)	2003-04 (April-November)
1	2	3	5	4
IIP	100.0	5.8	5.4	6.2
Basic Goods	35.6	4.8	4.8	4.5
Capital Goods	9.3	10.5	10.4	8.8
Intermediate Goods	26.5	3.9	2.6	5.4
Consumer Goods	28.7	7.1	7.5	8.1
i) Consumer Durables	5.4	-6.3	-5.9	7.6
ii) Consumer Non-Durables	23.3	12.0	12.9	8.2

Source : Central Statistical Organisation.

Table 2.16: Growth Performance of Two-digit Manufacturing Groups

Performance	No. of Groups	Weight Per cent	No. of Groups	Weight Per cent
	April-November 2002-03		April-November 2003-04	
1	2	3	4	5
Acceleration	10	49.89	8	39.04
Deceleration	3	17.55	5	30.26
Negative	4	11.92	4	10.06

Source: Central Statistical Organisation.

account of the renewed thrust on the infrastructure sector, in general, and the Golden Quadrilateral Highway Project and Rural Road Network Project, in particular. The passenger car sector witnessed higher growth on the back of an eight per cent excise duty reduction, low interest loans, aggressive retail finance schemes and discounts, and launching of new models. The tractor industry also indicated signs of recovery on account of the better monsoon in 2003-04. The electrical machinery industry witnessed a revival in 2003-04, particularly in the power cable, high voltage motor and distribution transformer segments. Among the few sectors that witnessed a decline during 2003-04, notably, the fertiliser sector underwent a downward adjustment in production in the context of outstanding stock holdings on account of lower consumption during 2002-03.

2.26 The indicators of industrial production recorded significant growth over and above the strong performance in the previous year (Table 2.17). Despite the high growth base, capital goods production recorded a significant increase, reflecting the positive investment sentiment. The buoyant growth in the capital goods sector along with the surge in the imports of capital goods could reflect a revival of investment demand. This has been facilitated, on the supply side, by the availability of adequate credit to the productive sectors coupled with the soft interest rate stance so as to support investment demand. On the demand side, the credit requirement of the small-scale sector may be expected to increase further in tandem with the growth in large corporates. Besides, the capital requirement of the infrastructure sector and the credit demand of the agriculture sector may also increase.

Infrastructure Sector

2.27 During 2003-04 (up to November 2003), the overall growth of infrastructure industries was substantially lower. Moreover, five out of the six

Table 2.17: Indicators of Industrial Performance: Growth Rates

(Per cent)

Month	IIP	Capital Goods Production	Exports	Capital Goods Imports	Non Food Credit
1	2	3	4	5	6
2002					
April	4.1	-0.6	28.2	39.9	13.4
May	4.1	5.1	9.7	25.7	15.5
June	4.5	11.7	6.9	23.9	15.8
July	7.1	11.8	29.2	18.8	15.7
August	6.2	11.7	20.0	14.1	15.8
September	6.2	16.6	16.1	40.1	16.9
October	7.0	17.5	25.0	35.4	16.8
November	4.1	10.0	10.5	45.4	17.5
December	6.2	12.6	34.3	33.2	17.4
2003					
January	6.7	14.8	9.2	47.7	17.4
February	7.0	5.1	13.5	13.2	18.4
March	5.9	10.4	15.3	20.0	18.6
April	4.2	6.5	8.7	17.7	18.0
May	6.4	7.7	13.5	39.0	16.3
June	6.7	10.9	10.9	52.2	16.2
July	6.6	11.2	5.7	20.0	15.4
August	5.7	9.5	4.2	38.0	14.8
September	7.1	9.2	15.9	31.2	14.9
October	5.4	3.9	5.1	..	15.6
November	7.4	12.1	13.7		16.0

.. Not Available.

Note : Non-food credit growth rates from May 2002 to April 2003 are adjusted for the initial impact of mergers.

industries, barring petroleum refinery products, recorded lower growth during 2003-04 so far. Cement witnessed a lower growth, possibly because of subdued construction activities in the wake of the monsoon. Crude petroleum production witnessed a decline mainly due to a high water-oil ratio in some of the oil fields (Table 2.18).

Table 2.18: Growth Rate of Infrastructure Industries

Sector	Weights in IIP	Growth Rates (Per cent)		
		2002-03	2002-03 (April-November)	2003-04 (April-November)
1	2	3	4	5
1. Electricity	10.17	3.0	3.9	3.1
2. Coal	3.22	4.3	4.9	3.4
3. Finished Steel	5.13	6.9	10.7	7.0
4. Cement	1.99	8.8	8.9	5.1
5. Crude Petroleum	4.17	3.3	3.9	-0.5
6. Pet. Ref. Products	2.00	4.9	5.0	6.9
Composite Index	**26.68**	**4.8**	**6.1**	**4.2**

Source : Office of the Economic Adviser, Ministry of Commerce and Industry, Government of India.

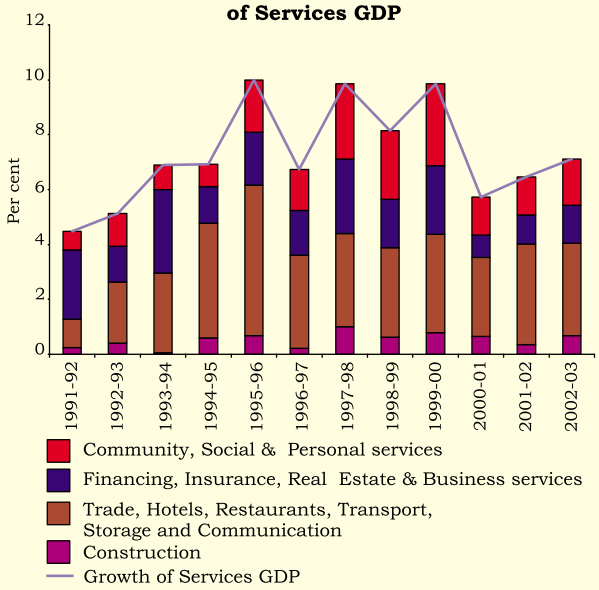
2.28 According to the Ministry of Statistics and Programme Implementation, revenue-earning freight traffic of railways, new cellular phone connections and net telephone connections and civil aviation (both domestic and international) recorded increases during April-October 2003. On the other hand, net switching capacity and village public telephone connections recorded a decline during April-October 2003. The upsurge in growth in the railways sector was mainly due to increased transportation of coal and raw material for steel plants. The transportation of coal and raw material for steel accelerated, for instance, to 5.8 per cent and 8.6 cent, respectively, during April-October 2003 from 4.0 per cent and 1.2 per cent during the corresponding period of the previous year. There has been a sharp increase in cellular connections, with cellular operators increasingly venturing into smaller cities and towns. The decline in net switching capacity addition and village telephone connections possibly reflects the substitution of basic telecom services by cellular services on account of preferences for such services due to declining tariffs. Both domestic and international segments in the civil aviation sector witnessed an increased growth mainly because of increased flow of foreign tourist arrivals.

Services Sector

2.29 According to the latest quarterly estimates of GDP released by the CSO, the services sector growth stood higher in the first and second quarters of 2003-04 at 7.4 per cent and 9.6 per cent, respectively, as compared with the corresponding period of the previous year (Chart II.3). The recent high growth in 'trade, hotels, restaurants, transport and communication' services has mainly reflected the robust growth of communications that benefited significantly from the reforms underway in the telecom sector. According to the Confederation of Indian Industry-Associations Council (CII-ASCON), new subscribers in cellular services, upsurge in tourist arrivals and higher occupancy of hotels extended a boost to this sub-sector during the first half of 2003-04. Alongside, according to the CSO, net tonne kilometres and passenger kilometres in respect of railways have shown a growth of 4.7 per cent and 4.1 per cent, respectively, during the second quarter of 2003-04. Besides, production of commercial vehicles and cargo handled at major ports has shown growth of 52.7 per cent and 7.6 per cent, respectively, during the second quarter of 2003-04.

2.30 Besides, the segment of 'trade, hotels, restaurants, transport and communication' appears to have got a boost from increased trade services on

Chart II.3 : Sectoral Contribution in Growth of Services GDP



account of bumper agricultural production and increased industrial activities. The higher growth of the segment is also reflected in the increased revenue earning freight traffic (133.3 million tonnes during second quarter of 2003-04 as compared with 124.5 million tonnes during the comparable quarter of 2002-03) in the railway sector and passenger handling at major domestic and international airports (74.7 lakh passengers during the second quarter of 2003-04 as compared with 64.8 lakh passengers during the comparable quarter of 2002-03).

2.31 In connection with the growth performance of 'financing, insurance, real estate and business services' sub-sector, the CSO has placed the growth rate of bank deposits and credit (year-on-year basis) at 11.4 per cent and 10.7 per cent, respectively, in the second quarter of 2003-04. According to the CSO, the high growth performance of 'community, social and personal services' is reflected in the growth of revenue expenditure of the Central Government at 25.3 per cent in the second quarter of 2003-04.

2.32 Information technology (IT) and software services have emerged as one of the most dynamic services-providing sub-sectors of the economy. The IT software and services exports accounted for the bulk of revenues generated by the sector. The share of IT services increased to 3.2 per cent of GDP in 2002-03 from 2.9 per cent in 2001-02; of this, software and services accounted for 2.4 per cent of GDP during 2002-03 as compared with 2.1 per cent in the previous year. According to a preliminary NASSCOM estimate, business process outsourcing (BPO) is likely to grow by 50 per cent during 2003-04.

Industrial Outlook

2.33 The investment climate has improved during the year as reflected in the equity market recovery and recent signs of a pick-up in commercial bank non-food credit off-take. It is reported that large-scale corporate restructuring has already taken place and productivity gains harnessed to a significant degree. Besides, there are clear indications of improvement in the bottomlines of corporates due to the recovery in industrial activity. There is also evidence of lower interest expense by corporates aided by the soft-interest rate regime and ploughing back of internal resources for investment, leading to lower cost of funds.

2.34 The Business Confidence Index (BCI), based on a survey by Economic Times - National Council of Applied Economic Research (ET-NCAER), released in November 2003, has shown an improvement of 3.5 per cent over July 2003 indicating a consistent upturn in economic activity. The Federation of Indian Chambers of Commerce and Industry (FICCI), based on a similar survey, has shown a rise in its index by 6.9 per cent over its previous round for the second quarter of 2003-04. The Indian Leading Indicator Index released by the Delhi School of Economics-Economic Cycle Research Institute (DSE-ECRI), in December 2003, suggests a further upturn in overall economic growth in the months ahead.

II. FISCAL SITUATION

Central Government Finances

Union Budget 2003-04

2.35 The Union Budget for 2003-04 focused on poverty eradication, infrastructure development, fiscal consolidation, development of agriculture including irrigation, and enhancing manufacturing sector efficiency. The process of fiscal consolidation will be carried forward through a mixed strategy of revenue enhancement *via* tax reforms and expenditure containment through debt restructuring and cash management. The Union Budget projected moderate growth rates in revenue receipts and aggregate expenditure. The major deficit indicators during 2003-04 are expected to increase in absolute terms from the levels in the revised estimates for 2002-03 due to relatively higher growth in expenditure. However, in terms of GDP, all the deficit indicators are projected to be lower during 2003-04 than the levels in the revised estimates for 2002-03 in anticipation of higher GDP growth (Table 2.19).

Table 2.19: Deficit Indicators of the Centre

Indicator	2001-02	2002-03 RE	2003-04 BE	Variation (2 over 1) per cent	Variation (3 over 2) per cent
	1	2	3	4	5
Gross Fiscal Deficit	1,40,955 (6.1)	1,45,466 (5.9)	1,53,637 (5.6)	3.2	5.6
Revenue Deficit	1,00,162 (4.4)	1,04,712 (4.2)	1,12,292 (4.1)	4.5	7.2
Gross Primary Deficit	33,495 (1.5)	29,803 (1.2)	30,414 (1.1)	-11.0	2.1

Note: Figures in brackets are percentage to GDP.

2.36 The modest increase in revenue receipts during 2003-04 is to be generated entirely from tax receipts; with the result that the tax-GDP ratio of the Central Government is projected to show a modest rise to 9.2 per cent during 2003-04 from 9.0 per cent in the revised estimates for 2002-03. Non-tax revenue is budgeted to register a decline on account of lower interest receipts and dividends and profits. Receipts from disinvestment are projected at Rs.13,200 crore as against Rs.3,360 crore in the revised estimates for 2002-03. On the expenditure side, the aggregate expenditure would be moderately higher during 2003-04 than the revised estimates for 2002-03. Non-Plan revenue expenditure would also be higher. Among the major items of non-Plan revenue expenditure interest payments, defence expenditure and subsidies taken together would form 82.0 per cent of non-Plan revenue expenditure and would absorb 92.6 per cent of revenue receipts. Interest payments alone would pre-empt 48.5 per cent of the revenue receipts during 2003-04 (Table 2.20).

2.37 The Union Budget emphasised five important aspects of tax reforms: (i) Value Added Tax (VAT) for States; (ii) integration of services into the tax net; (iii) improvement in tax administration through greater application of information technology (IT); (iv) rationalisation of excise duties; and (v) reduction in customs duty. Moreover, cash management was to be initiated on a pilot basis in some major spending Ministries. This would facilitate the release of budgetary allocations in a phased manner to permit convergence with the availability of resources within the year. Improvement in cash flow matching is expected to have salutary effects on expenditure management. The Union Budget also focussed on debt restructuring, which is being undertaken on three fronts, *viz.,* pre-payment of external debt, buy-back of illiquid high interest rate loans from banks, and allowing State Governments to swap high-cost Central Government debt with lower-cost new borrowings.

Table 2.20: Select Fiscal Parameters of the Central Government

Amount in Rupees crore

Indicator	2001-02	2002-03 RE	2003-04 BE	Variation (2 over 1) per cent	Variation (3 over 2) per cent
1	2	3	4	5	6
Total Receipts	**3,62,453** (15.8)	**4,04,013** (16.3)	**4,38,795** (16.0)	**11.5**	**8.6**
Revenue Receipts	2,01,449 (8.8)	2,36,936 (9.6)	2,53,935 (9.3)	17.6	7.2
Tax Revenue (net)	1,33,662 (5.8)	1,64,177 (6.6)	1,84,169 (6.7)	22.8	12.2
Non-Tax Revenue	67,787 (3.0)	72,759 (2.9)	69,766 (2.5)	7.3	-4.1
Capital Receipts	1,61,004 (7.0)	1,67,077 (6.8)	1,84,860 (6.7)	3.8	10.6
Total Expenditure	**3,62,453** (15.8)	**4,04,013** (16.3)	**4,38,795** (16.0)	**11.5**	**8.6**
Non-Plan Expenditure	2,61,259 (11.4)	2,89,924 (11.7)	3,17,821 (11.6)	11.0	9.6
Plan Expenditure	1,01,194 (4.4)	1,14,089 (4.6)	1,20,974 (4.4)	12.7	6.0
Revenue Expenditure	3,01,611 (13.1)	3,41,648 (13.8)	3,66,227 (13.3)	13.3	7.2
Capital Expenditure	60,842 (2.6)	62,365 (2.5)	72,568 (2.6)	2.5	16.4

Note: Figures in brackets are percentage to GDP. RE Revised Estimates. BE Budget Estimates.

2.38 As on January 8, 2004, the Central Government announced a series of measures in respect of direct and indirect taxes. The objective of these measures has been mainly to further rationalise the tax rate structure under indirect taxes and to simplify the procedures under direct taxes. While changes in rates of indirect taxes would take effect immediately from January 9, 2004, procedural changes with respect to direct taxes would take effect from April 1, 2004.

2.39 Continuing the policy stance to reduce and align the custom duty rates to the international level, the peak rate of customs duty on non-agricultural goods has been further reduced from 25 per cent to 20 per cent and special additional duty of customs of 4 per cent has been abolished (Box II.1). Moreover, specific relaxations have been announced with respect to project imports, power sector, information technology/ electronics industry, communication services, medical equipment and life-saving drugs.

2.40 Furthermore, steps to facilitate trade include -round-the-clock electronic filing of customs documents for clearance of goods, clearances based on self-assessment and selective examination, reduction/ exemption of duty on specified items under transfer of residence and relaxation in baggage rules with respect to cinematographic films and laptops.

2.41 In case of excise duty, specific relaxations have been extended to the civil aviation sector and water supply projects. As regards income and services taxes, further simplification of procedures has been envisaged by introducing filing of income tax returns through internet, electronic filing of services tax returns for all 58 services taxes and exemption from filing the return to pensioners with no taxable income and employees with income upto Rs. 1.5 lakh and in whose case deduction of tax is made at source by the employer.

Developments during April-November 2003

2.42 The Central Government finances during the first eight months of the current fiscal year (April-November 2003) continued to be under pressure, as the growth in aggregate expenditure [excluding the discharge of liabilities to the National Small Savings Fund (NSSF)] over the corresponding period of the preceding year, outpaced the growth in revenue receipts. Including the expenditure on account of discharge of liabilities to the NSSF, the growth in aggregate expenditure was as high as 24.7 per cent. All the deficit indicators registered an increase in April-November 2003 (Table 2.21). There has, however, been some improvement in Central finances since September 2003. The Centre's ways and means

Box II.1

Highlights of Pre-Budget Announcements Made by Government of India

Indirect Taxes

- Peak customs duty on non-agricultural goods reduced from 25 per cent to 20 per cent and 4 per cent special additional duty (SAD) has been abolished.
- Customs duty on coal reduced from 25 per cent to 15 per cent.
- Customs duty on specified capital goods used for manufacture of electronic goods reduced from 15 per cent/10 per cent to Nil.
- Customs duty on project imports with investment of at least Rs 5 crore, in plant and machinery, reduced from 25 per cent to 10 per cent. Similarly, customs duty on power equipment cut by 15 per cent to 10 per cent.
- Customs duty on cell-phones and computers reduced from 10 per cent and 16 per cent to 5 per cent and 8 per cent, respectively.
- Excise duty on aviation turbine fuel (ATF) halved to 8 per cent and inland air travel tax of 15 per cent abolished.
- Customs duty on life saving drugs and equipment cut to 5 per cent.
- Trade facilitation measures such as round the clock electronic filling of custom documents extended to 23 custom formations; self-assessment and selective examination; and liberalisation of baggage rules.

Services Tax

- E- filing of service tax returns extended to all 58 taxable services from present 10.
- Process of registration for service tax simplified and rationalised.

Direct Taxes

- Pensioners with no taxable income and employees having salary income up to Rs. 1.5 lakh and whose entire tax is payable at source by the employer exempted from filing of returns.
- For perquisite valuation, rates of interest for housing loans, *etc.*, cut in line with the prevailing market rates.
- Infrastructure projects to be granted one-time approval for exemption under Section 10 (23G) of the Income Tax Act, 1961.
- Computer network to cover all 501 income-tax offices by June 2004.
- *Challan* forms for TDS payment cut from four to one.
- Paperless IT returns through internet under digital signatures for salaried taxpayers, doctors and accountants.

Expenditure Measures

- NABARD to operationalise a Rs.50,000 crore Agricultural Infrastructure and Credit Fund over the next three years for enhancing productivity and efficiency of agricultural activities.
- The Government to set up a Rs 50,000 crore Infrastructure Fund to provide credit for both term loans and working capital to projects in core sectors at 200 basis points below the prime lending rate (PLR) over the next three years.
- A new SMI Fund for Rs 10,000 crore for providing credit to small and medium enterprises (SMEs) at 200 basis points below the PLR, to be operationalised by SIDBI within four weeks.
- To rationalise the existing schemes, and to give a fillip to rural housing and sanitation, a new scheme called *Atal Grameen Griha Yojana* to come into effect from April 1, 2004.
- Food Corporation of India (FCI) to borrow funds from the capital market through government-guaranteed bonds from next financial year, which is likely to reduce revenue expenditure, on account of food subsidy by Rs. 2,000 crore per annum.
- Automatic route for ECBs with an average maturity of five years, thus minimising discretionary elements and rationalising the procedures.
- A new 'Dada-Dadi Bond' carrying a rate of interest higher than the prevailing market rate to enable senior citizens, above the age of sixty, earn a reasonable and secure income from their life's savings.
- The existing education loan scheme for needy students liberalised to allow access to loans at 200 basis points below PLR.

advances (WMA) from the Reserve Bank remained vacated for the larger part of the year (Chart II.4).

2.43 Till April 1999, the Central Government used to mobilise funds through small savings schemes and a major portion of net collection was being on-lent to the States. With a view to bringing transparency in accounting, the NSSF was created in April 1999, to collect the small savings and invest them in special securities issued by the Central and State Governments. With the creation of the NSSF, outstanding liabilities of the Centre towards small savers were taken over by it. The Centre, in turn, issued special securities of equivalent amount to the NSSF. Thus, outstanding balances as on March 31, 1999 became the liabilities of the NSSF towards small savers and the Centre had equivalent liability towards the NSSF. Further, the proportion of outstanding balances, which were earlier on-lent by the Centre to the States, continues to be the liabilities of the States to the Centre.

Table 2.21: Deficit Indicators of the Centre: April-November 2003

(Rupees crore)

Item	Financial Year (2003-04)		April-November 2003-04	
	Budget Estimates	April-November	Percentage to BE (Per cent)	Growth Rate (Per cent)
1	2	3	4	5
Revenue Deficit	1,12,292	76,701	68.3	13.0
Fiscal Deficit	1,53,637	93,656	61.0	12.3
Gross Primary Deficit	30,414	23,818	78.3	46.9

2.44 Under the debt-swap scheme, the States swapped a part of their high-cost liabilities (on account of small savings) to the Centre, contracted prior to April 1999, with fresh low-cost market borrowings and current liabilities on account of small savings. This helped the States to reduce interest cost of their debt. The Centre, in turn, used these proceeds to discharge part of its liabilities towards the NSSF. Thus, transactions under the debt-swap scheme were reflected in both the non-Plan expenditure (discharge of liabilities to NSSF) and non-debt capital receipts (pre-payment by States) of the Central Government.

2.45 The growth in the gross fiscal deficit (GFD) of the Centre emanated mainly from the higher revenue deficit. Among the other components of the GFD, capital outlay was higher and net lending registered a negative growth. The revenue deficit constituted 81.9 per cent of the GFD as against 73.1 per cent projected in the budget estimates for 2003-04, indicating that a larger share of borrowed resources is being used for

Chart II.4 : RBI's Ways and Means Advances to the Centre

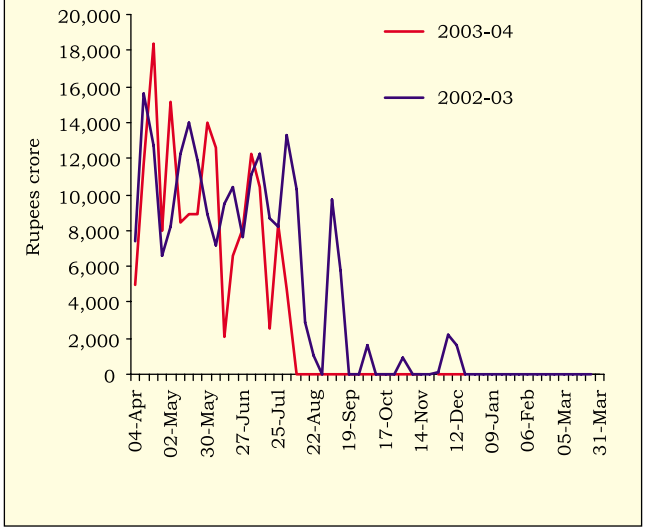


Table 2.22: Decomposition of GFD

(Rupees crore)

Item	April-November	
	2002-03	2003-04
1	2	3
Revenue Deficit	67,888	76,701
Capital Outlay	14,654	47,969
Net Lending	3,974	-29,474
Disinvestment	-3,122	-1,540
Gross Fiscal Deficit	83,394	93,656

Notes: 1. As disinvestment proceeds reduce GFD, they are indicated with a negative sign.
2. Figures include Rs.32,602 crore received under the State debt-swap scheme and used for discharge of liabilities with NSSF.

current expenditure leaving a lesser amount for investment purposes (Table 2.22).

2.46 Notwithstanding modest successes in expenditure containment in the recent period, the slippages from the budgetary projections underscores the deterioration in the "quality" of fiscal adjustment. The quality of the fiscal deficit has worsened, with the revenue deficit having increased substantially indicating that a larger share of borrowed funds is preempted by consumption expenditure.

2.47 The growth in revenue receipts for the first eight months of the current fiscal year was higher than the budgeted growth for 2003-04. The rise in revenue receipts was the result of both improved tax collection as well as higher non-tax revenue. Corporation tax rose significantly during April-November 2003, perhaps indicating the improvement in the corporate scenario. The higher non-tax revenue was mainly on account of improved collections from economic services (Table 2.23). Non-debt capital receipts rose three-fold with respect to the level during April-

Table 2.23: Revenue Receipts of the Centre

(Rupees crore)

Item	Financial Year (2003-04)		April-November 2003-04	
	Budget Estimates	April-November	Percentage to BE (Per cent)	Growth Rate (Per cent)
1	2	3	4	5
I. Revenue Receipts	**2,53,935**	**1,37,084**	**54.0**	**10.9**
Tax Revenue (Net)	1,84,169	90,010	48.9	12.0
Non-Tax Revenue	69,766	47,074	67.5	8.8
II. Gross tax revenue	**2,51,527**	**1,29,185**	**51.4**	**9.4**
Corporation Tax	51,499	21,987	42.7	31.7
Income Tax	44,070	20,715	47.0	7.5
Customs Duties	49,350	31,916	64.7	7.6
Union Excise Duties	96,791	48,790	33.0	1.1

November 2002 mainly reflecting the state debt- swap operations amounting to Rs.32,602 crore between June and November 2003. The realisation from disinvestments was Rs.1,540 crore.

2.48 The aggregate expenditure during April-November 2003 registered a substantial increase mainly on account of discharge of liabilities towards NSSF. Excluding redemption of securities to the NSSF, aggregate expenditure during the first eight months of the current fiscal year grew by 10.2 per cent as against a growth of 8.6 per cent budgeted for the full fiscal year. The higher growth in expenditure was on account of increase in revenue expenditure (Table 2.24). Of the total expenditure, non-Plan expenditure constituted 76.2 per cent. The composition of Plan and non-Plan expenditures, net of NSSF repayments, was, however, in tune with budget estimates, which was 72.4 per cent and 27.6 per cent, respectively. Interest payments, defence and subsidies together constituted a substantial portion of the non-Plan expenditure (net of NSSF repayments). Under the State debt-swap arrangement, the States had prepaid loans against small savings to the tune of Rs.32,602 crore during the April-November 2003. The Central Government, in turn, used the proceeds to discharge its liabilities with the NSSF.

Table 2.24: Expenditure of the Centre

(Rupees crore)

Item	Financial Year (2003-04)		April-November 2003-04	
	Budget Estimates	(April-November)	Percentage to BE (Per cent)	Growth Rate (Per cent)
1	2	3	4	5
Total Expenditure	**4,38,795**	**2,80,051**	**63.8**	**24.7**
I. Plan Expenditure	1,20,974	66,577	55.0	15.4
II. Non-Plan Expenditure	3,17,821	2,13,474	67.2	27.9
Of which:				
Interest Payments	1,23,223	69,838	56.7	4.0
Defence	65,300	30,640	46.9	4.3
Major Subsidies	48,636	33,726	69.3	30.7
III. Revenue Expenditure	3,66,227	2,13,785	58.4	11.6
IV. Capital Expenditure	72,568	66,266	91.3	100.4

Public Debt

2.49 The widening fiscal gap led to a steep rise in the outstanding liabilities of the Central Government. The outstanding domestic debt of the Central Government as a ratio to GDP is budgeted to rise (Table 2.25). The sharp increase in the debt-GDP ratio, reflective of burgeoning interest payments, essentially represents the overhang of outstanding liabilities contracted at a high interest cost in the past.

State Finances: 2003-04

2.50 The States' budgets for 2003-04 envisage continued efforts towards fiscal consolidation through augmentation of revenue and containment of expenditure. All major deficit indicators, *viz.,* the gross fiscal deficit (GFD), revenue deficit and primary deficit, are budgeted lower in 2003-04 as compared with the revised estimates for 2002-03 (Table 2.26). The decline in GFD is mainly on account of expected improvement in the revenue account and net lending, which would more than compensate the increase in capital outlay.

2.51 In 2003-04, the aggregate (revenue and capital) receipts of States are budgeted higher. The States' own revenue receipts (States' own tax and non-tax) would contribute about 65 per cent of the total increase in revenue receipts, while the rest would be accounted by current transfers (States' share in Central taxes and grants from the Centre). Consequently, the share of States' own revenue in financing their total expenditure is expected to move up from 42 per cent in 2002-03 to 44 per cent in 2003-04. The decline in

Table 2.25: Combined Liabilities and Debt-GDP ratio

Year (end-March)	Outstanding Liabilities			Debt to GDP ratio		
	Centre	States	Combined	Centre	States	Combined
	(Rupees crore)			(in per cent)		
1	2	3	4	5	6	7
1990-91	3,14,558	1,10,289	3,50,957	55.3	19.4	61.7
1996-97	6,75,676	2,43,525	7,73,629	49.4	17.8	56.5
2001-02	13,66,409	5,89,797	16,32,084	59.5	25.7	71.1
2002-03 RE	15,61,876	6,94,289	18,66,626	63.2	28.1	75.5
2003-04 BE	17,80,064	7,90,702	21,10,681	64.9	28.8	76.9

RE Revised Estimates. BE Budget Estimates.
Note: Data regarding States are provisional.

Table 2.26: Major Deficit Indicators of State Governments

(Rupees crore)

Item	2000-01	2001-02	2002-03 (BE)	2002-03 (RE)	2003-04 (BE)
1	2	3	4	5	6
Gross Fiscal deficit	89,532	95,986	1,02,882	1,16,730	1,08,861
	(4.3)	(4.2)	(4.0)	(4.7)	(4.0)
Revenue Deficit	53,569	59,233	48,314	61,302	49,008
	(2.5)	(2.6)	(1.9)	(2.5)	(1.8)
Primary Deficit	37,830	33,497	30,629	42,584	26,573
	(1.8)	(1.5)	(1.2)	(1.7)	(1.0)

RE Revised Estimates. BE Budget Estimates.

Note: Figures in brackets are per cent to GDP.

capital receipts is expected mainly on account of the budgeted decline in recovery of loans and advances, market borrowings and reserve funds (Table 2.27).

2.52 Reflecting increased efforts by the State Governments to contain expenditure, the growth in budgeted aggregate expenditure has been moderate during 2003-04. Component-wise, the deceleration in expenditure is pronounced on the capital account. However, a continued deterioration in the expenditure pattern is noticed during recent years due to a higher growth in the non-developmental component *vis-à-vis* the developmental component. Consequently, the share of developmental expenditure in the total, which had declined in 2002-03, is budgeted to decline further to 54.8 per cent in 2003-04 (Table 2.28). Within non-developmental heads, interest and pension payments would together account for 28.8 per cent of the total revenue expenditure.

2.53 As per the budget estimates for 2003-04, the financing pattern of GFD indicates that the small savings receipts (special securities issued to NSSF) would continue to contribute a major share. The shares of small savings receipts, loans from the Centre, and State provident funds in the financing of GFD is budgeted higher as compared with the revised estimates of the previous year (Table 2.29).

2.54 As a result of persistent fiscal deficits, the outstanding debt of the States is estimated to reach 28.8 per cent of the GDP by end-March 2004 from 28.1 per cent as at end-March 2003. The growing stock of States' debt has brought into focus the issue of fiscal sustainability of States.

2.55 The likely fiscal outturn of the State Governments during the current year is not yet evident. During April-October 2003, on an annual average basis, the outstanding ways and means advances (WMA) and overdrafts (OD) from the Reserve Bank were at a lower level as compared with those prevailing during the same period of the previous year. The outstanding WMA and OD of State Governments, at Rs.5,876 crore as on January 2, 2004, was lower by 10.4 per cent than the level on

Table 2.27: Receipts and Expenditure of States

(Rupees crore)

Item	2001-02	2002-03 (RE)	2003-04 (BE)	Percentage Variation	
				(Col.4 over 3)	(Col.3 over 2)
1	2	3	4	5	6
Aggregate Receipts	**3,80,107**	**4,37,292**	**4,69,446**	**7.4**	**15.0**
	(16.6)	**(17.7)**	**(18.4)**		
Revenue Receipts	2,55,599	2,93,873	3,32,919	13.3	15.0
	(11.1)	(11.9)	(13.0)		
Capital Receipts	1,24,507	1,43,419	1,36,527	-4.8	15.2
	(5.4)	(5.8)	(5.3)		
Total Expenditure	**3,77,554**	**4,42,609**	**4,76,039**	**7.6**	**17.2**
	(16.4)	**(17.9)**	**(18.6)**		
Revenue Expenditure	3,14,833	3,55,175	3,81,927	7.5	12.8
	(13.7)	(14.4)	(14.9)		
Capital Expenditure	62,722	87,434	9,41,12	7.6	39.4
	(2.7)	(3.5)	(3.7)		

Note: Figures in brackets are per cent to GDP. RE Revised Estimates. BE Budget Estimates.

Table 2.28: Expenditure Pattern of State Governments

(Rupees crore)

Item	2001-02	2002-03 (RE)	2003-04 (BE)
1	2	3	4
1. Developmental Expenditure	2,16,629 (57.4)	2,47,873 (56.0)	2,60,977 (54.8)
2. Non-Developmental Expenditure	1,38,062 (36.6)	1,60,596 (36.3)	1,77,025 (37.2)
3. Others*	22,863 (6.1)	34,140 (7.7)	38,037 (8.0)
Total Expenditure (1+2+3)	**3,77,554 (100.0)**	**4,42,609 (100.0)**	**4,76,039 (100.0)**

* Includes expenditure towards compensation and assignments to local bodies, grants-in-aid contribution, reserve with finance departments, discharge of internal debt and repayment of loans to the Centre.

Note: Figures in brackets are per cent of total expenditure.

January 3, 2003 (Chart II.5). In 2002-03, 21 State Governments were in overdraft from the Reserve Bank. In the current fiscal year (up to December 1, 2003), 15 States have resorted to overdrafts from the Reserve Bank.

2.56 The States' continued efforts towards fiscal consolidation include measures for revenue augmentation, expenditure containment and other institutional reforms like PSU restructuring and power sector reforms. On the revenue front, strengthening of tax efforts and rationalisation of user charges mainly relating to power, water and transport are under way. In view of the apprehensions expressed by a large number of States, the Union Budget for 2003-04 envisaged that the Central Government would compensate 100 per cent of the loss in the first year, 75 per cent of the loss in the second year and 50 per cent in the third year on account of the introduction of VAT by the States. The implementation of VAT has, however, been postponed subsequent to the Union Budget. On the expenditure front, a number of States have proposed to continue their efforts towards containment of revenue expenditure through restrictions on fresh recruitment/ creation of new posts and curbs on the increase in administrative expenditure. Some States have proposed introduction of a contributory pension scheme for their newly-recruited staff.

2.57 Several States have initiated measures to provide statutory backing to fiscal reforms through enabling legislation. The objective is to eliminate the revenue deficit and contain the fiscal deficit in the medium-term. The Central Government has also initiated measures to encourage medium-term fiscal reforms at the State level. The immediate concern about the current high level of debt has prompted the introduction of the debt-swap scheme on mutual agreement between the Central and the State Governments. Recognising the need to reduce the interest burden of the States, all loans from the Centre to the State Governments bearing coupons in excess of 13 per cent are to be swapped with market borrowings and small savings proceeds at prevailing interest rates over a period of three years ending in 2004-05.

Chart II.5 : RBI's WMA and Overdrafts to States

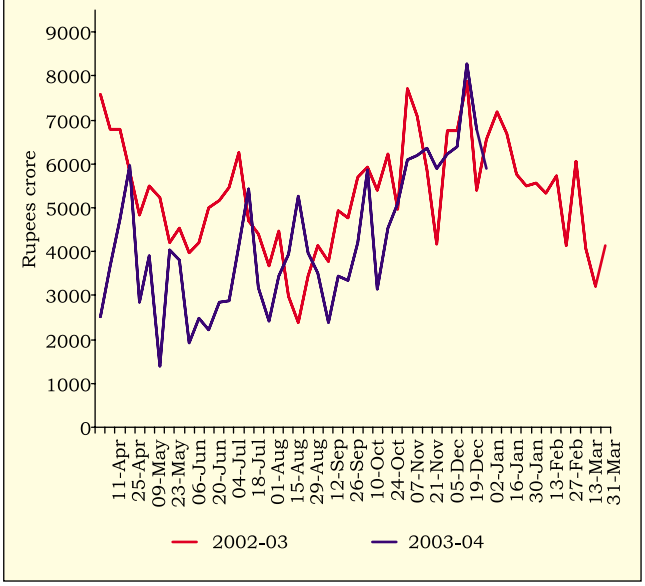


Table 2.29: Financing of Gross Fiscal Deficit of State Governments

(Per cent to GFD)

Year	Loans from the Centre	Market borrowings (net)	Special securities issued to NSSF	Small savings, PF *etc.*	Others #	Gross Fiscal Deficit (2+3+4+5)
1	2	3	4	5	6	7
2001-02	9.5	17.7	39.5	10.6	22.7	100
2002-03 (RE)	7.0	19.9	42.7	9.2	21.2	100
2003-04 (BE)	10.7	12.4*	46.3	9.7	21.0	100

RE Revised Estimates. BE Budget Estimates.

\# Include loans from FIs, reserve funds, deposits and advances, *etc.*

* Does not include the market borrowings for debt swap.

2.58 With the power sector reforms gaining importance in recent years, 22 States have either constituted or notified the constitution of State Electricity Regulatory Commissions (SERCs) for determining tariff structure, 15 of which have issued tariff orders. Various other measures have also been undertaken - particularly unbundling of electricity boards into separate entities performing separate functions.

III. MONETARY AND CREDIT SITUATION

Monetary Conditions

2.59 The monetary policy stance of the Reserve Bank continued to be the provision of adequate liquidity to meet credit growth and support investment demand in the economy while continuing a vigil on movements in the price level. The Reserve Bank also proposed to continue with the prevailing stance of preference for a soft and flexible interest rate environment within the framework of macroeconomic stability. The monetary policy stance was reflected in cuts of 25 basis points in the Bank Rate to 6.0 per cent (April 29, 2003), 50 basis points in the repo rate to 4.5 per cent (August 25, 2003) and 25 basis points in the cash reserve ratio (CRR) to 4.5 per cent of the banks' net demand and time liabilities (June 14, 2003).

2.60 The Mid-Term Review of the Monetary and Credit Policy stressed that monetary management and macroeconomic developments have been in conformity with the stance announced in the annual Monetary Policy Statement of April 2003. It, was, therefore, proposed to continue with the stance for the remaining half of the current year. However, taking into account the favourable progress of the monsoon and other macroeconomic developments during the first half of the year, the Reserve Bank revised the GDP growth projection to 6.5-7.0 per cent with an upward bias from around 6.0 per cent, and inflation projection to 4.0-4.5 per cent with a downward bias from 5.0-5.5 per cent. In January 2004, the Reserve Bank revised its growth projections further to around 7.0 per cent with a continued upward bias. As regards inflation, while the downward bias may not be attainable, the range of 4.0-4.5 per cent continues to be relevant for policy purposes unless there are unanticipated shocks. Consistent with the expected growth and inflation rates, the April 2003 statement placed expected M_3 and non-food credit (including non-SLR investments) growth at 14.0 per cent and 15.5-16.0 per cent, respectively; these monetary and credit projections were retained in the Mid-Term Review. Several measures were announced to improve the credit delivery mechanism, micro-credit delivery, money market development and supervision of banks and other financial institutions.

2.61 Monetary management in 2003-04, as in recent years, had to contend with persistent excess supplies in the foreign exchange market. The Reserve Bank, therefore, had to actively modulate discretionary liquidity through open market operations (OMO), including repo operations through the Liquidity Adjustment Facility (LAF), to steer monetary conditions in line with the desired objectives. In line with the policy preference for a soft and flexible interest rate environment, the interest rates in the money and government securities markets softened during the course of the financial year.

2.62 The monetary experience suggests that sustained excessive monetary expansion has often spilled over into inflation. While the increase in foreign exchange reserves reflects the growing investor confidence in the Indian economy and provides an insurance cover against adverse external shocks, there is also the need to mitigate the inflationary potential by counter-balancing the domestic and external sources of monetisation.

2.63 The scope of the Reserve Bank to conduct direct sterilisation operations is, by and large, circumscribed by its stock of Government paper, which could be sold outright or furnished as collateral in the LAF repo auctions. The Reserve Bank of India Act, 1934 does not allow the Reserve Bank to borrow clean beyond its paid-up capital of Rs.5 crore or pay interest on balances held by banks beyond the CRR prescribed by the central bank and also below the statutory minimum of 3.0 per cent of net demand and time liabilities. This constrains its ability to mop up surplus liquidity from the market by borrowing funds without a collateral on the lines of a deposit facility. The ability of the Reserve Bank to trade the surpluses of the external sector with the deficit of the Government account is also limited by the stock of Government securities in its books. As the Reserve Bank statutorily cannot pay interest on Government balances, the Government invests its surplus cash balances into Government securities held by the Reserve Bank, thereby reducing its stock available for OMO. The pressure of sudden large-scale inflows in most emerging market economies, including India, has led to a search for alternative strategies of sterilisation. Against the background of international experience with various instruments of sterilisation and application of available instruments within the existing financial and legal structure, the Reserve

Bank's Working Group on Instruments of Sterilisation recommended a two-pronged approach of strengthening and refining the existing instruments and exploring new instruments appropriate in the Indian context (see Chapter VI).

2.64 The operating procedures of monetary policy have been changing rapidly in India, as in other emerging market economies, as channels of monetary policy transmission shift in the course of financial liberalisation. As part of the increasing market orientation of monetary policy, the Reserve Bank has gradually put in place a liquidity management framework in the form of a LAF not only to adjust the quantum of marginal liquidity but also to transmit signals regarding the price of liquidity. While the LAF has emerged as the principal instrument in the monetary policy operating framework of the Reserve Bank, its operation in the present form in conjunction with other supporting instruments has given rise to certain conceptual and operational issues which need to be addressed to enhance the efficacy of monetary operations (Box II.2). The Reserve Bank's Internal Group on Liquidity Adjustment Facility reviewed LAF operations in a cross-country perspective, keeping in view recent developments in the financial markets as well as in technology. These were addressed in two parts, in terms of day-to-day liquidity management and in terms of sterilisation operations. While it is difficult to distinguish operationally between the sterilisation operations and liquidity management operations under LAF, the Group emphasised the need to conceptually distinguish surplus liquidity of a "temporary" nature arising from banks' cash management practices from surplus liquidity of a somewhat "enduring" nature arising from sustained capital flows.

Reserve Money

2.65 Reserve money growth during the fiscal year 2003-04 (up to January 16, 2004) continued to be driven by the sustained accretion to the Reserve Bank's foreign currency assets (Table 2.30). The expansionary effect on reserve money was, however, contained through sterilisation operations.

Box II.2

Internal Group on Liquidity Adjustment Facility

Recommendations Regarding Day-to-Day Liquidity Management:

- Pursuing the objective of conducting LAF operation on real-time basis, in the light of substantial technological developments.
- Introduction of a standing deposit facility, with enabling amendment of the Reserve Bank of India Act, 1934 to accord the Reserve Bank greater flexibility in its use of the repo facility with a view to achieving balanced development of various segments of the money market. Pending legislative amendments, the Reserve Bank could explore possibilities of modifying the current CRR provision to accommodate a standing deposit type facility - placement of deposits at the discretion of banks, unlike CRR, which is applicable to all banks irrespective of their liquidity position.
- Since the interest rate on standing deposit type facility is designed to provide a floor to the interest rate corridor, the remuneration of such deposits should be at a rate lower than the repo rate. The remuneration of eligible cash balances under CRR, if any, could be delinked from the Bank Rate and placed at a rate lower than the repo rate.
- Enlarging the minimum tenor of the LAF operations from overnight to seven days to be conducted on daily basis to enable balanced development of various segments of money market, with the flexibility to conduct overnight repo if the situation so warrants.
- Conducting fixed rate LAF auctions, to enhance the ability of the Reserve Bank to transmit policy signals to the market, with the flexibility to use the variable price auction format if the situation so warrants.
- Injecting liquidity at a single interest rate, *i.e.*, the reverse repo rate set above the repo rate, thereby forming a ceiling to the corridor.
- Aligning of the Bank Rate to the reverse repo rate so that the entire liquidity support, including refinance, could be made available at the reverse repo rate/Bank Rate. In the recent period, with the economy remaining in surplus mode, the importance of the Bank Rate seems to have reduced. However, while the Reserve Bank may continue to announce the Bank Rate independently, as at present, it should be aligned, under normal circumstances, to the reverse repo rate. If liquidity conditions shift to deficit mode on a more enduring basis, the reverse repo rate would be placed within the corridor. The interest rate on liquidity injection at the marginal lending facility in the nature of standing liquidity facility, in such a situation, would form the ceiling to the corridor. In such a scenario, the Bank Rate should, under normal circumstances, be aligned to the marginal lending rate (*i.e.*, standing refinance rate). However, the standing deposit rate would continue to operate as the floor to the LAF corridor.
- Shifting the timing of LAF to the middle of the day, say, 12 noon to ensure that marginal liquidity is kept in the system for a longer time in an environment of the real-time gross settlement (RTGS) system and low CRR before coming on to the Reserve Bank's repo window once intra-day liquidity (IDL) is available under the RTGS system. To take care of unforeseen contingencies in mismatches, the Reserve Bank could consider discretionary announcement of timing of both repo auctions and reverse repo auctions at late hours.
- Strengthening the Reserve Bank's liquidity forecasting model to provide a more scientific basis to the decision making process for LAF operations.

Recommendations Regarding Sterilisation:

- Additional instruments of sterilisation to be explored so as to reduce the liquidity pressure on the LAF window. The Group has proposed that as and when the RBI Act is amended, the standing deposit facility could provide an additional instrument of sterilisation. As proposed by the Reserve Bank's Working Group on Instruments of Sterilisation, setting up of a Market Stabilisation Fund (MSF) could be useful as an option, which can be operationalised whenever considered necessary.

Table 2.30: Variations in Major Components and Sources of Reserve Money

(Rupees crore)

Item	2002-03	2003-04 (up to Jan. 16)	2002-03				2003-04		
			Q1	Q2	Q3	Q4	Q1	Q2	Q3
1	2	3	4	5	6	7	8	9	10
Reserve Money	**31,091**	**25,683**	**-8,850**	**6,791**	**7,917**	**25,233**	**17,201**	**-18,291**	**23,834**
	(9.2)	(7.0)							
Components									
1. Currency in circulation	31,499	35,225	14,633	-5,901	11,206	11,561	17,885	-5,969	17,966
	(12.6)	(12.5)							
2. Bankers' Deposits with RBI	-801	-10,339	-23,873	12,451	-2,427	13,048	-1,606	-12,633	5,961
3. 'Other' Deposits with the RBI	393	798	389	241	-861	624	921	310	-92
Sources									
1. RBI's net credit to Government Sector	-31,499	-77,366	-4,212	-19,779	-17,427	9,919	-4,451	-53,146	-12,506
Of which : to Central Government	-28,399	-76,066	1,455	-19,555	-17,882	7,583	434	-53,744	-15,844
	(-20.1)	(-67.3)							
2. RBI's Credit to Banks and Commercial Sector	-6,468	-4,887	-6,537	-784	8	844	-1,564	-2,525	-796
3. NFEA of RBI	94,275	1,10,501	19,279	19,619	34,766	20,611	22,710	25,720	51,931
	(35.7)	(30.8)							
4. Government's Net Currency Liabilities to the Public	705	169	168	256	157	124	87	60	23
5. Net Non-Monetary Liabilities of RBI	25,922	2,734	17,548	-7,479	9,587	6,265	-419	-11,600	14,818
Memo:									
1. Net Domestic Assets	-63,184	-84,818	-28,130	-12,828	-26,849	4,623	-5,509	-44,011	-28,097
2. FCA, adjusted for revaluation	82,090	1,03,573	8,145	22,881	31,060	20,004	23,943	31,832	37,560
3. NFEA/Reserve Money (per cent) (end-period)	97.1	118.7	86.1	90.2	98.2	97.1	98.6	110.5	117.0

NFEA : Net Foreign Exchange Assets. FCA : Foreign Currency Assets.

Note: Data based on March 31 for Q4 and last reporting Friday for all other quarters.

Figures in brackets are percentage variations during the year.

2.66 The sterilisation operations in the form of open market sales of government securities and repo operations offset the primary liquidity emanating from the Reserve Bank's primary subscriptions (Rs.14,500 crore). Consequently, the Reserve Bank's net credit to the Centre declined sharply (Table 2.31). Reflecting the scale effect of CRR cuts and the substitution effect of large-scale capital flows, the share of net foreign assets in reserve money has increased dramatically to 119 per cent by January 16, 2004 from less than 10 per cent as at end-March 1990.

2.67 Besides the conventional open market operations, the Reserve Bank continued to appropriately supplement its ability to absorb excess liquidity emanating from sustained capital flows by various means:

- As a temporary measure, the notified amount for 91-day Treasury Bills was raised to Rs.1,500 crore for eight auctions between August 6, 2003 and September 24, 2003 but brought back to Rs.500 crore from October 1, 2003.
- With a view to sustaining liquidity management amidst the steady reduction in the stock of Government securities, the Government of India converted the entire stock of Government of India Treasury Bills (Conversion) Special Securities held by the Reserve Bank (Rs.61,818 crore) into marketable securities on private placement basis.
- Acquisition of Government paper by funding pre-payment of the Government's external debt.

Monetary Survey

2.68 Broad money (M_3) growth decelerated during 2003-04 (up to January 9, 2004), remaining within the trajectory of 14.0 per cent indicated in the monetary and credit policy (Table 2.32). The lower M_3 growth was on account of a deceleration in banks' time deposits. Apart from the effect of redemption of Resurgent India Bonds (RIBs), there was a slowdown in domestic time deposit accretion reflecting moderation in deposit rates by banks. Relative rigidity of the interest rates on small savings has also made financial savings in small savings and Government

Table 2.31: Variation in Net Reserve Bank Credit to the Centre

(Rupees crore)

Variable	2002-03	2002-03				2003-04		
		Q1	Q2	Q3	Q4	Q1	Q2	Q3
1	2	3	4	5	6	7	8	9
Net Reserve Bank Credit to the Centre (1+2+3+4-5)	**-28,400**	**1,455**	**-19,555**	**-17,882**	**7,582**	**435**	**-53,744**	**-15,845**
1. Loans and Advances	-5,176	2,472	-7,648	0	0	8,145	-8,145	0
2. Treasury Bills held by the Reserve Bank	-15	-18	0	0	3	-3	0	0
3. Reserve Bank's Holdings of Dated Securities	-24,731	-6,107	-11,761	-17,979	11,116	-11,300	-45,530	-15,795
4. Reserve Bank's Holdings of Rupee Coins	-92	64	-146	97	-106	163	-69	-51
5. Central Government Deposits	-1,614	-5,044	0	0	3,431	-3,430	0	0
*Memo Items**								
1. Market Borrowings of Dated Securities by the Centre #	1,25,000	49,000	35,000	23,000	18,000	44,000	36,000	15,000
2. Reserve Bank's Primary Subscription to Dated Securities	36,175	22,018	1,157	0	13,000	5,000	0	0
3. Repos (-) / Reverse Repos (+) (LAF), net position £	1,940	-20,355	8,845	10,371	3,079	-25,052	1,557	-3,580
4. Net Open Market Sales #	53,781	7,020	19,918	15,693	11,150	5,620	16,671	14,225
5. Primary Operations $	23,616	29,598	-8,642	-12,527	15,187	25,643	-32,609	2,304

* At face value. # Excludes Treasury Bills. £ Includes fortnightly repos.
$ Adjusted for Centre's surplus investment.
Quarterly variations are based on March 31 for Q4 and last reporting Fridays for other quarters.

of India Relief Bonds more attractive than fixed deposits. Besides, the lower interest rates on fixed deposits have also resulted in lower interest accruals (included under time deposits). Currency demand recorded an increase commensurate with the recovery in agricultural activity.

Table 2.32: Monetary Indicators

(Amount in Rs. crore)

Variable	Outstanding as on March 31, 2003	Year-on-year Variation			
		2003 (As on January 10)		2004 (As on January 9)	
		Absolute	Per cent	Absolute	Per cent
1	2	3	4	5	6
I. Reserve Money*	**3,69,061**	**33,893**	**10.8**	**47,826**	**13.8**
II. Broad Money (M_3)	**16,95,551**	**2,02,262**	**13.9**	**2,27,825**	**13.5**
a) Currency with the Public	2,70,983	31,276	13.3	38,952	14.6
b) Aggregate Deposits	14,21,326	1,70,674	14.0	1,87,605	13.2
i) Demand Deposits	1,98,602	19,567	11.9	39,072	21.2
ii) Time Deposits	12,22,725	1,51,108	14.3	1,48,533	12.0
Of which: Non-Resident Foreign Currency Deposits	92,271	3,568	4.0	-19,697	-21.1
III. NM_3	**16,15,205**	**1,96,731**	**14.7**	**2,35,779**	**15.3**
IV. a) L_1	16,70,480	2,06,336	15.0	2,50,197	15.8
Of which: Postal Deposits	55,275	9,605	24.2	14,418	29.3
b) L_2	16,76,776	2,01,957	14.5	2,50,524	15.7
Of which: FI Deposits	6,296	-4,379	-42.2	327	5.5
c) L_3	16,96,349	2,02,629	14.4	2,51,816	15.6
Of which: NBFC Deposits	19,573	672	3.7	1,292	6.9
V. Major Sources of Broad Money					
a) Net Bank Credit to the Government (i+ii)	**6,78,059**	**67,435**	**11.6**	**73,389**	**11.3**
i) Net Reserve Bank Credit to Government	1,20,679	-31,548	-20.8	-72,049	-59.9
Of which: to the Centre	1,12,985	-30,694	-21.4	-72,611	-64.2
ii) Other Banks' Credit to Government	5,57,379	98,983	23.0	1,45,437	27.4
b) Bank Credit to Commercial Sector	**8,62,068**	**87,529**	**11.9**	**1,08,134**	**12.5**
Of which: Scheduled Commercial Banks' Non-food Credit	6,35,192	86,401	16.8	1,10,047	17.1
c) Net Foreign Exchange Assets of Banking Sector	**3,93,715**	**95,632**	**33.3**	**1,22,151**	**31.9**

Data provisional. FI : Financial Institutions; NBFC : Non-Banking Financial Companies.
* Variations pertain to January 16, 2004 and corresponding period of previous year.
Note: M_3, NM_3, L_1, L_2, L_3 and deposits are adjusted for the full impact of mergers while credit is adjusted for the initial impact of mergers during 2002-03. For items III, IVa, IVb and non-resident foreign currency deposits, variation figures pertain to October while that for item IVc pertain to September.

Bank Credit

2.69 Bank credit to the commercial sector has shown signs of pick up since August 2003. Non-food credit growth recorded a larger expansion on a year-on-year basis (Table 2.32). Food credit contracted reflecting a further decline in food stocks (Table 2.33).

2.70 Housing credit has emerged as an important driver of credit growth benefiting from tax incentives as well as softening of interest rates, increasing by 222 per cent since end-March 2000. Credit to the priority sector has revived with a substantial increase in the advances to 'other priority sectors' (Table 2.34). Over the years, the definition of 'other priority sectors' has been widened in consonance with the coverage of priority sectors. The latest disaggregated data on this category, pertaining to 2002-03, reveal that the bulk of the higher off-take under 'other priority sectors' emanated from housing loans up to Rs.10 lakh in rural and semi-urban areas. Credit to industry, however, recorded a decline during April to November 2003 although it has started picking up in recent months. The decline in credit to industry was mainly on account of industries such as petroleum, fertilisers, coal, iron and steel, cotton textiles and cement. On the other hand, industries such as infrastructure, electricity and gems and jewellery recorded an increase in credit. The decline in overall credit to industry during April to November 2003 can be attributed to, *inter alia*, an increased recourse by corporates to internal sources of financing enabled by higher profits as well as higher external commercial borrowings (ECBs).

2.71 In the face of increased capital flows, commercial banks' holding of government and other approved securities increased sharply during the year. As a result, scheduled commercial banks' holding of government and other approved securities – much higher than the prescribed Statutory Liquidity Ratio (SLR) of 25.0 per cent – increased even further during 2003-04, reaching 41.4 per cent by end-December 2003. The increase in the excess liquid funds of the commercial banks, *i.e.*, the resources still available after meeting statutory pre-emptions and credit off-take, flowing into the government securities market contributed to the reduction of the secondary market yields of Government securities across the spectrum (Chart II.6).

Priority Sector Lending

2.72 In continuation of several initiatives taken, and keeping in view the recent developments in credit flows to different sectors, certain specific measures with respect to the priority sector announced in the November 2003 Mid-Term Review were:

- Depending on the good track record and financial position of the SSI units, banks may increase the loan amount from Rs.15 lakh up to Rs.25 lakh (with the approval of their Boards) for dispensation of the collateral requirement.
- The interest rate on the deposits of foreign banks placed with SIDBI towards their priority sector shortfall will be at the Bank Rate.
- SIDBI would take appropriate steps to ensure that the priority sector funds are used expeditiously and benefits of reductions in interest rates are passed on to the borrowers.
- All new loans granted by banks to NBFCs for the purpose of on-lending to the SSI sector would also be reckoned under priority sector lending.

Table 2.33: Select Banking Indicators: Financial Year Variations

(Amount in Rupees crore)

Item	2001-02		2002-03		2002-03 (up to Jan. 10)		2003-04* (up to Jan. 9)	
	Absolute	Per cent	Absolute	Per cent	Absolute	Per cent	Absolute	Per cent
1	2	3	4	5	6	7	8	9
Aggregate Deposits	**1,40,742**	**14.6**	**1,47,822**	**13.4**	**1,27,857**	**11.6**	**1,56,539**	**12.2**
Demand Deposits	10,496	7.4	17,241	11.3	5,799	3.8	25,073	14.7
Time Deposits	1,30,246	15.9	1,30,581	13.7	1,22,058	12.8	1,31,466	11.8
Bank Credit	**78,289**	**15.3**	**94,949**	**16.1**	**61,281**	**10.4**	**62,774**	**8.6**
Food Credit	13,987	35.0	-4,499	-8.3	-3,836	-7.1	-12,943	-26.2
Non-food Credit	64,302	13.6	99,448	18.6	65,117	12.2	75,717	11.1
Investments	**68,110**	**18.4**	**1,09,276**	**24.9**	**85,555**	**19.5**	**1,10,323**	**20.1**
Government Securities	71,141	20.9	1,12,241	27.3	88,309	21.5	1,07,392	20.5
Other Approved Securities	-3,032	-10.1	-2,964	-10.9	-2,754	-10.2	2,931	12.1

* Data provisional.

Note: Deposits are adjusted for the full impact of mergers while credit is adjusted for the initial impact of mergers during 2002-03.

Table 2.34: Sectoral and Industry-wise Deployment of Gross Bank Credit of Scheduled Commercial Banks

(Amount in Rupees crore)

Item	Outstanding as at end-November 2003	Variation			
		2002-03 (April-November) $		2003-04 (April-November)	
		Absolute	Per cent	Absolute	Per cent
1	2	3	4	5	6
Priority sector #	2,36,117	7,132	4.1	24,508	11.6
of which : Agriculture	79,641	4,980	8.2	6,123	8.3
Small Scale	61,017	-139	-0.2	623	1.0
Others	95,115	2,291	4.0	17,418	22.4
Industry (Medium and Large)	2,33,075	16,505	9.6	-2,093	-0.9
Housing	45,466	6,802	30.4	8,879	24.3
Wholesale Trade	22,667	672	3.3	89	0.4
Rest of the sectors	1,25,382	9,574	10.4	11,269	9.9
Non-food Gross Bank Credit	**6,62,707**	**40,685**	**8.4**	**42,652**	**6.9**
Memo Items					
(i) Export Credit	52,112	328	0.8	2,910	5.9
(ii) Credit to Industry (Small, Medium and Large)					
Petroleum	11,460	170	1.5	-3,283	-22.3
Infrastructure	30,315	3,135	21.2	4,018	15.3
Cement	6,126	604	14.3	-305	-4.7
Cotton Textiles	15,379	1,131	9.6	-383	-2.4
Iron and Steel	25,933	1,254	6.3	-2,132	-7.6
Electricity	12,601	221	2.4	1,428	12.8
Engineering	26,140	-790	-3.3	-132	-0.5
Fertilisers	5,807	329	6.0	-1,116	-16.1
Computer Software	2,809	314	18.9	198	7.6
Gems and Jewellery	8,956	1,090	16.9	1,423	18.9

Excluding investments in eligible securities. $ Data adjusted for mergers since May 2002.

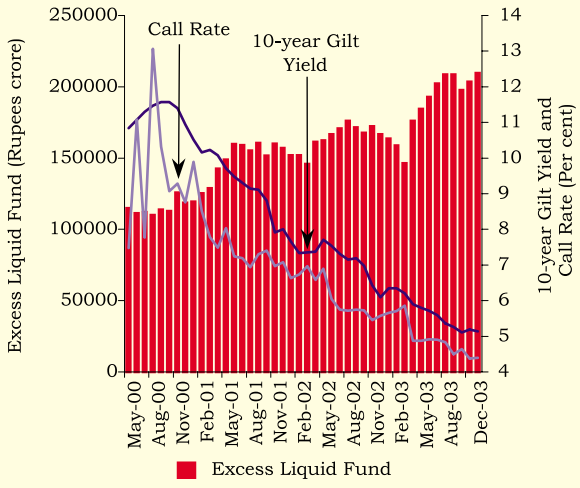
Note : Data are provisional and relate to select scheduled commercial banks which account for about 90 per cent of bank credit of all scheduled commercial banks.

Micro-Credit Delivery

2.73 Several steps were also taken in respect of micro credit, based on the recommendations of the informal groups constituted to examine micro-finance delivery. The measures included in the Mid-Term Review were:

- Banks should provide adequate incentives to their branches in financing self-help groups (SHGs) and establish linkages with them. The procedures be made simple and easy while providing total flexibility to suit local conditions.
- The group dynamics of working of the SHGs should be left to themselves and need neither be regulated nor formal structures imposed or insisted upon.
- There should be a hassle-free approach to micro-financing of SHGs including financing of consumption expenditures.
- NABARD would reinforce its commitment to maintaining and enhancing the flow to micro-finance while simplifying the process.
- NABARD would also devise mechanisms for experience sharing among bank branches actively involved in extending micro-finance.

Chart II.6 : Excess Liquid Fund and Interest Rates

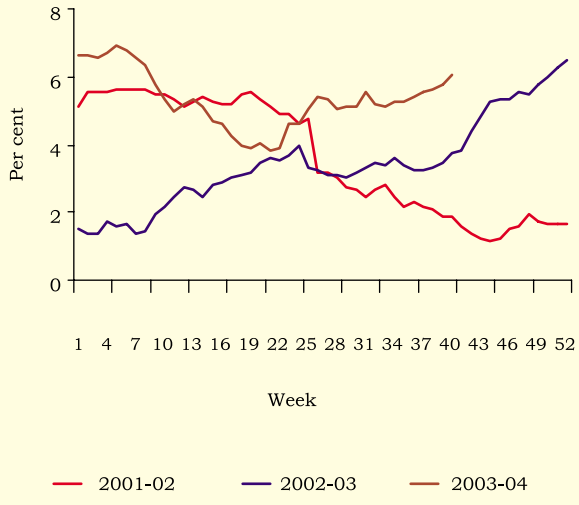


Price Situation

2.74 The global inflation environment remains stable (Table 2.35). In the US, the fear of an unwelcome fall in inflation has diminished with the inflation risk viewed as balanced. Headline consumer price inflation (CPI) fell to 1.8 per cent in November 2003 from 2.0 per cent in October 2003 due to an accelerated decline in goods prices in face of a steady rise in services' prices, which is entirely holding up inflation. In the Euro area, inflation is expected to remain around the ECB target of close to two per cent, as appreciation of the euro and cyclical recovery in productivity are expected to dampen inflationary pressures from higher oil prices, unprocessed food prices, as well as planned increases in indirect taxes and administered prices. In the UK, the broad-based recovery is expected to increase underlying inflationary pressures. In Japan, deflationary pressures continue to persist. In China, consumer prices increased mainly due to food and farm products prices; prices of most manufactured products are still falling. Hong Kong and Taiwan continue to experience declining prices while in Singapore, inflation is below one per cent.

2.75 Inflation in India has generally remained benign during 2003-04 so far (Chart II.7). Inflation trends in the last two months have not been unexpected but the magnitude of price rise has been above the original expectations. As noted earlier, in the normal course, it is expected that the inflation rate would fall during the period mid-January to March 2004. While the downward bias in the Mid-Term Review may not be attainable, the range of 4.0-4.5 per cent for inflation by end-March 2004 continues to be relevant for monetary policy making, unless there are unanticipated shocks.

Chart II.7 : Annual Wholesale Price Inflation (Point-to-Point)



2.76 Inflation measured as annual year-on-year (y-o-y) variations in the wholesale price index (WPI) peaked at 6.9 per cent in the first week of May 2003. This resulted from the upward revision in electricity prices and supply disruptions due to the transporters' strike in April, more than offsetting the effect of fortnightly downward revisions in POL prices beginning April 16, 2003. Inflation ebbed thereafter up to August 23, 2003 driven by a decline in the prices of mineral oil, oil seeds, oilcakes, fruits and cement which more than offset inflationary pressures from iron and steel prices, vegetable prices and hike in administered coal prices. In the subsequent weeks, increases in prices of domestic mineral oil (following continued hardening of international crude prices), electricity, fruits, oil seeds and textiles pushed inflation up to 6.1 per cent by January 3, 2004 (Chart II.8).

Table 2.35: Annual Consumer Price Inflation

(Per cent)

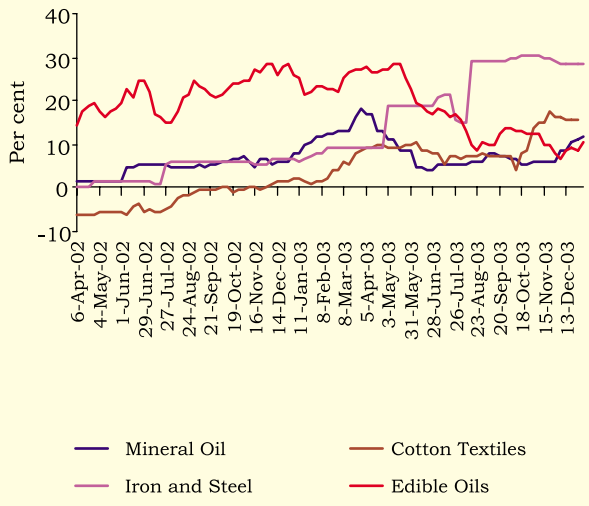
Country/Area	1995	1996	1997	1998	1999	2000	2001	2002	2003 P
1	2	3	4	5	6	7	8	9	10
Advanced Economies	**2.6**	**2.4**	**2.1**	**1.5**	**1.4**	**2.2**	**2.2**	**1.5**	**1.8**
United States	2.8	2.9	2.3	1.5	2.2	3.4	2.8	1.6	2.1
Japan	-0.1	0.0	1.7	0.6	-0.3	-0.9	-0.7	-0.9	-0.3
Euro Area	2.7	2.2	1.6	1.1	1.1	2.1	2.4	2.3	2.0
Developing Countries	**23.3**	**15.3**	**9.9**	**10.4**	**6.5**	**5.8**	**5.8**	**5.3**	**5.9**
Developing Asia	13.2	8.2	4.8	7.7	2.5	1.8	2.7	2.0	2.5
China	17.1	8.3	2.8	-0.8	-1.4	0.4	0.7	-0.8	0.8
India	**10.2**	**9.0**	**7.2**	**13.2**	**4.7**	**4.0**	**3.8**	**4.3**	**4.0**

P : IMF Projections.

Note : Data are on a calendar year basis.

Source : World Economic Outlook, IMF, September 2003.

Chart II.8 : Major Sources of Wholesale Price Inflation (Point-to-Point)



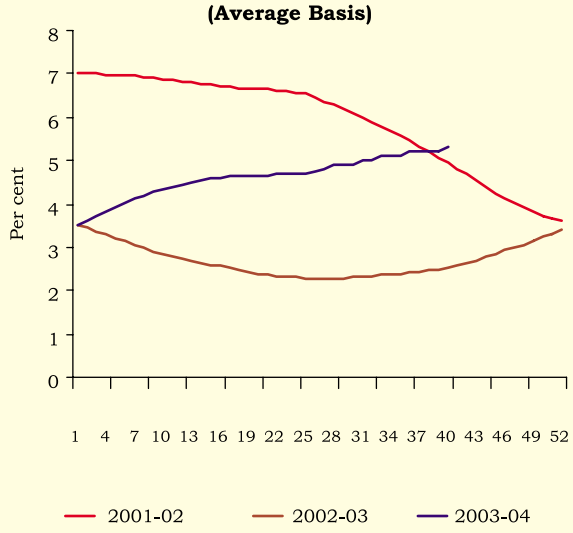
2.77 The major sources of y-o-y inflation have been few items such as iron and steel, mineral oils, electricity, oilseeds and edible oils, vegetables, raw cotton and cotton textiles; these explain more than 70 per cent of the y-o-y inflation. Firming of iron and steel prices, in line with international price movements, is attributed to increased domestic as well as foreign demand (largely from China) in the face of domestic production approaching its potential. Edible oils inflation reflects the impact of the last year's drought - the prices have been broadly stable since mid-May 2003 on an expected rebound in domestic production of oilseeds. Higher raw cotton prices were due to weak domestic crop in the last season as well as low global stocks; prices have though largely stabilised since end-July on expectations of a better crop. On the whole, manufactured products group contributed 52.5 per cent to the y-o-y inflation as on January 3, 2004 as compared with 53.3 per cent during the corresponding period last year (Table 2.36).

Table 2.36: Annual Point-to-Point WPI Inflation by Component (Base 1993-94=100)

(Per cent)

Group/ Item	Weight	Annual Variation				Weighted Contributions	
		2000-01	2001-02	2002-03	2003-04 (Jan. 3, 2004)	2002-03	2003-04 (Jan. 3, 2004)
1	2	3	4	5	6	7	8
All Commodities	**100.0**	**4.9**	**1.6**	**6.5**	**6.1**	**100.0**	**100**
A. Primary Articles	**22.0**	**-0.4**	**3.9**	**6.1**	**4.8**	**21.6**	**17.9**
i) Cereals	4.4	-5.5	0.8	4.0	0.2	2.9	0.1
ii) Pulses	0.6	7.1	-3.3	0.3	2.5	0.0	0.3
iii) Fruits and Vegetables	2.9	-2.9	14.4	-1.2	11.4	-0.6	5.5
iv) Raw Cotton	1.4	7.8	-21.3	34.3	27.1	5.4	5.3
v) Oilseeds	2.7	2.8	6.8	30.0	11.5	10.6	4.9
vi) Sugarcane	1.3	10.5	6.2	11.5	0.0	2.8	0.0
B. Fuel, Power, Light and Lubricants	**14.2**	**15.0**	**3.9**	**10.8**	**8.7**	**33.9**	**29.1**
i) Mineral Oil	7.0	17.0	1.2	18.4	11.9	29.7	21.0
ii) Electricity	5.5	11.5	9.2	3.4	4.1	4.2	5.3
iii) Coal Mining	1.8	18.1	-1.9	0	9.2	0	2.9
C. Manufactured Products	**63.7**	**3.8**	**0.0**	**5.1**	**5.6**	**44.3**	**52.5**
i) Sugar	3.6	-0.9	-3.8	-15.0	7.1	-7.0	2.9
ii) Edible Oils	2.8	-4.8	12.5	27.4	10.4	8.5	4.1
iii) Oil Cakes	1.4	0.4	14.3	40.3	-4.4	8.8	-1.3
iv) Cotton Textiles	4.2	6.3	-6.7	8.3	14.9	4.8	9.3
v) Man-made Fibre	4.4	1.7	-5.0	17.4	2.8	5.8	1.1
vi) Fertilisers	3.7	3.4	3.6	2.1	0.1	1.2	0.1
vii) Iron and Steel	3.6	1.3	0.0	9.2	28.6	4.4	15.0
viii) Cement	1.7	20.3	-4.7	1.1	2.3	0.3	0.6
ix) Non-electrical Machinery	3.4	6.9	5.4	2.5	2.4	1.2	1.3
x) Electrical Machinery	5.0	11.8	-1.1	-1.3	0.5	-0.7	0.3
xi) Transport Equipment and Parts	4.3	5.8	1.3	-0.9	0.3	-0.6	0.2

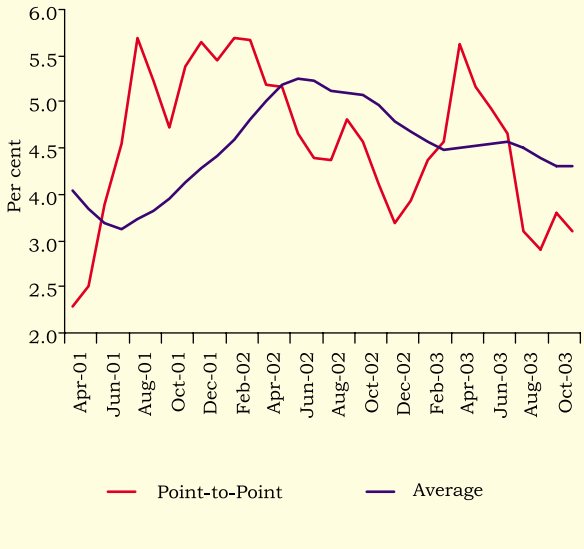
Chart II.9 : Annual Wholesale Price Inflation (Average Basis)



2.78 Average inflation, measured as annual percentage variation in the average wholesale price index, was 5.3 per cent on January 3, 2004 as compared with 2.5 per cent a year back (Chart II.9).

2.79 At the retail level, y-o-y consumer price inflation, as measured by the annual variation in the consumer price index for industrial workers (CPI-IW), decelerated to 3.1 per cent in November 2003 from 3.6 per cent in November 2002. On an annual average basis also, it stood lower at 3.8 per cent as against 4.5 per cent a year ago (Chart II.10).

Chart II.10 : Annual Consumer Price Inflation



IV. FINANCIAL MARKETS

Money Market

2.80 Money markets were characterised by ample liquidity during 2002-03 and the current financial year so far. This reflected sustained accretions of capital inflows, contraction in food credit, liquidity overhang, as also easing of monetary conditions. Banks were consequently able to fund the increased credit demand emanating from industrial revival without impinging on interest rates (Chart II.11). The Reserve Bank continued to appropriately manage liquidity conditions through open market (including the LAF) operations (OMOs) and facilitated the orderly behaviour of money markets (Chart II.12). Mirroring the comfortable liquidity conditions, the interest rates softened across the various segments of the money market (Table 2.37).

2.81 The orderly behaviour of money markets facilitated the smooth progress of further reforms in the money market. The aim of developing a proper short-term rupee yield curve has been pursued in recent years by calibrating a switch of the market participants away from uncollateralised overnight call/ notice money markets to other money market segments. The money market reform process continued to adopt a multi-pronged approach:

- The move towards a pure inter-bank call/notice money market was accelerated by reducing the lending limit of non-bank participants further by 10 percentage points to 75 per cent of their average daily call/ notice money market lendings

Chart II.11 : Bank Deposit Rates and Lending Rates

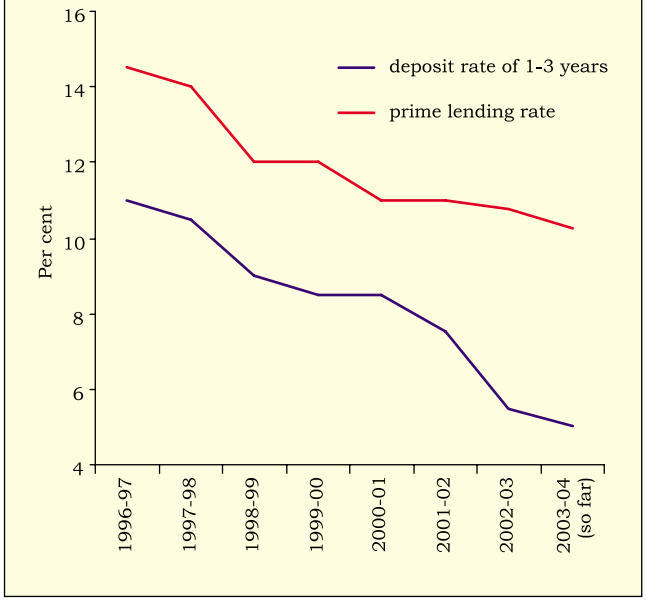
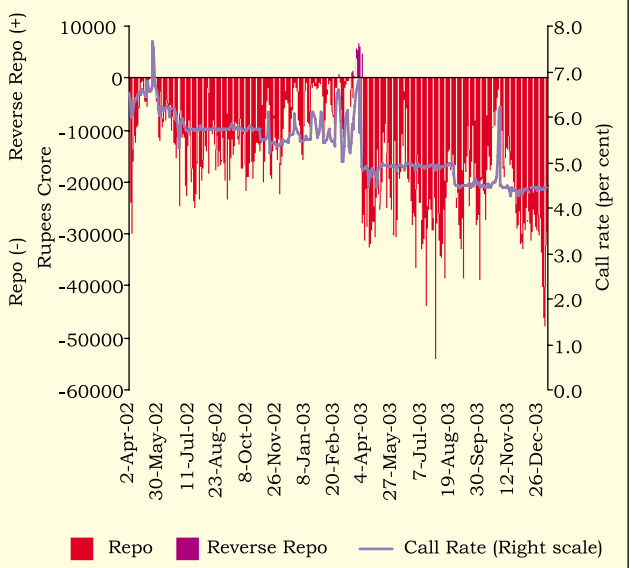


Chart II.12 : Liquidity Adjustment Facility Operations



of 2000-01 effective the fortnight beginning June 14, 2003. The purpose of this was to facilitate further deepening of the repo and term money markets. Subsequently, with effect from December 27, 2003, non-banks' access to call/notice money market was reduced by another 15 percentage points to 60 per cent of their average daily call/notice money lending during 2000-01. Primary dealers (PDs) would be allowed to borrow, on average, in a reporting fortnight, up to 200 per cent of their net owned funds as at end-March of the preceding financial year with effect from February 7, 2004.

- Measures were undertaken to make other money market instruments freely accessible to non-bank participants.

- With the operationalisation of the LAF, the collateralised lending facility (CLF) was phased out by October 5, 2002 and the standing facility was

Table 2.37: Money, Gilt, Foreign Exchange and Equity Markets: Select Indicators

Month	Average Daily Call Money Turnover (Rs. crore)	Average Call Rates (Per cent)	Turnover in Govt. Securities (Rs. crore)*	Average Daily Inter-bank Turnover (US $ million)	Average Exchange Rate (Rs. per US $)	RBI's net Foreign Currency Sales (-)/ Purch-ases(+) (US $ million)	Forward premia 3-month (Per cent)	Net OMO Sales(-) Purcha-ses (+) (Rs. crore)	Average Daily Repos (LAF) Outstan-ding (Rs. crore)	Average Daily Reverse Repos (LAF) Outstan-ding (Rs. crore)	Average Daily BSE Turnover (Rs. crore)	Average Daily NSE Turn-over (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
2002-03														
April	41,616	6.58	1,93,091	6,541	48.92	477	6.12	-5,307	8,119	1,322	1,312	2,424	3435	1121
May	39,326	6.90	1,20,173	4,966	49.00	86	6.23	-1,525	1,924	17	1,279	2,499	3303	1080
June	28,905	6.04	1,16,846	4,836	48.97	241	5.37	-189	10,420	0	1,166	2,212	3257	1066
July	32,386	5.75	2,35,586	4,922	48.76	1,829	4.40	-6,538	17,092	0	1,162	2,235	3215	1035
August	32,269	5.72	2,44,717	4,564	48.59	1,179	4.09	-7,025	19,046	0	1,132	2,196	3053	978
September	28,883	5.75	1,70,345	4,429	48.44	965	3.94	-6,355	19,483	0	1,221	2,325	3086	987
October	30,469	5.73	2,48,038	4,156	48.37	1,171	3.81	-71	20,653	0	1,316	2,472	2950	955
November	25,821	5.45	3,34,605	5,093	48.25	2,115	3.66	-11,073	13,859	2	1,367	2,703	3058	992
December	24,305	5.58	2,95,943	5,054	48.14	1,679	3.32	-4,548	10,911	0	1,456	2,951	3316	1074
January	24,034	5.66	3,55,821	4,941	47.93	1,785	3.42	-10,996	6,325	13	1,343	2,816	3328	1073
February	20,682	5.71	1,39,689	5,205	47.73	2,335	3.55	-88	4,259	45	1,235	2,542	3279	1056
March	24,357	5.86	1,31,947	5,542	47.64	1,849	3.60	-66	2,265	1,570	1,013	2,158	3156	1016
2003-04														
April	17,338	4.87	2,26,803	5,585	47.38	1,432	2.08	-7	27,372	109	1,041	2,449	3037	965
May	18,725	4.87	2,99,933	5,960	47.08	2,342	1.10	-5,569	25,223	10	1,072	2,604	3033	963
June	20,544	4.91	3,00,504	5,837	46.71	896	2.76	-44	24,805	0	1,187	2,933	3387	1069
July	18,698	4.90	3,04,587	5,920	46.23	3,146	2.65	-57	42,690	39	1,434	3,429	3665	1150
August	19,556	4.83	4,09,539	5,983	45.93	2,352	2.25	-11,546	39,995	0	1,817	4,267	3978	1261
September	20,584	4.50	2,65,848	6,862	45.85	2,345	0.91	-5,107	31,373	0	2,032	4,698	4315	1369
October	23,998	4.64	3,89,968	7,672	45.39	1,593	0.02	-13,986	13,569	0	2,288	5,026	4742	1506
November	15,156	4.38	1,77,063	6,795	45.52	3,449	(-)0.002	-69	21,182	0	2,251	4,644	4951	1580
December	15,276	4.40	1,81,991	–	45.59	2,888	(-)0.30	-132	32,020	0	2,492	5,017	5425	1740

OMO : Open Market Operations. * Outright turnover in Central Government dated securities. LAF: Liquidity Adjustment Facility.
BSE : Stock Exchange, Mumbai. NSE: National Stock Exchange.

gradually rationalised by changing the apportionment of "normal" and "back-stop" facilities to a ratio of one third is to two-thirds (33:67) from the fortnight beginning December 27, 2003.

- As a prudential measure aimed at limiting the uncollateralised exposure of banks to the call money market, the limit on maximum daily call/ notice money borrowings applicable to urban co-operative banks (UCBs) was extended to state co-operative banks (StCBs) and district central co-operative banks (DCCBs) on April 29, 2002.
- Furthermore, with a view to preserving the integrity of the financial system and facilitating the development of the repo market, prudential limits on borrowing and lending in call/notice money market were stipulated for scheduled commercial banks (SCBs) in two stages (effective October 5, 2002 and December 14, 2002) (and PDs, effective February 7, 2004). The prudential norms were introduced with adequate safeguards to prevent problems arising out of asset-liability mismatches on banks' portfolios.
- With a view to improving transparency and strengthening market efficiency, a system of mandatory reporting of all call/ notice money market deals on the Negotiated Dealing System (NDS) from all NDS members commenced effective the fortnight beginning May 3, 2003.

2.82 Inflows on account of large deferred expenditure undertaken by the Government, purchase of foreign currency by the Reserve Bank and unwinding of the year-end tightness of liquidity in April 2003 ensured that the year started with a softening of call rates – a tendency which continued into May when the call rate remained below the repo rate throughout the month for the first time since the operationalisation of the LAF. Easy liquidity conditions were reflected in large repo bids, while there were very few reverse repo bids. In June, the Stage II of the transition to a pure inter-bank call money market was initiated synchronising with a cut in the CRR by 25 basis points to 4.5 per cent to prevent strains on liquidity. Liquidity conditions continued to remain comfortable in June despite fund outflows towards government security auctions and advance tax payments with the call rate continuing to rule at sub-repo levels. Easy liquidity conditions were reflected in large repo bids most of which were accepted in full. No reverse repo bids were accepted during the month. There was a temporary lull in the repo market as the advance tax outflows commenced but as liquidity conditions became comfortable, repo bids soared.

2.83 Easy liquidity conditions continued in the second quarter of the year as well. Government security auctions and the sale of State Development Loans resulted in only mild spikes in the call rate without breaching the repo rate in July. While the call market turnover fell reflecting the fact that call rates ruled below the Reserve Bank repo rates, there was a jump in the turnover in the repo market (outside the Reserve Bank) (Chart II.13). The repo rate was cut by 50 basis points to 4.5 per cent on August 25, 2003. The steady capital inflows continued to create conditions of surplus liquidity leading to call rates ruling generally below the repo rate during the third quarter of 2003-04.

2.84 Other segments of the money market experienced enhanced activity in 2003-04 so far (Table 2.38). Average daily turnover in the term money market during the first three quarters of 2003-04 was almost 1.7 times the amount in the corresponding period of 2002-03. The average outstanding volume increased on a year-on-year basis, particularly after November 2002, following implementation of prudential limits on banks' call/ notice money operations in October 2002.

2.85 The outstanding amount of CDs issued by scheduled commercial banks increased during the year. The typical discount rate on CDs declined from 7.20 per cent in early April 2003 to 4.0 per cent by early December 2003. The main issuers were private sector banks. The discount rates on CP generally eased from a range of 5.25-8.15 per cent in mid-April 2003 to 4.64-6.75 per cent by December 31, 2003 with the weighted average discount rate declining from 6.20 per cent to 5.05 per cent.

Chart II.13 : Call Turnover and Transactions in Repo Market outside the Reserve Bank

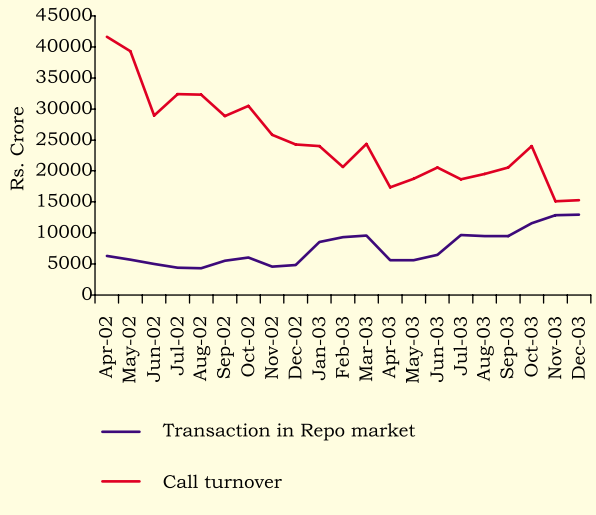


Table 2.38: Activity in Other Money Market Segments

(Rupees crore)

Month	Average Daily Turnover in Term Money Market	Transactions in Repo Market (Outside Reserve Bank)	Commercial Paper (Outstanding Amount)	Certificates of Deposit (Outstanding Amount)	Commercial Bills Rediscounted by commercial banks	Forward Rate Agreements/ Interest Rates Swaps (Notional Amount)
1	2	3	4	5	6	7
2002-03						
March	546	74,236	5,749	908	105	2,44,161
2003-04						
April	604	41,815	5,994	1,485	164	2,49,449
May	455	43,328	6,820	1,996	334	2,84,641
June	610	48,605	7,108	2,183	393	2,93,127
July	573	74,936	7,557	2,466	364	3,05,409
August	644	73,844	7,646	2,961	693	3,14,708
September	772	69,512	7,258	3,098	644	3,33,736
October	543	89,452	6,845	3,321	354	3,92,303
November	428	96,824	7,956	3,666	429	3,71,373
December	403	1,00,275	8,762	3,643 *		

* As on December 12, 2003.

2.86 There was a sharp expansion in the emerging segments of the financial markets. The repo market (outside the Reserve Bank) has been expanding with the gradual conversion of the call money market into a pure inter-bank market. The futures markets, in the form of forward rate agreements (FRAs) and interest rate swaps (IRSs), continued to witness a jump in the notional amount.

2.87 The collateralised borrowing and lending obligation (CBLO) operationalised through the Clearing Corporation of India Limited (CCIL) in January 2003, emerged as a new money market instrument. So as to aid its development as a money market instrument, the CBLO has been exempted from CRR subject to banks maintaining a statutory minimum CRR of 3 per cent. As at end-December 2003, out of total 59 members, 46 members were activated under the CCIL's system for CBLO. The CBLO market recorded major gains in the second quarter of the current financial year. The daily average turnover in CBLO increased from Rs.47 crore in April 2003 to Rs.363 crore in December 2003. With regard to the changing profile of participants under the CBLO, it has been found that on the lending side more mutual funds have started participating in the market apart from an insurance company. On the borrowing side, the participants are largely co-operative banks.

Government Securities Market

Central Government Borrowings - 2003-04

2.88 The gross market borrowings of the Central Government during 2003-04 was budgeted at Rs.1,66,230 crore, up by 10.0 per cent over the preceding year's actual borrowings. A highlight of the current year so far has been the continued endeavour for restructuring of domestic debt through debt-swap by the State Governments and buy-back of high coupon loans by the Central Government from banks. Adjusting for the inflows of States' repayments of high-cost loans to the Centre under the debt swap scheme, the gross and net market borrowings of the Central Government are expected to be lower by 21 per cent and 33 per cent, respectively, than the budgeted amounts. The Central Government conducted its first buyback in July 19, 2003 when 19 high cost, illiquid securities amounting to Rs.14,434 crore (face value) were bought back and in their place four liquid securities of equal face value were issued. During the current fiscal year so far (up to December 31, 2003), the gross and net market borrowings of the Central Government amounted to Rs.1,15,036 crore and Rs.77,319 crore, respectively (excluding buyback of Rs.14,434 crore). This constituted 69.2 per cent of the budgeted gross market borrowings. Of the gross amount raised so far, about 83 per cent was raised through dated securities and the balance through 364-day Treasury Bills.

2.89 The issuance of floating rate bonds with some modifications was continued in 2003-04 as well, with a view to providing the investor an effective instrument for hedging interest rate risk in the context of the elongation of the maturity profile of Government debt. There were three issues of floating rate bonds up to December 15, 2003, with maturities ranging from 8 years to 11 years which raised a total of Rs.16,000 crore, with the variable bank rate linked to 364-day Treasury Bills. The Reserve

Bank's recent Working Group on Rupee Interest Rate Derivatives (Chairman: G. Padmanabhan) recommended several measures to develop the interest rate derivatives market. Besides, the Group has suggested changes in risk reporting to reflect the interest rate risk of bank's trading activities in interest rate products, both cash market and derivatives market.

2.90 Ample liquidity during 2003-04 so far enabled a sharp lowering of the weighted average yields of the dated securities issued despite the increase in the weighted average maturity, a lower order of primary placements on the Reserve Bank and no devolvements on primary dealers and the Reserve Bank (Table 2.39). During the current year so far (up to January 7, 2004), primary yields of 91-day Treasury Bills and 364-day Treasury Bills declined by 165 basis points and 152 basis points, to 4.24 per cent and 4.37 per cent, respectively.

2.91 The auction calendar for the second half of the year set a borrowing target of Rs.25,000 crore for the period October 2003 to March 2004 after adjusting amounts received from the State Governments towards prepayment of small savings loans and keeping in view trends in other receipts.

State Government Borrowings

2.92 The market borrowings of State Governments have gone up substantially in the wake of the debt-swap scheme which allowed the States to retire their high-cost debt to the Government of India. The gross and net market borrowings allocated for States for fiscal 2003-04 (provisional) amount to Rs.40,802 crore and Rs.36,657 crore, respectively. This is inclusive of the additional allocation of Rs.23,000 crore under the debt-swap scheme. During the current year so far (up to December 31, 2003), the State Governments have raised Rs.38,752 crore (Rs.36,357 crore through tap sales and Rs.2,395 crore through auction) under the market borrowing programme, of which Rs.23,000 crore was raised under the debt-swap scheme. In order to elongate the maturity profile of State loans, a 12-year bond was issued on August 25, 2003 through the tap sale of 6.20 per cent State Development Loan (SDL) 2015. The declining trend in interest rates on market borrowings of the State Governments continued during 2003-04. During 2003-04 (up to December 31, 2003), the interest rate on market borrowings ranged from 6.40 per cent to 5.78 per cent.

Secondary Market for Government Securities

2.93 During the current year so far (up to December 2003), the average monthly volume of secondary market transactions through the Subsidiary General Ledger (SGL) in Government securities increased sharply to Rs.2,23,769 crore from Rs.1,61,806 crore during 2002-03. Exchange-traded Interest Rate Derivatives (IRDs) were enabled on the National Stock Exchange (NSE) from June 3, 2003 with the introduction of interest rate futures on notional Government bonds/Treasury Bills were introduced in the first phase. With a view to enabling PDs to manage their exposure to interest rate risks as well as to provide liquidity in the IRD segment, they were allowed to deal in IRDs for both hedging and trading. In the first phase, banks could transact in interest rate futures on notional bonds and Treasury Bills for the

Table 2.39: Central Government's Market Borrowing

(Amount in Rupees crore)

Item	2002-03		2002-03 (April-December)		2003-04 (April-December)	
	Gross	Net	Gross	Net	Gross	Net
1	2	3	4	5	6	7
Budget Estimates*	1,42,867	95,859	1,42,867	95,859	1,66,230	1,07,194
of which: Dated Securities	1,16,867	89,447	1,16,867	1,16,867	140,230	1,07,320
364-day Treasury Bills	26,000	6,412	26,000	26,000	26,000	-126
Expected@*	–	–	–	–	1,31,126	72,090
Completed so far	1,51,126	1,04,118			1,15,036	77,319
of which: Dated Securities	1,25,000	97,580			95,000	77,316
364-day Treasury Bills	26,126	6,538			20,036	2.32
Private Placements	31,000		18,000		5,000	
Devolvements on						
RBI	5,175		5,175		0	
PDs	2,722		2,722		0	
Weighted Average Yield on dated securities (per cent)	7.34		7.48		5.86	
Weighted Average Maturity of dated securities (years)	13.83		14.43		16.13	

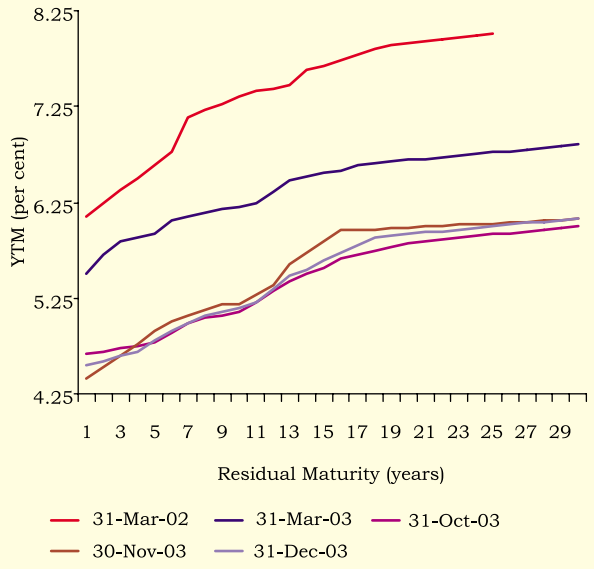
* For the full financial year. @ Actuals for 2002-03.

limited purpose of hedging the risk in their underlying investment portfolio.

2.94 Looking at the trends in secondary markets, the year 2003-04 commenced with the usual flush of early April liquidity fuelling a rally in prices of government securities which was subsequently moderated with the concerns of rising inflation. The price rally was sustained in June 2003 amidst a positive response in primary auctions as also a rate cut of 50 basis points by the European Central Bank (ECB). The rally, however, reversed following a clarification from the Reserve Bank that a repo rate cut was not on the anvil. Thereafter, prices remained range bound in view of favourable liquidity conditions despite advance tax flows. Since mid-July 2003, expectations of a further fall in inflation improved the sentiments.

2.95 Due to the reduction of the repo rate by 50 basis points from 5.00 per cent to 4.50 per cent from August 25, 2003, there was a sharp decline in the yields and the 10-year yield touched a historic low of 5.23 per cent on August 26, 2003. During September 2003, the reduction in the interest rate cap on NRE deposits to 100 basis points above from the existing cap of 250 basis points above Libor affected market sentiments on expectations of slow forex inflows and a squeeze in Rupee liquidity. The announcement of a modest borrowing target in the calendar of issuance of Government securities for the second half of 2003-04 led to a rally in prices. Prices continued to go up on expectations of monetary easing in the run up to the Mid-Term Review. The 10-year yield reached a further low of 4.95 per cent on October 16, 2003. The yields, however, firmed up on the announcement of the 28-day LAF auction and OMO auction on October 18, 2003. During August 25-November 3, 2003, the 10-20 year spread widened from 55 basis points to 76 basis points. Although expectations of rate cuts in the Mid-Term Review did not materialise, the markets stabilised in view of the Reserve Bank's benign inflation outlook and the reiteration of the soft interest rate stance of monetary policy. The yields moved in a range thereafter. The benchmark 10-year yield declined to 5.14 per cent on December 31, 2003 from 6.21 per cent as on March 31, 2003, a decline of 107 basis points. Reflecting the persistence of easy liquidity conditions, the yield curve has been trending steadily downwards in recent years (Chart II.14).

Chart II.14 : Government Securities Yield Curve



Foreign Exchange Market

2.96 Surplus conditions prevailed in the foreign exchange market on account of sustained foreign exchange inflows from export proceeds, inward remittances and investment by FIIs during fiscal 2003-04. Increased foreign exchange inflows coupled with absence of adequate dollar demand from corporates and importers helped the Indian Rupee to steadily appreciate by 4.2 per cent against the US dollar from Rs.47.51 per US dollar as at end-March 2003 to Rs.45.61 per US dollar as at end-December 2003. The Rupee moved in the range of Rs.45.26-47.46 per US dollar during April-December 2003. The exchange rate of the Rupee was at Rs.45.45 per US dollar as on January 16, 2003. Despite a appreciation of the Rupee against the US dollar, the 5-country (trade-weighted) REER and NEER depreciated by 2.0 per cent and 3.9 per cent, respectively, during the same period mainly on account of depreciation of US dollar against the major currencies.

2.97 Reflecting excess liquidity conditions in the spot exchange market, as banks, exporters and corporates resorted to heavy forward dollar sales, the average one-month, three-month and six-month forward premia declined sharply to (-)0.46 per cent, (-)0.30 per cent and 0.04 per cent, respectively, in December 2003. Activity in both the merchant and inter-bank segments of the foreign exchange market increased strongly. While the merchant turnover increased from US $ 25 billion in April to US $ 41.5 billion in November 2003, the inter-bank turnover increased from US $ 89.4 billion to US $ 129.1 billion during the same period. The inter-bank to merchant turnover ratio, however, remained broadly stable at around 3 during the period.

Table 2.40: Mobilisation of Resources from the Primary Market

(Amount in Rupees crore)

Item	April-November				2002-03	
	2003-04		2002-03			
	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount
1	2	3	4	5	6	7
A. Prospectus and Rights Issues	**9**	**1,559**	**9**	**2,736**	**17**	**4,867**
I. Public Sector	4	820	6	2,123	8	2,989
II. Private Sector	5	739	3	613	9	1,878
B. Private Placement #	**504**	**32,007**	**577**	**25,643**	**1,147**	**61,746**
I. Public Sector	119	22,272	111	12,145	243	37,148
II. Private Sector	385	9,735	466	13,498	904	24,598
C. Euro Issues	**10**	**2,398**	**5**	**1,247**	**11**	**3,426**

For private placement, data pertain to April-September.

Note : Includes both debt and equity.

Source : Estimates based on information gathered from arrangers, financial institutions and newspaper reports.

Capital Market

Primary Market

2.98 During the current financial year (up to November 2003), the primary market remained sluggish despite a pick-up in the industrial activity, a strong economic outlook and a vibrant stock market. There are, however, some early signs of a pick-up as some corporates have announced plans of floating public issues. Moreover, sanctions and disbursements by All-India Financial Institutions (AIFIs) have increased after a gap of more than two years. In the public issues market, out of nine issues floated during April-November 2003, there were six equity issues amounting to 49 per cent of the total resources mobilised through public issues. Resource mobilisation from the private placement market increased during April-September 2003, the period for which data are available (Table 2.40). Public sector companies continued to raise substantial resources from the private placement market. Resource mobilisation during April-November 2003 from the Euro issues market in the form of American Depository Receipts (ADRs), Global Depository Receipts (GDRs) and Foreign Currency Convertible Bonds (FCCBs) also registered a rise.

2.99 Net resource mobilisation by mutual funds (excluding UTI-I) increased significantly during April-November 2003 (Table 2.41). The substantial improvement was on account of a turnaround in UTI and considerably higher inflows into private sector mutual funds. Due to the buoyancy witnessed in the equity and debt market, mutual funds have attracted huge inflows.

Secondary Market

2.100 The stock markets, which had remained subdued since February 2000, recorded a sustained rally in the current financial year, especially since end-May 2003. The BSE Sensex crossed the 4000 mark in mid-August 2003, the 5000 mark in November 2003 and the historical high of 6100 in early January 2004. The BSE Sensex climbed by over 100 per cent over mid-May 2003. Various factors like good monsoons, encouraging quarterly results by major corporates, strong institutional support, especially by FIIs, positive trends in international markets, sector-specific factors and strong macroeconomic fundamentals along with the appreciation in the Rupee contributed to the buoyant market sentiments which supported the rally. The BSE Sensex had crossed the 6000 mark only once before - during February 2000 in intra-day trading. The rally in the year 2000 was, however, driven mainly by technology scrips. In contrast, the recent rally is far more broad-based covering almost all sectors.

Table 2.41: Net Resource Mobilisation by Mutual Funds

(Rupees crore)

Category	April-November		2002-2003
	2003-04	2002-03	
1	2	3	4
I. Unit Trust of India	270	-7,362	-9,434
II. Private Sector	38,383	21,145	12,069
III. Public Sector	2,189	2,586	1,561
Total (I+II+III)	**40,842**	**16,369**	**4,196**

Source : Securities and Exchange Board of India.

Note : Data for UTI does not include UTI-I since February 2003.

Table 2.42: Trends in Stock Markets

Indicator	BSE		NSE	
	April-December 2003	April-December 2002	April-December 2003	April-December 2002
1	2	3	4	5
Average BSE Sensex/ S&P CNX Nifty	4071.8	3189.6	1293.1	1033.6
Volatility (C.V.)	20.1	5.3	20.5	5.7
Turnover (Rupees Crore)	3,34,749	2,39,449	7,51,671	4,61,777
Delivery as a per cent of Turnover	26.4	19.2	20.8	14.2
Market Capitalisation (end-period) (Rupees crore)	12,73,361	6,28,197	11,67,029	6,72,862
P/E ratio (end-period)	18.9	14.6	20.7	14.8

Source: The Stock Exchange, Mumbai (BSE) and The National Stock Exchange (NSE).

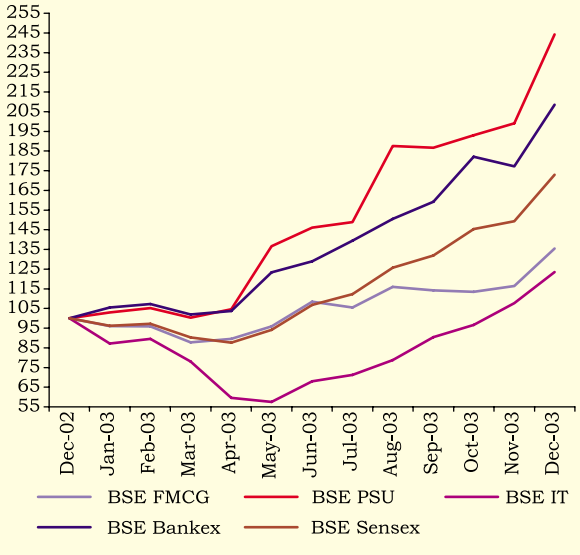
2.101 The present rise in indices is accompanied by a rise in turnover. This is reflected in the fact that while the BSE Sensex and the S&P CNX Nifty registered gains of 27.7 per cent and 25.1 per cent, respectively, during April-December 2003 over the corresponding period last year, the turnover witnessed even larger growth (Table 2.42). Though the volatility, as measured by coefficient of variation has risen, it is not a cause for concern as the speculative interest seems to have declined during the current rally as is evident from a rise in deliveries as a percentage of turnover. Although market capitalisation and the price-earning (P/E) ratio rose as a result of the increase in prices, the present P/E ratio on Indian markets still remains attractive as compared with certain other emerging markets.

2.102 The present rally is not restricted to the blue-chip indices but is broad-based, with mid-cap and small-cap scrips also registering substantial gains. During April-December 2003, the broad-based BSE 500 index registered a gain of 120.9 per cent and the S&P CNX Mid-Cap Index registered a gain of 168.4 per cent while the blue-chip BSE Sensex posted a gain of only 91.5 per cent. Almost all the sectors including fast moving consumer goods (FMCG), technology, capital goods, banking and public sector undertaking (PSU) participated in the rally (Chart II.15).

2.103 Strong FII inflows into the equity markets in the current financial year have been viewed as one of the major driving forces of the present rally. FII investment in debt instruments increased too. Mutual funds turned buyers in equities but invested a large amount in debt instruments (Table 2.43).

2.104 Along with the rally in the cash segment of the markets, the derivatives segment has also been recording large turnover. In fact, the turnover in the derivatives market exceeded that of the cash markets (Table 2.44). The scrip-wise futures have been attracting a large turnover. However, the volumes in interest rate futures introduced on the NSE in June 2003 are yet to pick up.

Chart II.15 : Sectoral Trends *vis-a-vis* BSE Sensex



Source : Stock Exchange, Mumbai (BSE)

Table 2.43: Institutional Investments

(Rupees crore)

Year	FIIs		Mutual Funds	
	Equity	Debt	Equity	Debt
1	2	3	4	5
2000-01	10,124	-46	-2,767	5,023
2001-02	8,067	685	-3,796	10,959
2002-03	2,528	162	-2,067	12,604
2003-04 (April-December)	28,781	3,997	736	19,388

Source: Securities and Exchange Board of India.

Table 2.44: Turnover in Derivatives Market *vis-à-vis* Cash Market in NSE

(Rupees crore)

Year	Derivatives	Cash
1	2	3
2000-01	2,365	13,39,510
2001-02	1,01,925	5,13,167
2002-03	4,39,855	6,17,989
2003-04 (April-December)	12,73,254	7,51,671

Source: The National Stock Exchange Ltd.

Financial Sector

Scheduled Commercial Banks

2.105 During 2002-03, scheduled commercial banks witnessed an increase in profitability with their net profits touching 1.0 per cent of total assets as at end-March 2003. This was driven by: (i) substantial trading income, reflecting the continuing softening of interest rates; (ii) an increase in the credit portfolio, with the revival of industrial demand; and (iii) containment of operating expenses, partly offset by higher provisioning. Spreads also widened during the year, reflecting the fact that the decline in deposit rates outstripped the decline in lending rates.

2.106 During the first half of 2003-04, based on regulatory returns, net profits, at 0.64 per cent of total assets, were higher than 0.49 per cent recorded in the comparable half of the previous year, driven by a containment of expenses partly offset by higher provisioning. Some banks have already made *ad hoc* provisions in view of the impending 90-day delinquency norm, effective end-March 2004. The enactment of the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002 has provided the scope for sustained recovery of dues: as at the end of September 2003, banks had issued notices in 42,047 cases worth Rs.14,141 crore and recovered Rs.769 crore from 13,583 cases.

2.107 The increase in bank profitability was accompanied by an improvement in indicators of balance sheet health (Table 2.45). Asset quality continued to improve. The ratio of gross NPAs to gross advances declined during 2002-03. Besides, capital adequacy continued to be satisfactory with as many as 91 of the 93 SCBs achieving the stipulated 9.0 per cent capital to risk-weighted assets ratio (CRAR). The Investment Fluctuation Reserve, a cushion against any adverse movements in interest rates in the future, worked out to 1.7 per cent of eligible investments as at end-June 2003.

Table 2.45: Important Parameters of Select Bank-Groups

(Per cent)

Bank Group	1996-97	2001-02	2002-03
1	2	3	4
Operating Expenses/Total Assets			
Scheduled Commercial Banks	2.9	2.2	2.2
Public Sector Banks	2.9	2.3	2.3
All Old Private Sector Banks	2.5	2.1	2.0
All New Private Sector Banks	1.9	1.1	2.0
Foreign Banks	3.0	3.0	2.8
Spread/Total Assets			
Scheduled Commercial Banks	3.2	2.6	2.8
Public Sector Banks	3.2	2.7	2.9
All Old Private Sector Banks	2.9	2.4	2.5
All New Private Sector Banks	2.9	1.2	1.7
Foreign Banks	4.1	3.2	3.4
Net Profit/Total Assets			
Scheduled Commercial Banks	0.7	0.8	1.0
Public Sector Banks	0.6	0.7	1.0
All Old Private Sector Banks	0.9	1.1	1.2
All New Private Sector Banks	1.7	0.4	0.9
Foreign Banks	1.2	1.3	1.6
Gross NPAs to Gross Advances			
Scheduled Commercial Banks	15.7	10.4	8.8
Public Sector Banks	17.8	11.1	9.4
All Old Private Sector Banks	10.7	11.0	8.9
All New Private Sector Banks	2.6	8.9	7.6
Foreign Banks	4.3	5.4	5.2
Net NPAs to Net Advances			
Scheduled Commercial Banks	8.1	5.5	4.4
Public Sector Banks	9.2	5.8	4.5
All Old Private Sector Banks	6.6	7.1	5.5
All New Private Sector Banks	2.0	4.9	4.6
Foreign Banks	1.9	1.9	1.8
CRAR			
Scheduled Commercial Banks	10.4	11.9	12.6
Public Sector Banks	10.0	11.8	12.7
All Old Private Sector Banks	11.7	12.5	12.8
All New Private Sector Banks	15.3	11.6	11.6

Co-operative Banks

2.108 The profitability of co-operative banks continued to be less than satisfactory, partly reflecting a narrowing of spreads. Reflective of the difficulties faced by the sector, urban co-operative bank deposits and credit off-take decelerated during 2002-03 (Table 2.46). Scheduled urban co-operative banks continued to record a net loss for the third year in succession, reflecting a narrowing of spreads, on the one hand, and a reduction in the size of the credit portfolio, on the other. The asset quality of urban co-operative banks remained, more or less, the same. The performance of rural co-operatives continued to be under some strain with the asset quality of the lower tier being relatively worse than that of the upper tier. State co-operative banks, however, continued to post profits in 2002-03.

Table 2.46: Urban Co-operative Banks – Select Financial Indicators

Indicator	2001-02	2002-03
1	2	3
Growth in Major Aggregates (Per cent)		
Deposits	15.1	9.1
Credit	14.1	4.5
Financial Indicators (as percentage of total assets) @		
Operating Profits	1.5	1.3
Net Profits	-0.9	-1.1
Spread	2.2	2.1
Non-Performing Assets (as percentage of advances)		
Gross NPA	21.9	21.0

@ Relates to scheduled urban co-operative banks.

Financial Institutions

2.109 The performance of All-India financial institutions (FIs), as a group, witnessed further deterioration over the previous year on account of declines in the spread as well as non-interest income and rise in other expenses. All FIs, excluding IIBI and IFCI, however, registered positive operating and net profit. The CRAR of all institutions, excepting IFCI and IIBI. remained well above the benchmark minimum of 9 per cent. There is, neverthless, a pick up in project finance from FIs this year.

2.110 The FIs' support to the commercial sector has been gradually shrinking reflecting the emergence of alternative sources of project finance for the Indian corporates as well as paucity of new business in view of the economic slowdown. This is reflected not only in the gross financial assistance in the form of sanctions and disbursements but also in terms of net flow of resources, which has been consistently negative since 2001-02 (Table 2.47).

Non-Banking Financial Companies

2.111 Non-banking financial companies continued to stagnate, as a sector, with their public deposits working out to about 1.0 per cent of broad liquidity (L_3). In case of large NBFCs (excluding residual non-bank financial companies (RNBCs)), there was a decline in the share of public deposits in total assets, partly substituted by a larger recourse to bank loans during 2002-03 (Table 2.48). The major portion of the assets of NBFCs (excluding RNBCs) continued to be in the form of their specialised areas of hire purchase and lending while the equipment leasing business continued to contract partly reflecting, *inter alia*, changes in taxation.

Table 2.47: Financial Institutions: Select Performance Indicators

Indicator	2001-02	2002-03
1	2	3
Balance Sheet Indicators (as percentage of assets)		
Operating Profits	1.6	1.4
Net Profits	0.7	0.9
Spread	0.6	0.7
Non-Performing Assets (as percentage of net advances)	8.8	10.6
Resource Flows (Rupees crore)		
Sanctions	27,619	19,335
Disbursements	20,725	14,501
Credit	-4,706	-5,321

Note: Data on balance sheet indicators cover nine FIs, *viz*., IDBI, IFCI, IIBI, IDFC, Exim Bank, TFCI, SIDBI, NABARD and NHB while that on resource flows cover IDBI, IFCI, IDFC, IIBI and SIDBI.

2.112 The NBFCs, as a sector, recorded losses for the second year in succession during 2001-02, as the decline in expenditure could not keep pace with the drop in both fund-based and fee-based income. The decline in fund income was particularly steep in recent years. Total expenditure fell less sharply as operating expenditure and tax provisions have tended to be sticky. Operating costs of NBFCs, however, continue to be higher than those of banks and financial institutions. The gross and net non-performing assets of reporting NBFCs has experienced a steady decline in recent years.

V. EXTERNAL SECTOR

Global Economic Outlook

2.113 Global output expanded strongly in the third quarter of 2003, following recovery in the United States and strong growth prospects in Asia. Global GDP growth is projected to grow by 4.1 per cent in 2004, up from 3.2 per cent in 2003 (IMF, September, 2003). Recent months have seen the emerging signs of a recovery in economic activity, particularly in the US, Japan and emerging Asia. In the US, the pace of growth has picked up, assisted by expansionary macroeconomic policies and supportive financial conditions. Equity and bond markets have responded with optimism to the prospects of recovery with investor interest returning to technology stocks more rapidly than to other sectors. In Japan, economic activity exhibited stronger signs in the third quarter of this fiscal which indicated that a cyclical upswing is underway, led by industrial activity and exports. In the UK and Australia, signs of recovery are clearly evident with rising household spending reflected in retail price

Table 2.48: Asset and Liabilities of Non-Banking Financial Companies (Other than RNBCs) Holding Public Deposits of Rs.20 crore and Above

Amount in Rupees crore

Item	March 31, 2002		March 31, 2003	
	Amount	Share to total	Amount	Share to total
1	2	3	4	5
Liabilities				
Capital & Reserves	4,765	16.0	3,018	11.4
Public Deposits	4,503	15.1	3,686	14.0
Convertible debentures	3,948	13.2	3,755	14.2
Other Borrowings	9,575	32.0	8,675	32.9
of which : Banks	7,108	23.8	6,785	25.7
Other Liabilities	7,103	23.8	7,222	27.4
Total Liabilities	29,895	100.0	26,355	100.0
Assets				
Investment	3,302	11.0	2,696	10.2
Loans and Advances	8,592	28.7	8,576	32.5
Other Financial Assets	12,081	40.4	10,255	38.9
Of which: Hire Purchase	9,556	32.0	8,571	32.5
Equipment Leasing	2,077	6.9	1,546	5.9
Other Assets	5,920	19.8	4,828	18.3
Total Assets / Liabilities	**29,895**	**100.0**	**26,355**	**100.0**

inflation, prompting the monetary authorities to raise key policy interest rates. China continues to grow at a remarkably strong pace while activity in other parts of Asia is bouncing back from the effects of SARS.

2.114 There is, nevertheless, considerable uncertainty regarding the durability of the pick-up. In the US, labour markets remain sluggish and significant excess capacity persists. Moreover, the substantial support provided to consumption by tax cuts is unlikely to be sustained. Despite the prospects of stronger growth, Japan continues to experience deflation. The ongoing concerns relating to structural weaknesses in the financial system remain. In contrast to the rest of the world, the euro area remains conspicuously weak although there are tentative signs of a modest recovery in recent months. Household demand remains sluggish and the unemployment rate for the area as a whole has risen.

2.115 In the euro area, whereas monetary policy can be adjudged to have been successful in an inflation targeting framework, the economic slowdown has been deep and prolonged, with GDP declining in the second quarter of 2003. The large economies – Germany, France, the Netherlands and Italy – are in recession with high levels of unemployment. Despite some recent improvement in expectations, household and business confidence remains depressed. The poor performance of Germany, in particular, threatens to hold back the region's recovery. Corporate balance sheets are still adjusting to the bursting of the asset price bubble of the late 1990s holding down investment spending. Exports have been adversely affected by weak external demand as well as the substantial appreciation of the euro *vis a vis* the US dollar over the past two years. Monetary policy has been accommodative but distinct inflation and unemployment rates in different countries blur the effectiveness of the common monetary policy. Although Germany and France are expected to post fiscal deficits above 4 per cent of GDP in 2003, the scope for countercyclical fiscal policy is limited by the Stability and Growth Pact.

2.116 In Japan, macroeconomic performance during 2003 has exceeded expectations alongside an improved external environment and an upturn in equity markets. The outlook remains overcast with deflationary pressures and persistent weakness in the financial sector. The possibility of declines in equity or bond prices, a sustained appreciation of the Japanese Yen and rising public debt remain dangers to a durable recovery. Quantitative easing of monetary policy has kept short-term interest rates at zero, but has not been aggressive enough to end deflation.

2.117 Overall, global macroeconomic imbalances and the associated misalignment of the G-3 currencies remain the most serious threat to a broad-based and robust recovery. This has implications for the pattern of capital flows. A current issue of concern is the practice of greater flexibility in the exchange rate regimes of these countries, and the resulting effects on the real economy. Studies have shown that greater volatility in developing countries' real exchange rates has been associated with greater

Table 2.49: World Merchandise Trade

(Annual Percentage Change)

Item	1998	1999	2000	2001	2002	2003 P	2004 P
1	2	3	4	5	6	7	8
World Trade in Goods							
Volume	4.7	5.8	13.3	-0.6	3.3	2.9	5.4
Value (In US Dollars)	-2.2	3.7	12.6	-4.2	4.2	13.7	6.2
World Trade Prices in US Dollars							
Manufactures	-1.7	-1.8	-4.7	-2.4	2.6	12.8	1.7
Oil	-32.1	37.5	57.0	-14.0	2.8	14.2	-10.5
Non-Fuel Primary Commodities	-14.3	-6.7	4.5	-4.0	0.6	5.0	2.4
Price Deflator							
In US dollars	-6.3	-1.5	-0.1	-3.5	0.6	11.0	0.9
In SDRs	-4.9	-2.3	3.6	-0.1	-1.1	3.4	1.0

P Projection.
Source: World Economic Outlook (September 2003), IMF.

misalignment in G-3 countries with disruptive effects on both trade and finance channels (see Chapter VII). This emerges as a major source of uncertainty for the conduct of monetary policy.

Global Trade

2.118 According to the International Trade Statistics (ITS) 2003 released by the WTO, world merchandise exports recorded a growth of 15 per cent in US dollar terms during the first half of the calendar year 2003.[1] This marks a strong acceleration over the growth of 4 per cent recorded in 2002. The growth in world merchandise exports in volume (or real) terms during 2003 is, however, projected to be about 3 per cent, the same as that achieved in the previous year. The main factor behind buoyant trade growth in US dollar terms is the depreciation of the US dollar against the major currencies in Europe and Asia in the first six months of 2003. Higher oil and non-fuel commodity prices have also contributed to the increase in the value of international trade (Table 2.49). This is in contrast with the period 1998 to 2000 when the appreciation of the US dollar over other major currencies more than compensated for the price changes. As a result, volume growth during those years exceeded the growth in merchandise trade in US dollar terms.

India's Merchandise Trade

2.119 The latest data, released by the Directorate General of Commercial Intelligence and Statistics (DGCI&S), indicate that India's exports during the first eight months of the current fiscal 2003-04 witnessed a lower order of increase as compared to the previous year (Table 2.50). Imports registered an increase mainly on account of higher non-oil imports. On the other hand, the growth rate of oil imports during this period

Table 2.50: India's Foreign Trade

Item	April-March				April-November			
	US $ Billion		Growth Rate (per cent)		US $ Billion		Growth Rate (per cent)	
	2001-02	2002-03 P	2001-02	2002-03 P	2002-03	2003-04 P	2002-03	2003-04 P
1	2	3	4	5	6	7	8	9
Exports	43.8	52.7	-1.6	20.3	33.5	36.5	18.0	8.8
Oil	2.1	2.5	12.0	18.8	1.5	..	5.7	..
Non-oil	41.7	50.2	-2.3	20.4	32.1	..	18.6	..
Imports	51.4	61.4	1.7	19.4	39.1	47.7	14.3	21.9
Oil	14.0	17.6	-10.5	26.0	11.4	12.8	17.6	12.3
Non-oil	37.4	43.8	7.2	17.0	27.7	34.9	13.0	25.8
Trade Balance	-7.6	-8.7	–	–	-5.6	-11.2	–	–
Oil	-11.9	-15.1	–	–	-9.9	..	–	–
Non-oil	4.3	6.4	–	–	4.3	..	–	–

P Provisional. .. Not Available
Source: DGCI&S.

[1] The World Economic Outlook (September 2003) of the IMF has projected a growth of around 14 per cent in world merchandise exports for the calendar year 2003 in terms of US dollars.

Table 2.51: India's Principal Exports

Commodity Group	April-March				April-September			
	US $ million		Growth Rate (per cent)		US $ million		Growth Rate (per cent)	
	2001-02	2002-03 P	2001-02	2002-03 P	2002-03	2003-04 P	2002-03	2003-04 P
1	2	3	4	5	6	7	8	9
Primary Products	**7,164**	**8,312**	**0.5**	**16.0**	**4,004**	**3,908**	**17.0**	**-2.4**
Agricultural & Allied Products	5,901	6,412	-1.2	8.7	3,011	3,048	4.8	1.2
Ores & Minerals	1,262	1,900	9.5	50.5	994	860	80.4	-13.5
Manufactured Goods	**33,370**	**38,353**	**-2.8**	**14.9**	**19,383**	**20,971**	**19.0**	**8.2**
Leather & Manufactures	1,910	1,787	-1.8	-6.4	957	946	-5.7	-1.1
Chemicals & Related Products	6,052	7,031	2.8	16.2	3,509	4,091	19.1	16.6
Engineering Goods	6,958	8,393	2.0	20.6	4,082	5,233	21.0	28.2
Textiles	9,665	10,567	-9.3	9.3	5,444	5,123	12.0	-5.9
Gems & Jewellery	7,306	8,854	-1.1	21.2	4,496	4,786	34.1	6.5
Handicrafts	549	721	-17.0	31.3	380	229	35.4	-39.8
Carpets	510	497	-12.3	-2.6	250	240	-2.5	-4.0
Petroleum Products	**2,119**	**2,517**	**12.0**	**18.8**	**1,216**	**1,657**	**22.8**	**36.2**
Total Exports	**43,827**	**52,719**	**-1.6**	**20.3**	**25,094**	**27,439**	**18.7**	**9.3**

P Provisional.
Source: DGCI&S.

decelerated. The trade deficit during April-November 2003 doubled over the same period last year.

2.120 Commodity-wise data on India's foreign trade, available for the first half of the fiscal year 2003-04, show that while the exports of 'primary products' declined, there was a substantial rise in the exports of 'petroleum products'. 'Manufactured goods', which accounted for over three-fourth of India's exports, witnessed a moderate increase during this period. Within the broad 'manufacturing goods' group, however, the exports of 'leather and manufactures', 'textiles', 'handicrafts' and 'carpets' recorded negative growth. On the other hand, exports of 'chemical and related products' and 'engineering goods' increased significantly during April-September 2003 (Table 2.51).

2.121 The decline in exports of 'leather and manufactures', 'textiles' and 'handicrafts' and 'carpets' is mainly due to a subdued demand for such products in advanced countries, especially in the USA. Although most of the 'engineering goods' had a moderate rise in exports during 2003-04 so far, the important item that led this group's growth has been 'iron and steel', 'manufactures of metals' and 'machinery and instruments'. This was mainly due to rising demand from countries in East Asia and China supplemented by higher domestic production.

2.122 The USA continued to remain the most important destination of India's exports, followed by the UAE and the UK (Table 2.52). However, the market that is rapidly emerging as one of the prime

Table 2.52: Major Destination of India's Exports

Country	April-March				April-September			
	US $ million		Growth Rate (per cent)		US $ million		Growth Rate (per cent)	
	2001-02	2002-03 P	2001-02	2002-03 P	2002-03	2003-04 P	2002-03	2003-04 P
1	2	3	4	5	6	7	8	9
U S A	8,513	10,856	-8.5	27.5	5,378	5,345	27.8	-0.6
U A E	2,492	3,314	-4.1	33.0	1,605	1,914	29.6	19.2
U K	2,161	2,473	-6.0	14.4	1,240	1,310	14.8	5.6
Hong Kong	2,366	2,444	-10.4	3.3	1,210	1,443	3.3	19.3
Germany	1,788	2,061	-6.2	15.2	994	1,125	16.0	13.2
China	952	1,961	14.5	106.0	701	910	59.1	29.8
Japan	1,510	1,858	-15.8	23.0	978	793	26.1	-18.9
Belgium	1,391	1,648	-5.4	18.5	821	840	27.3	2.2
Singapore	972	1,423	10.9	46.3	762	706	65.1	-7.4
Italy	1,207	1,340	-7.8	11.0	637	751	4.8	17.9

P Provisional.
Source: DGCI&S.

Table 2.53: India's Principal Imports

Commodity	April-March				April-September			
	US $ million		Growth Rate (per cent)		US $ million		Growth Rate (per cent)	
	2001-02	2002-03 P	2001-02	2002-03 P	2002-03	2003-04 P	2002-03	2003-04 P
1	2	3	4	5	6	7	8	9
Petroleum, Petroleum Products & Related Material	14,000	17,639	-10.5	26.0	8,663	9,214	12.6	6.4
Edible oil	1,356	1,807	3.6	33.3	824	1,394	9.3	69.2
Non-Ferrous Metals	647	645	21.2	-0.4	320	380	-1.7	18.8
Metalliferous Ores and Metal Scraps	1,144	1,004	47.7	-12.3	549	593	-9.1	8.0
Iron & Steel	834	940	7.2	12.8	445	676	4.0	51.9
Capital Goods	9,882	12,746	10.5	29.0	5,495	7,271	26.6	32.3
Pearls, Precious & Semi-Precious Stones	4,623	6,054	-3.8	31.0	3,102	3,026	41.4	-2.4
Textiles, Yarn, Fabrics, *etc.*	748	956	25.3	27.9	455	582	16.3	27.8
Chemicals, Organic & Inorganic	2,800	2,966	14.6	5.9	1,438	1,791	3.5	24.6
Gold & Silver	4,582	4,234	-1.2	-7.6	1,911	3,091	-27.1	61.8

P Provisional.
Source: DGCI&S.

destinations in recent years is China. Sharp increases in exports were also observed in respect of Iran, Italy, Germany and Netherlands. During April-September 2003, there were considerable declines in exports to Japan, Russia and East Asian countries, such as, South Korea, Malaysia, Singapore and Thailand.

2.123 Commodity-wise analysis of imports during the first half of 2003-04 showed that the growth was largely on account of the sharp increases in the imports of 'gold and silver', 'edible oil', 'iron and steel' and 'capital goods'. The increase in the import value of 'gold and silver' was primarily due to the hardening of international prices during this period while the sharp rise in 'edible oil' imports could be attributed to lower domestic production, consequent upon drought conditions last year. Within the 'non-oil non-gold/silver' imports, 'iron and steel' and 'capital goods' imports recorded an impressive rise in April-September 2003, mainly reflecting the industrial recovery (Table 2.53).

2.124 As regards sources of India's imports, although the USA and Belgium continued to remain the two most important countries, China has become the third important source during the current year. Country-wise data showed sharp increases in imports from Switzerland, South Africa, and East Asian countries such as Hong Kong, South Korea and Malaysia during April-September 2003 (Table 2.54).

Table 2.54: Sources of India's Imports

Country	April-March				April-September			
	US $ million		Growth Rate (per cent)		US $ million		Growth Rate (per cent)	
	2001-02	2002-03 P	2001-02	2002-03 P	2002-03	2003-04 P	2002-03	2003-04 P
1	2	3	4	5	6	7	8	9
U S A	3,150	4,418	4.5	40.3	1,870	2,240	20.8	19.8
Belgium	2,763	3,712	-3.7	34.3	1,808	1,737	42.9	-3.9
China	2,036	2,783	35.6	36.6	1,221	1,746	30.1	43.0
U K	2,563	2,778	-19.1	8.4	1,411	1,478	5.6	4.7
Germany	2,028	2,377	15.3	17.2	1,118	1,232	16.9	10.1
Switzerland	2,871	2,329	-9.2	-18.9	1,050	1,784	-36.8	69.9
South Africa	1,441	2,090	41.0	45.0	907	1,087	17.3	19.8
Japan	2,146	1,829	16.5	-14.8	840	1,122	-6.9	33.6
South Korea	1,141	1,524	27.7	33.5	561	1,161	3.1	107.0
Malaysia	1,134	1,465	-3.7	29.2	670	932	18.2	39.1

P Provisional.
Source: DGCI&S.

Table 2.55: India's Current Account

US $ million

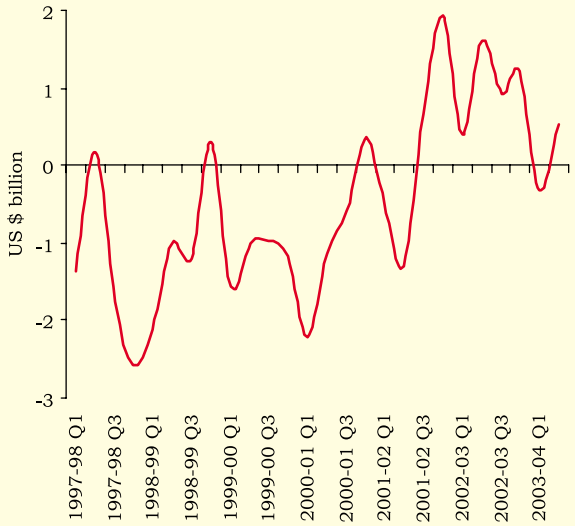
	Item	2000-01	2001-02	2002-03	April-September	
					2003	2002
	1	2	3	4	5	6
I.	**Merchandise Balance**	**-14,370**	**-12,703**	**-12,910**	**-12,079**	**-5,413**
II.	**Invisibles Balance (a+b+c)**	**10,780**	**13,485**	**17,047**	**12,286**	**7,420**
	a) Services	2,478	4,577	6,765	5,322	2,435
	i) Travel	294	628	-438	552	-309
	ii) Transportation	-1257	-413	-23	214	8
	iii) Insurance	135	13	54	-48	72
	iv) G.n.i.e.	316	197	79	31	44
	v) Miscellaneous	2,990	4,152	7,093	4,573	2,620
	Of which: Software Services	5,750	6,884	8,863	5,610	4,017
	b) Transfers	13,134	12,509	15,217	9,047	7,270
	i) Official	336	384	410	109	96
	ii) Private	12,798	12,125	14,807	8,938	7,174
	c) Income	-4,832	-3,601	-4,935	-2,083	-2,285
	i) Investment Income	-4,929	-3,675	-5,010	-2,103	-2,320
	ii) Compensation of Employees	97	74	75	20	35
	Total Current Account (I+II)	**-3,590**	**782**	**4,137**	**207**	**2,007**

G.n.i.e. : Government, not included elsewhere.

Invisibles and Current Account

2.125 Invisibles earnings continued to provide strong support to India's balance of payments during the first half of 2003-04. Net invisibles surplus increased during April-September 2003 as compared with the corresponding period of the previous year. This was mainly on account of higher inflows under transportation, software services and private transfer receipts. Despite a higher trade deficit on payment basis, the current account again registered a small surplus after being in deficit during the first quarter of 2003-04 (Chart II.16 and Table 2.55).

Chart II.16 : Current Account Balance



Capital Account

2.126 Net capital flows increased sharply during April-September 2003. The major contributors to capital flows were portfolio investment, short-term trade credit and NRI deposits (Table 2.56).

2.127 Foreign direct investment (FDI), which includes equity capital of unincorporated entities, reinvested earnings and, inter-corporate debt transactions between the related entities, under the expanded coverage[2], stood a little lower than in the previous year. The breakup of portfolio investments reveals that FIIs flows have been substantial during the financial year so far (Table 2.57). In mid-January 2004, the Central Government revised FDI limits in several sectors, including banking, petroleum and natural gas, to create an enabling environment for FDI inflows along with infusion of new technologies and management practices. In case of private sector banks, for example, the FDI limit (including both direct and porfolio investment) has been hiked to 74 per cent. Guidelines for external commercial borrowings (and foreign currency convertible bonds) have been revised in respect of eligibility, end-use restrictions and spreads. Corporates have been allowed to borrow up to US $ 500 million under the automatic route, provided the ECBs are for a minimum average maturity of five years (See Chapter VI).

[2] Foreign direct investment has been revised from 2001-02 to include equity capital of unincorporated entities, reinvested earnings and inter-corporate debt transaction. These have been incorporated following the IMF's accepted definitions and other country practices.

Table 2.56: Capital Flows

US $ million

Item	(April-September)		Variation
	2002-03	2003-04	
1	2	3	4=(3-2)
Capital Flows	4,298	12,916	8,618
Foreign Direct Investment	1,988	1,675	-313
Portfolio Investment	-394	3,512	3,906
Non-resident (NRI) Deposits	1,494	2,028	534
Banking Capital (excluding NRI Deposits)	960	1,031	71
External Commercial Borrowing	-1,718	-324	1,394
Short-term Credit	343	2,213	1,870
External Assistance	-18	-201	-183
Rupee Debt Service	-358	-303	55
Others (including leads and lags in export)	2,001	3,285	1,284

2.128 Net inflows under non-resident deposit schemes increased during April-September 2003 (Table 2.58). With the rationalisation in the interest rates on NRE deposits, in line with the decline in global interest rates, the flow in NRE deposits declined in the last few months.

Foreign Exchange Reserves

2.129 India's foreign exchange reserves comprising foreign currency assets, gold and Special Drawing Rights (SDRs) touched US $ 103.1 billion on January 16, 2004 driven by sustained capital flows (Chart II.17). Foreign exchange reserves recorded a rise of US $ 27.7 billion during the current financial year (up to January 16, 2004), even after prepayment of external debt of US $ 2.6 billion and redemption of Resurgent India Bonds (RIBs) amounting to US $ 2.4 billion out of the reserves. This accretion during the current year so far has been the highest in any financial year. It was almost entirely in the form of foreign currency assets, which reached US $ 98.9 billion on January 16, 2004. The Reserve Bank's forward assets declined to US $ 740 million as at end-December 2003 as compared with US $ 2,420 million as on March 31, 2003 mainly due to selling of forward assets for RIB repayment.

Table 2.57: Foreign Investment Flows by Category

(US $ million)

	Item	2001-02 (R)	2002-03 (P)	April-October	
				2002-03(P)	2003-04 (P)
	1	2	3	4	5
A.	**Direct Investment (I+II+III)**	**6,131**	**4,660**	**2,783**	**2,221**
	I. Equity (a+b+c+d+e)	**4,095**	**2,700**	**1,837**	**1,163**
	a. Government (SIA/FIPB)	2,221	919	633	507
	b. RBI	767	739	509	292
	c. NRI	35	–	–	–
	d. Acquisition of shares *	881	916	633	314
	e. Equity capital of unincorporated bodies	191	126	62	50
	II. Re-invested earnings $	1,646	1,498	749	738
	III. Other capital $$	390	462	197	320
B.	**Portfolio Investment (a+b+c)**	**2,021**	**979**	**-251**	**5,156**
	a. GDRs/ADRs #	477	600	137	347
	b. FIIs **	1,505	377	-388	4,809
	c. Offshore funds and others	39	2	–	–
Total (A+B)		**8,152**	**5,639**	**2,532**	**7,377**

* Relates to acquisition of shares of Indian companies by non-residents under Section 5 of FEMA, 1999. Data on such acquisitions have been included as part of FDI since January 1996.
\# Represents the amount raised by Indian corporates through Global Depository Receipts (GDRs) and American Depository Receipts (ADRs).
** Represents fresh inflow of funds by Foreign Institutional Investors (FIIs).
$ Data for 2002-03 are estimated as average of previous two years.
$$ Data pertain to inter-company debt transactions of FDI entities.

Table 2.58: Inflows under NRI Deposit Scheme

US $ million

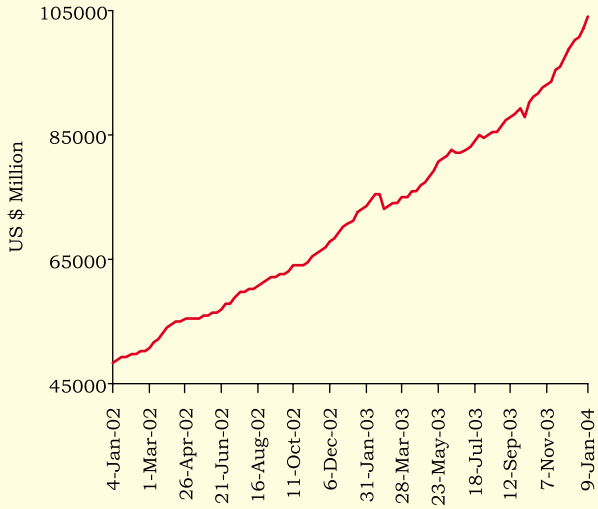
Scheme	2001-02	2002-03	April-October	
			2002-03P	2003-04P
1	2	3	4	5
1. FCNR(B)	594	526	581	-333
2. NR(E)RA @	1,626	6,195	3,794	3,964
3. NR(NR)RD	508	-3,745	-2,430	-1,167
Total	**2,728**	**2,976**	**1,945**	**3,130**

P Provisional.
@ Discontinued with effect from April 1, 2002.

2.130 The composition of the accretion to foreign exchange reserves during the first half of 2003-04 has undergone significant changes as compared with that of the comparable half of the previous year:

- The current account surplus declined to US $ 0.2 billion during April-September 2003 from US $ 2.0 billion during April-September 2002.
- There has been a significant rise in the net inflows through the capital account heads at US $ 13.3 billion during April-September 2003 as against US $ 4.6 billion in April-September 2002.
- There has been a significant increase in capital flows from investment by foreign institutional investors (FIIs), short-term credit and non-resident deposits. The higher increase in FII inflows have emerged as a critical factor behind the rally in the stock markets.
- Valuation changes, reflecting the appreciation of the Euro, GBP and Japanese Yen against the US dollar, accounted for US $ 1.8 billion of accretion to total reserves in April-September 2003 as against with a valuation addition of US $ 2.0 billion in April-September 2002.

Chart II. 17 : Foreign Exchange Reserves



External Debt

2.131 India's external debt as at end-September 2003 increased over the level of end-March 2003, mainly on account of increase in NRI deposits, external commercial borrowings, short-term debt including short-term trade-related debt (Table 2.59).

2.132 The increase in NRI deposits during April-October 2003 was on account of an increase in both Non-Resident (External) Rupee Account [NR(E)RA] deposits and Foreign Currency Non-Resident (Banks) [FCNR(B)] deposits, partly reflecting the reinvestment of RIB maturity proceeds. The increase in NR(E)RA deposits included reinvestment of maturity proceeds of the NR(NR)RD scheme (which was discontinued with effect from April 1, 2002). The increase in

Table 2.59: India's External Debt

	Item	March 2003		September 2003	
		Amount (US $ Million)	Share in total Debt	Amount (US $ Million)	Share in Total Debt
	1	2	3	4	5
1.	Multilateral	29,994	28.6	30,575	27.2
2.	Bilateral	16,824	16.1	17,542	15.6
3.	IMF	0	–	0	–
4.	Commercial Borrowings (including trade credits) #	27,330	26.1	28,469	25.3
5.	NRI Deposits (Long-Term)	23,160	22.1	27,186	24.2
6.	Rupee Debt	2,822	2.7	2,603	2.3
7.	Long-Term Debt (1to 6)	1,00,130	95.6	1,06,375	94.5
8.	Short-Term Debt *	4,569	4.4	6,162	5.5
9.	Total Debt (7+8)	1,04,699	100	1,12,537	100

Includes net investment by 100% FII debt funds.
* Excludes suppliers credit of up to 180 days.

borrowing by corporates in the face of low international interest rates led to a rise in external commercial borrowings. The increase in short-term debt has been mainly on account of higher short-term trade credits which, in turn, reflected a sharp increase in import. Despite growth in short-term debt during April-September 2003, the proportion of such debt in the overall debt stock remains modest.

2.133 It is interesting to note that during end-March 1991 to end-September 2003, India's foreign exchange reserves increased by about US $ 85.3 billion, while the addition to India's external debt was only US $ 28.7 billion. This implies that bulk of the accumulation of reserves has taken place through non-debt creating flows and without any additional costs in the form of increased indebtedness and debt servicing obligations.

VI. CONCLUDING OBSERVATIONS

2.134 The Indian economy is now exhibiting healthy growth. The real GDP growth of 8.4 per cent in the second quarter of 2003-04 places India amongst the fastest growing economies in the world during the current year. Importantly, the second quarter estimates show that buoyancy has spread across most sectors of the economy and is not confined only to agriculture, which still accounts for most of the rebound from the drought of last year. The progress of the North-East monsoon is satisfactory, over the above-normal South-West monsoon. As a result, total foodgrains production during 2003-04 is expected to reach a record high, substantially pushing up agricultural GDP. The momentum of industrial recovery is expected to continue, with the already strong export demand, reinforced by the improved prospects for domestic investments. This is also reflected in most surveys of business confidence in the recent months. The manufacturing sector has recorded a significant growth of 7.3 per cent in the second quarter of 2003-04, continuing the sustained acceleration from the low of 2.9 per cent growth registered in the first quarter of 2001. The improved prospects for real activity globally should add strength to the upward momentum in growth. The overall GDP growth for the year 2003-04 as a whole, which was estimated at around 6.0 per cent at the beginning of the year and 6.5-7.0 per cent with an upward bias in November is, on latest assessment, likely to be higher and around 7.0 per cent with a continued upward bias, unless there are unforeseen circumstances.

2.135 The investment climate has improved in the recent months. However, there is not yet adequate evidence of a clear increase in investment demand. There are reports that corporates are now relying more and more on internal resources, and hence incremental pressure on credit demand may appear with a time lag. Resource mobilisation by corporates in the primary market has actually been lower during the year, but there is now expectation of increased activity in the IPO market in 2004.

2.136 The fiscal situation still remains a cause for concern. The tax-GDP in the economy continues to be low. As the revenue deficit is high, the burden of fiscal correction naturally falls on public investment. The public sector dis-saving, which began in 1998-99, has been rising over the years. The fiscal constraint has not been binding as the private sector saving-investment surplus has continued to grow. This surplus has been funding public sector dis-savings. Hence, the high fiscal deficit has not put pressure on interest rates or for that matter, on monetary policy and the current account balance. Moreover, in 2001-02 and 2002-03, the private sector surplus, apart from financing the public sector deficit, also spilled over into the external account.

2.137 Large inflows from foreign institutional investors have flown into the stock markets, reflecting the prevailing strong business confidence. Capital markets around the world have revived in 2003. The rising secondary market and the strong macroeconomic fundamentals suggest that the time is now ripe for a take-off by the primary market. There are some early indications that many corporates are planning to come to the primary market in 2004 to mobilise a significant amount of resources.

2.138 The persistence of capital flows is likely to continue to generate surplus liquidity in the economy. In the backdrop of the current policy stance on exchange rate management and reserves accretion, it would be appropriate for the Reserve Bank to continue to maintain orderly conditions in the foreign exchange markets, as well as maintain stable conditions in the financial markets through monetary measures. Until now, the Reserve Bank has managed to conduct monetary management consistent with its monetary stance through appropriate absorption of liquidity by sterilisation. Given the expectations of the magnitude of the flows and the reduction in the quantum of securities available with it, the Reserve Bank had set up an internal Working Group on the instruments of Sterilisation. The recommendations of the Working Group are currently under consideration of the Reserve Bank and the Government.

2.139 The Indian foreign exchange market generally continued to witness orderly conditions during the recent months. The phenomenon in the last few months should appropriately be described as a significant depreciation of the US dollar. In general, the adjustment in the US dollar, which was considered to be essential, seems to have taken place in large measure in a non-disruptive manner so far. There are, however, emerging pressures on the distribution of the burden of adjustment mainly between the US, Euro area, and Asia, especially Japan and China. Under these circumstances, there appears to be considerable merit in continuing with the policy of exchange rate management of the Rupee addressing essentially the volatility issues without a fixed target. As a result of this policy of exchange rate management, in the context of maintaining orderly conditions in the foreign exchange markets, the foreign exchange reserves increased substantially. Considering the state of markets and the capabilities of the market participants in India, non-volatility in financial markets has to be treated as a public good.

2.140 The prospects for the world economy have improved since April 2003. There are signs of pick up in growth in US and Japan while Asian markets are having a strong recovery. China is also expected to perform well. Latin America and Africa are expected to show some acceleration in growth. Global growth will continue to be led by the USA, but significant downside risks could emanate from the emergence of the record current account and fiscal deficits in the USA. While the depreciation of the US dollar has so far been relatively orderly, further and substantial depreciation remains a risk to global recovery under the shadow of the twin deficits. The monetary policy has moved to mild tightening in some countries; in others there is a neutral bias with expectations of tightening, particularly in the US, with no firm indication on the timing. These uncertainties would necessarily have an impact on global liquidity as well as the flow of resources to emerging countries including India. As far as India is concerned, the relative weight of the fundamentals and confidence in the economy appears to be more than the global liquidity factors that govern the capital flows.

2.141 In sum, the Indian economy is now geared for higher growth as the macroeconomic environment has continued to improve during the year. The inflation outlook, by and large, remains benign, though careful monitoring and management would have to continue with a view to cushioning supply shocks and better management of supply bottlenecks for individual commodities so that price volatilities are evened out. The money, government securities and foreign exchange markets remain stable. The foreign exchange reserves are at a more comfortable level than ever before and there is adequate liquidity in the system. The overall developments in the economy are favourable and provide the main springs for a strong revival of investment by industry. If the fiscal drag could be eased, the macroeconomic prospects would improve further, reinforced by improved public infrastructure and sound investment. This would need continuing tax and non-tax fiscal reforms, including user charges.

III CONDUCT OF MACROECONOMIC POLICY IN AN OPEN ECONOMY

Introduction

3.1 Increasing integration of countries through growing volumes of trade and capital flows has been a characteristic feature of the world economy in recent times. Greater openness to trade and capital flows entailing greater interdependence among economies has long moved on from the realms of theoretical debate to that of inevitability. Indeed, the decades of the 1980s and 1990s have witnessed a generalised shift in policy stance towards openness among a number of emerging market economies - either spontaneously, so as to reap the benefits of greater volumes of trade and external investment or under the compulsions arising out of unsustainable domestic imbalances. These two decades, however, have also seen a series of financial crises in several open economies engendered by volatile capital flows - prompting a re-look into the conventional wisdom regarding the gains from cross-border trade and investment. This has brought to the fore a number of open-ended issues relating to the manner and sequencing of such opening up, the challenges posed by free capital flows and increased cross-border market integration, and the role of monetary and fiscal polices.

3.2 All these developments have profound implications for macroeconomic policies. After all, the process of opening up exposes the economy to global shocks on the one hand, and extends the closed economy domestic resource constraint on the other. Illustratively, in an open economy framework the inter-temporal budget constraint of the domestic government gets a new dimension; furthermore, domestic business cycles get synchronised with the peaks and troughs of the international business cycles. While there is no unanimity about the precise nature of these exposures and extensions, there is little doubt that the process of opening up makes the task of the policymakers far more complex than has been the case earlier.

3.3 In the Indian context, progressive dismantling of trade restrictions, current account convertibility, shift to market determined exchange rates and gradual liberalisation of capital account have all contributed to the emergence of a more open economy structure and higher degree of integration with the global markets since the early 1990s. Among the more visible effects of these changes is the possibility of Indian business cycles synchronising with the global business cycles and increasing influence of trade cycles on the economy. Furthermore, the increased integration with international markets as also the greater volumes of capital flows into the economy have entailed changes in the strategy for fiscal policy and monetary policy framework comprising their goals, instruments and target variables. While opening up of the external sector necessitated changes in the macroeconomic framework of the economy, liberalisation of the external sector itself was contingent on a broader set of reforms comprising the real sector, particularly industry, and the financial sector. Accordingly, the management of external sector liberalisation in India would have to be viewed in the context of a coordinated macro-level overhaul of the policy regime.

3.4 Against this backdrop, this Chapter looks into the changed context and paradigm of policymaking since the economy opened up in the early 1990s and moved progressively towards greater degree of openness. The changing contours of the policy framework under the process of opening up of the economy have been analysed at an aggregative level embracing the three major arms of public policy, *viz*., monetary, fiscal and financial policies. The Chapter is organised as follows. As a prologue to the process of opening up, Section I provides a quick run-down of the external sector policies, which are covered comprehensively in the ensuing chapters. A brief review of the paradigm shift in macroeconomic policy, covering some emerging policy challenges, is also included in this section. In Section II the emerging issues in fiscal policy making in a more globalised world, with special reference to India, are discussed against the backdrop of theoretical developments in the area. Section III discusses the theoretical and empirical literature on challenges to monetary policymaking in the evolving world scenario. Policymaking in India is discussed in the light of this analysis with special reference to the high order of capital flows in recent years. Section IV covers macro issues relating to the financial sector. Section V discusses the synchronicity of business cycles across economies under greater openness. The Chapter ends with concluding observations.

I. OPENING UP OF THE ECONOMY

Liberalisation of the External Sector

3.5 The unprecedented external payment crisis of 1991 brought critical focus to bear on the management of the external sector characterised by the persistent build-up of current account deficits in the 1980s. The external sector reforms in India during the 1990s included a market based exchange rate system, introduction of convertibility of rupee for external transactions on the current account and compositional shift in cross-border capital inflows from debt creating to non-debt creating flows. Moreover, a cautious approach was followed in respect of debt creating external capital inflows especially those with short-term maturity, besides reduction of the volatile component of non-resident Indian (NRI) deposits and the flow of external assistance. In the 1990s, for the first time, a strategic external debt management policy was put in place, emphasising compositional aspects, cost, maturity, end-use, transparency and risk management. The overall approach of prudence was integrated into the process of growing openness and financial liberalisation which were basic elements of the package of structural reforms instituted in the wake of the balance of payments crisis of 1991. In order to strengthen the external sector reforms and to benefit from these measures, complementary reforms were introduced in other segments of the economy as well (see Chapter VI and VII).

3.6 The policy of ensuring a well diversified capital account with rising share of non-debt liabilities and low percentage of short-term debt in total debt liabilities is reflected in India's policies relating to foreign direct investment (FDI), portfolio investment and external commercial borrowings (ECB). Quantitative annual ceilings on ECB along with maturity and end-use restrictions broadly shaped the ECB policy. FDI is encouraged through a very liberal but dual route: a progressively expanding automatic route and a case-by-case route. Portfolio investments are restricted to select players, particularly approved institutional investors and NRIs. Indian companies are also permitted to access international markets through Global Depository Receipts/American Depository Receipts (GDRs/ADRs) under an automatic route, subject to specified guidelines. Foreign investment in the form of Indian joint ventures abroad is also permitted. Restrictions on outflows involving Indian corporates, banks and those who earn foreign exchange (like exporters) have also been liberalised over time, subject to certain prudential guidelines (see Chapter VI).

3.7 As a result of pursuing the above approach, India has attracted considerable private flows, primarily in the form of FDI, portfolio investment, ECB and NRI deposits. Indeed, managing the surplus also became a challenge in the management of the capital account. The policy for reserve management is built upon a host of identifiable factors and other contingencies. Taking these factors into account, India's foreign exchange reserves are at present comfortable and consistent with the rate of growth, the share of the external sector in the economy and the size of risk-adjusted capital flows (see Chapter VI).

Macroeconomic Policy Responses

3.8 The starting point for policymaking in an open economy may be viewed in terms of the national income identity *viz.*, $Y = C + I + G + X - M$, where C stands for consumption, I for investment, G for government expenditure, X for exports and M for imports. The national income identity in its gross national income variant, states that the difference between the gross national disposable income[1] and the gross domestic expenditure must equal the current account balance. Differentiating private consumption and savings from those of the government, the identity could be reorganised to state that the sum of the government and private budget surpluses must equal the increase in the net foreign assets which, in turn, equals the difference between foreign receipts and payments (Box III.1). The identity holds for any country irrespective of the degree of its openness.

3.9 The crucial factor that may change with greater liberalisation of the external sector is the direction of causation along the identity. In a relatively closed economy, changes in the domestic budget surplus (government or private) would be expected to drive changes in the net foreign assets of any economy, whereas in a relatively open economy, capital flows may lead to changes in private or government budget surpluses. As such, the policy reaction function must take into account the source of imbalance. An imbalance originating in the domestic budget surpluses must be addressed by expenditure changing polices - *i.e.,* traditional fiscal or monetary policies. Expenditure switching policies, in contrast, are seen as appropriate in addressing imbalances arising from the foreign exchange receipts and payments. Financial policies are deemed to be effective in addressing imbalances arising out of capital flows into or out of the economy.

[1] Gross domestic income *less* net factor payments abroad *plus* net unrequited transfers from abroad.

Box III.1

Basic National Accounting Identities and Policy Instruments

National accounting equations

$$\underset{\text{(GDP - NFP + NTR)}}{\text{Gross national income}} - \underset{\text{(C + I + G)}}{\text{Domestic expenditures on final products}} =$$

$$\underset{\text{(C + S)}}{\text{(Domestic consumption + Gross national saving)}} - \underset{\text{(C + I)}}{\text{(Domestic consumption + Gross domestic investment)}} =$$

$$\underset{[(C_g + S_g) - (C_g + I_g)]}{\text{[Government income - Government expenditures]}} + \underset{[(C_p + S_p) - (C_p + I_p)]}{\text{[Private income - Private expenditures]}}$$

Balance of payments equation

$$\underset{\text{(T - G)}}{\text{Government budget surplus}} + \underset{(S_g - I_p)}{\text{Private budget surplus}} =$$

$$\underset{\text{(X + NTR)}}{\text{Foreign exchange receipts}} - \underset{\text{(M + NFP)}}{\text{Foreign exchange expenditures}} =$$

Policy type → **Expenditure-changing policies**
Fiscal policies
Monetary policies

Policy type → **Expenditure-switching policies**
Trade policies
Exchange rate policies

Increase in net foreign assets

Policy type → **Financial policies**
Capital controls
Debt policies

NTR : Net unrequited transfers
NFP : Net factor payments
T : Taxes
Source: Leslie, F. and C.H.Helmers, 1988.

3.10 There is a growing recognition that openness matters and globalisation is an irreversible process entailing both opportunities as well as challenges. The opening up of the economy has given rise to a number of macroeconomic policy challenges in recent times. These challenges, however, are in sharp contrast to the challenges witnessed during the pre-1990s representing a closed economic structure. For instance, policy challenges emanating from the growing degree of synchronicity between domestic and international business cycles coupled with the global slowdown witnessed in recent times have been highlighted in this Chapter. Similarly, consecutive surpluses in the current account have raised concerns about the options to attain the target of deficit in the current account (Chapter V).

3.11 Moreover, with opening up of economies, capital movements have rendered exchange rates significantly more volatile than before (Mohan, 2003). For the majority of developing countries which continue to depend on export performance as a key to the health of the balance of payments, exchange rate volatility has had significant real effects in terms of fluctuations in employment and output and the distribution of activity between tradables and non-

tradables (Chapter VII). In the face of continued capital inflows, the limits to sterilisation could pose further challenges to the conduct of macroeconomic policy (Chapter VI). At the same time, a key issue is enhancement of the absorptive capacity of the economy to better utilise these capital inflows for productive purposes. Issues relating to volatility in capital flows and capital account liberalisation are also important (Chapter VIII). Moreover, the concerns relating to international financial architecture, which have assumed importance in the wake of a series of crises in the 1990s cannot be ignored (Chapter IX).

3.12 From this perspective, the chronicle of Indian reforms towards increasing openness could be analytically reviewed in terms of the elements of the above identity. Thus, the impact of the reform policies could be seen in terms of fiscal, monetary and financial policies. Instead of a detailed narration of the Indian reform policies, as a backdrop, the following sections provide a synoptic rundown of the policies towards opening up of the Indian economy in terms of these crucial elements.

II. CHANGING DIMENSION OF FISCAL POLICY

3.13 Fiscal policy is expected to play a key role in ensuring macroeconomic stability while facilitating sustained economic growth within the framework of a market economy. Increasing openness of the economy complicates the task of fiscal policy formulation because of the uncertainties about the magnitude, speed and direction of the trade and capital flows. In this context, the efficiency and flexibility of fiscal policy as an instrument of macroeconomic policy response acquires significance. In an economy that is opening up, the design of fiscal policy would depend, *inter alia,* upon the nature of its monetary and exchange rate policies; the degree of openness of the capital market; the prevailing macroeconomic conditions; the position of the economy in the business cycle; on whether there is inflation or deflation, whether or not the external position is sustainable (Heller 2002).

3.14 For fiscal policy to play its stabilising role, however, the structural fiscal deficit should be modest. With the progressive opening up of the Indian economy in the 1990s, macroeconomic stabilisation assumed importance. This necessitated fiscal reforms geared towards attainment of fiscal balance, restructuring of the public sector through a process of disinvestments, and improvement in fiscal-monetary coordination. The strategy for restoring fiscal balance comprised a mix of tax and non-tax reforms, expenditure management and institutional reforms, while public sector restructuring mainly involved a preference for divestment of government ownership. The process of fiscal-monetary coordination encompassed deregulation of the financial system, elimination of automatic monetisation, and reduction in pre-emption of institutional resources by the Government (RBI, 2003).

3.15 Despite structural reforms, the fiscal deficit has, however, remained persistently high during the 1990s. Although there is a widespread recognition that all is not well on the fiscal front, the gravity of the situation has not received adequate appreciation (Mohan, 2000). Against this backdrop, this section provides theoretical discussion on the role of fiscal policy in an open economy followed by the Indian experience.

Fiscal Policy and Capital Mobility

3.16 The Mundell-Flemming model provides the theoretical paradigm for the effectiveness of fiscal policy in the face of capital mobility. The policy options under this model are broadly two fold: the first option is to change monetary and fiscal policies appropriately - for given levels of financial integration and the exchange rate regime. The second option is to control the degree of financial openness and choose an exchange rate regime that could enhance the effectiveness of both monetary and fiscal policies. Mundell's work on monetary dynamics encompassing short-run effects of monetary and fiscal policy in an open economy demonstrated the far-reaching importance of the exchange rate regime; for instance, under a floating exchange rate regime monetary policy becomes powerful and fiscal policy powerless, whereas the opposite is true under a fixed exchange rate (Mundell, 1963). Moreover, with free capital mobility, monetary and fiscal policy can be oriented towards either an external objective such as exchange rate or an internal objective such as the price level, but not both at the same time. This insight is shared by a majority of policy makers and academicians.

3.17 Fiscal tightening is often advocated for countries opening their capital regimes, irrespective of whether the capital flows are inward or outward. Fiscal tightening is expected to reduce absorption, thereby easing the pressure on unsustainable current account deficits and limiting the credit squeeze on private investment on the one hand, and strengthening market assessment of the medium-term viability of a country's fiscal stance, on the other (Heller, 1997). Fiscal tightening is also advocated in the context of significant capital inflows as an

Box III.2

Fiscal Policy and Exchange Rate

Fiscal expansion may be expected to effect a depreciation if capital is relatively immobile and an appreciation if there is greater capital mobility. The empirical evidence in this respect is inconclusive. Feldstein (1986), Throop (1989), Melvin *et al*. (1989), and Beck (1993) found a positive and significant relationship between fiscal expansion and the exchange rate in the context of movements of the US dollar during the1980s. But Evans (1986) and McMillin, Douglas and Koray (1990), among others, do not find a statistically significant relationship. The empirical evidence on the role of fiscal policy in explaining movements of ERM currencies in the early 1990s, summarised in IMF (1995), is also ambiguous.

Exchange rate appreciation (depreciation) also feeds into fiscal deficit. Depreciation would lead to an increase in the fiscal deficit if foreign currency based expenditures outweigh foreign currency based revenues. Seade (1990) noted that in the presence of tariffs, a devaluation would (i) increase tax revenues if the (weighted aggregate) price elasticity of imports is less than unity; and (ii) tend to yield a lower revenue gain, if not a revenue loss, if the structure of revenues depends heavily on wage taxes.

While the stance of fiscal policy continues to derive from theoretical models popularised in the 1960s, at the operational level, recent years have seen countries undertake a number of reform measures relating to fiscal policy in part in its role as a public policy instrument and in part to enhance its efficacy and efficiency in its traditional role. These reform measures relate both to tax and expenditure policies.

instrument of sterilisation. In this context, it is noteworthy that large capital inflows to India in the recent period have been managed almost entirely through monetary policy measures since fiscal policy has limited leverage given the preponderance of committed expenditures of the Government as well as a low tax-GDP ratio.

3.18 The approach of tightening fiscal policy during periods of capital inflows could, however, prove costly if the content and composition of expenditure and revenue get altered under conditions of unpredictable and volatile capital flows (Tanzi, 1990). An alternative approach is to undertake pre-emptive tightening in the underlying fiscal stance as a country moves from a closed system to a more open capital economy as this would avoid frequent changes in fiscal variables. This approach is motivated by three principal factors *viz.,* the desire to contain adverse effects of adjusting the fiscal structure in response to unpredictable capital flows; limiting the prospect of facing excessive risk premia; and, the need to instill greater international confidence in the durability of fiscal position. The magnitude of fiscal tightening needs to be large enough to lead to a lower trajectory in the ratio of public debt to GDP over time so as to be visible in international markets. The short-run macroeconomic impact of such fiscal consolidation, however, needs to be considered, as it could prove contractionary in the absence of crowding-in from the private sector (Heller, 1997). If the underlying fiscal position has been adequately tightened prior to the capital inflows, the appropriate fiscal response would depend on the factors governing such flows: whether they are exogenous, endogenous or an interplay of both. If the flows were exogenous and mostly speculative in nature, then the need for a strong reserve position in order to counter any future reversal of flows would necessitate an active sterilisation policy requiring further tightening of the fiscal position (Gavin, Hausmann and Leiderman, 1995).

3.19 It is also argued that increase in financial market integration reduces the effectiveness of fiscal policy, while an increase in goods market integration increases fiscal policy impulses through expenditure switching effects. Senay (1998) supports this in his analysis of the effectiveness of fiscal policy in the face of increasing financial market integration. In the presence of capital mobility, fiscal initiatives may be expected to affect the exchange rate, although the specific effects would depend on the underlying economic situation and the degree of capital mobility (Hemming, Kell and Mahfouz, 2002) (Box III.2).

Fiscal Policy Multipliers

3.20 In an open economy, as the government increases spending or reduces taxes, there is also an effect on the trade balance apart from the multiplier effect on output. Some results derived from the standard Keynesian framework are noteworthy here: (i) the more open the economy, the smaller is the effect on output and the larger is the effect on trade balance; (ii) multipliers of fiscal policy instruments are smaller in an open economy as compared with their closed economy counterparts; (iii) the government expenditure multiplier is larger than the tax multiplier in an open economy; (iv) in a large country, the effect of an increase in government expenditure on output is large while the effect on the trade balance is small;

the opposite would hold for a small economy; and (v) in an imperfectly competitive small open economy, fiscal multipliers are found to be increasing with the degree of imperfection (Coto-Martinez and Dixon, 2001). It may be noted that result (iv) above ignores movements in the real exchange rate. The benefits of an expansionary fiscal policy to bring about an increase in output are, in general, more difficult in a small open economy.

3.21 An econometric exercise for the Indian economy (1970-71 to 1999-00), showed that the multiplier effect of an increase in government spending on income was 2.5, *i.e.*, a one per cent increase in Government spending would raise income by 2.5 per cent (RBI, 2001). However, rather than the static multiplier, the impact of fiscal policy intervention is better explained by a super-multiplier framework, which, *inter alia,* takes into account the dynamics of income-expenditure propagation. The role of fiscal policy could be assessed in line with the sustainability of the growth path which sets a limit for the deployment of counter-cyclical policy. The multiplier and accelerator interaction in the Indian economy generates stable and converging cycles, thereby making room for counter-cyclical policies (RBI, 2001).

Tax Policy

3.22 With financial liberalisation and the concomitant increase in capital mobility, a new dimension got incorporated in the process of tax reforms. On the one hand, governments came under increasing pressure to reduce the statutory tax rates on capital income in order to attract foreign direct investment and portfolio capital. On the other hand, they tried to compensate for the revenue loss by widening the tax base and increasing the statutory tax on less mobile factors of production, especially labour (Ganghof, 2001). In this context, rising tax interdependencies between countries and regions become obvious, raising two issues of concern, which could have different outcomes depending on the way they are tackled (Benassy *et al*, 2000). First, countries could undertake action on tax levels: this may lead to tax harmonisation or tax competition depending on whether this action is co-operative or not. Second, countries would have to reconsider fiscal schemes, since the growing interdependence of countries tends to blur the notion of residence and source of revenue, which raises an incentive for tax evasion.

3.23 In recent years, tax reforms in most countries are aimed at reduction in income and payroll tax rates and elimination of exemptions so as to provide a more enabling tax environment to the productive sectors of the economy. The manner and speed of tax reforms, however, has differed across nations. The emphasis in many countries, particularly in Europe, has been on a shift from direct taxes on labour and capital income towards indirect taxes. In Indonesia, a comprehensive reform of the tax structure and tax administration was initiated in 1981 and carried out within a fairly short period of 30 months. In South Korea, however, tax reform has been a gradual and continuous process. Malaysia too adopted a step-by-step approach to tax reforms. In Pakistan and Sri Lanka, tax reforms were necessitated by structural adjustment programmes. Unlike most countries which reformed their tax structures in order to improve their fiscal position, Thailand undertook tax reforms when the fiscal position was strong. The objectives of the reforms were to improve competitiveness and the investment climate and to enhance productive efficiency through elimination of tax induced distortions. In countries such as South Korea, Taiwan and China, increasing attention was given to property and land taxes. Korea's tax system aimed at raising sufficient revenues to balance the budget and achieve its growth and industrial policy objectives (Asher, 1992). In the aftermath of the Asian crisis, the need for a more flexible fiscal policy, even at the cost of budget deficits, was emphasised (Horne, 1999).

3.24 India's fiscal consolidation measures entailed a reduction in government expenditure and an increase in its revenue. Since tax rates were already high and the tax structure, particularly indirect taxes, was distortionary, it was neither possible nor desirable to raise the rates of indirect taxes. Substantial restructuring of the tax system based on the recommendations of the Tax Reform Committee (Chairman: Raja J. Chelliah) has been under way since 1991-92. In the area of direct taxes, reforms focused on stability of tax rates, rationalisation and simplification of tax laws and effective tax compliance. The marginal income tax rates were reduced substantially. On the indirect tax front, approach has been to overhaul and rationalise the rate structure and simplify the procedures to reduce compliance cost. During the 1990s, the number of customs tariff rates was reduced significantly and the structure was rationalised; input tariff rates were made significantly lower than output tariff rates in order to bring the tariff structure in alignment with that of the other developing countries in the region. Tax rationalisation measures announced in January 2004 are expected to strengthen the ongoing fiscal reform process in India.

3.25 The results of this rationalisation process have been mixed. The total tax buoyancy declined from 1.07 per cent in 1981-93 to 0.96 per cent in 1981-2001 implying that buoyancy could be less than unity during the post-reform period, 1994-2001 (RBI, 2003a). Although the decline in the rates of both customs and excise duties was inevitable in the context of the opening up of the economy and the need to provide a level playing field to domestic producers, the continuance of exemptions and concessions for both these taxes substantially reduced revenue collection. While there was an increase in both personal and corporate income tax revenue due to an increase in the number of assessees and better compliance following the reduction in the average and marginal tax rates, this was not sufficient to offset the fall in indirect tax revenue. The progressive reductions in direct and indirect tax rates did not produce the expected Laffer curve effect and there was a secular decline in the tax/GDP ratio on the revenue side (Mohan, 2002). A cross-country comparison in terms of tax-GDP ratio places India towards the lower end of the spectrum (Table 3.1). The table also highlights an atypical reliance on trade taxes in emerging economies like Argentina, India and Philippines.

Tax Policy and Trade Liberalisation

3.26 Trade liberalisation often results in loss of revenue for the government as tariffs are lowered to international levels. The quantum of such losses depends on the price and income elasticities of the demand for imports, the elasticity of substitution between imports, the market structure of import trade, "announcement effects" and the degree of exchange rate flexibility in addition to the change in the tariff rate (Blejer and Cheasty, 1990). A strategy has been suggested for avoiding short-term revenue losses by effecting compensatory measures - a reduction in the scope of tariff exemptions in the existing system, a commensurate increase in their excise rates and adjustment in the rate of the general consumption tax (such as value added tax) to meet remaining revenue needs (Tanzi and Zee, 2001).

3.27 In India, the reduction in custom duties has led the secular decline in tax revenue (as a proportion of the GDP) in the post reforms period. Along with the fall in customs revenue, there has also been a sharp fall in Central excise and countervailing excise duties, which are related to the tariff reductions on imports. High proportion of revenue coming from trade taxes in India constrains the ability of the Government to progress towards rapid trade liberalisation. To the extent that there are constraints on compensating the loss of revenue on account of lower trade tariff, there exists resistance to trade reforms which is from the fiscal angle rather than of a protectionist origin (Rajaraman, 2003).

3.28 Moreover, in an open economy with more flexible exchange rates, the level of protection provided to the industry keeps on changing even if the tariff rates are kept unchanged. A combination

Table 3.1: Tax Revenue of General Government

(Per cent to GDP)

	Year	Total Tax Revenue	Income, Profits and Capital Gains	Sales Taxes and VAT	Excise Duties	Interna-tional Trade Taxes	Property Taxes	Social Security and Payroll	Others
1	2	3	4	5	6	7	8	9	10
U. S.	1999	28.9	14.2	2.2	1.7	0.2	3.1	6.9	0.6
Japan	2000	42.3	14.2	6.6	3.8	0.1	1.8	12.0	3.8
Germany	2000	37.8	11.4	6.9	3.3	0.2	0.9	14.8	0.4
U.K.	2000	37.7	14.5	7.0	4.7	0.2	4.4	6.3	0.6
Argentina	2001	20.9	4.9	3.3	1.7	5.2	2.4	3.1	0.3
Brazil	1998	21.8	5.0	2.0	1.8	0.7	0.6	9.7	1.9
China	1999	15.0	1.9	4.3	1.1	0.7	0.3	..	6.7
India	**1999**	**14.2**	**3.0**	**..**	**3.2**	**3.0**	**..**	**..**	**5.0**
Indonesia	2001	13.2	6.3	3.7	1.2	0.6	0.5	0.4	0.3
Mexico	2000	17.0	5.0	3.5	1.6	0.8	0.2	1.5	4.3
Philippines	2001	13.5	6.1	1.6	1.6	2.7	..	..	1.5
Thailand	2001	16.0	4.9	3.1	3.6	1.8	0.2	0.5	1.9
Turkey	2000	32.8	9.5	10.9	1.5	0.4	1.1	5.1	4.3

Source: Lorie, 2003. VAT : Value Added Tax.

Table 3.2: Combination of Exchange Rate and Tariffs Giving Equal Protection: An Illustration

Average Exchange rate (Rs. per US dollar)	Weighted Average Tariff	Cost of imports including tariff (Rs. per US dollar)
1	2	3
43.67	40.0	61.14
45.29	35.0	61.14
47.69	28.2	61.14
48.91	25.0	61.14
50.95	20.0	61.14

of inflation differential, nominal exchange rate and the tariff rate could yield the same level of protection in an open economy with flexible exchange rate (Table 3.2).

Expenditure Policy

3.29 Expenditure reforms in the context of external sector liberalisation have two aspects, *viz.*, consolidation so as to reduce the quantum of expenditure and restructuring with a view to changing the composition of government expenditure. A recent study indicates that expenditure reforms placed emphasis on a shift towards growth-inducing expenditure on infrastructure and human resource development and reduction in unwarranted subsidies (Lorie, 2003). In addition, during the initial years of transition, almost all the countries resorted to cuts in their public expenditures - though the severity of cuts varied across nations depending upon their ability to mobilise resources. While the average expenditure of Organisation for Economic Co-operation and Development (OECD) countries was around 43 per cent of GDP, for emerging economies it was much lower, at around 28 per cent (Table 3.3). Some of the common expenditure reform priorities include civil service reform, pension reform and reduction/ elimination of subsidies.

3.30 The composition of spending cuts are found to have a bearing on the effectiveness of the reforms. Broad-based spending cuts, which do not spare the most politically sensitive parts of the budget, *viz.*, transfers, social security and government wages and employment, were found to be more successful than large cuts on capital expenditures (Alesina and Perotti, 1996). Also, fiscal adjustments relying primarily on tax increases and cuts in public investment tend to be short-lived and contractionary. Furthermore, careful and effective implementation of public spending programmes is important to assure the necessary results.

Table 3.3: General Government Expenditure

(Per cent to GDP)

Country	Year	Total Expenditure
1	2	3
US	2001	32.7
Germany	1998	48.3
U.K.	1999	39.2
Argentina	2001	29.6
Brazil	1998	39.8
China	1999	20.4
India	**2001**	**26.5**
Indonesia	1999	21.2
Mexico	2000	20.7
Thailand	2001	22.1
Turkey	2001	42.3

Source: Lorie, 2003.

3.31 In India, on the expenditure side, a number of measures have been contemplated to rein in the built-in growth bias in the fiscal deficit and restructure the composition of government expenditure. The measures in this respect included subjecting all ongoing schemes to zero-based budgeting, assessment of manpower requirements of government departments, review of all subsidies, introducing cost based user charges wherever possible, review of budgetary support to autonomous institutions and greater commercialisation of the operations of public sector enterprises.

3.32 Apart from these reforms aimed at fiscal consolidation, a number of institutional measures were taken during the 1990s. Public sector restructuring and disinvestments were undertaken with a view to increase the efficiency of the Public Sector Undertakings (PSUs) as also to provide additional resources to the Government. The Ahluwalia Committee Report on Fiscal Transparency (2001) underscored the need for improvements in budgetary practices, which prepared the ground for passing of the Fiscal Responsibility and Budget Management (FRBM) Act by the Government to usher in an era of fiscal consolidation based on fiscal policy rules.

3.33 The financing of fiscal deficit is another area, which underwent significant changes in the post reform period. With the discontinuation of *ad hoc* 91-day Treasury Bills in April 1997, automatic monetisation of deficits was eliminated. Greater reliance on borrowing at market related interest rates since 1992 led to a substantial lowering of statutory pre-emption of institutional resources by the

Government. This has also facilitated development of the market for Government securities, which has witnessed remarkable changes since the latter half of the 1990s.

3.34 The current strategy towards accelerated growth and employment involves exploiting the opportunities offered by more rapid globalisation. The main impediment constraining India's growth in future is the continuing fall in public investment in infrastructure which has been caused by deteriorating fiscal environment at both Central and State Governments levels. Apart from ensuring higher buoyancy in tax revenues, the key solutions to India's fiscal predicament are bold programmes for imposing user charges, and implementation of a programme for disinvestment and privatisation (Mohan, 2000).

3.35 In sum, the growing liberalisation and integration of economies have led to fiscal reforms in several countries across the world. The general trend is to bring the level of taxes and expenditures in line with the international norms. The focus has shifted from fiscal stance to the composition of the fiscal package that takes into account the differential growth impact of tax and public expenditure instruments in a global framework. Within the 'new consensus', the use of discretionary fiscal policy and of long term budget deficit is seen as an exception rather than a rule. The norm for the fiscal policy should be to let automatic stabilisers operate in an environment of budgets balanced over the business cycle (Taylor, 2000; Arestis and Sawyer, 2003). Discretionary fiscal policies should focus on long run issues such as, tax reforms and social security reforms rather than on demand management (Aurbach, 2002). In an open economy framework, the issues in fiscal policy making relate to increasing the market friendliness of taxation and implementing efficiency-improving reforms of the expenditure system. There is greater emphasis on improving the budget and cash management and tightening both internal and external audit of the budget. Many countries have adopted medium-term budget frameworks as an important tool to introduce more strategic thinking in budget formulation, and have committed themselves to fiscal discipline by means of a binding fiscal rule. The strength and credibility of fiscal policy should attract the support of a well-informed public, result in a more favourable access to domestic and international capital markets, and play a role in reducing the incidence and severity of crises.

III. CONDUCT OF MONETARY POLICY IN AN OPEN ECONOMY

3.36 In a globalised world, monetary policy formulation has become more complex and interdependent. A key concern that seemingly guides the conduct of monetary policy is how to reap the benefits of market integration while minimising the risks of market instability. An integral component of central bank work is the development of financial markets that can increasingly shift the burden of risk mitigation and costs from the authorities to the markets. The adverse implications of excess volatility leading to financial crises are more severe for low-income countries. They can ill-afford the downside risks inherent in a financial sector collapse. It is increasingly being recognised that central banks need to take account of developments in the global economic situation, the international inflationary situation, interest rate situation, exchange rate movements and capital movements while formulating monetary policy (Mohan, 2003).

3.37 Although the basic objectives of monetary policy continue to remain unchanged, globalisation has implications for the conduct and instruments of monetary policy as global economic integration results in more economic convergence and more uncertainty (Solans, 2000). With increasing trade linkages, business cycles are quite synchronised; average cross-country correlation of GDP growth in the G-7 was 0.44 during 1984-2002 (Stock and Watson, 2003).

3.38 Globalised financial markets play an increasingly important role in the international transmission channel for several reasons. First, cross-border ownership of securities immediately transmits the effect of changes in market values of equities in one region to another. Second, the correlation between equity markets worldwide has increased in recent years. Third, large country-specific shocks and common shocks (for instance, oil shocks, the recent rise and fall in the information technology and related sectors) add to international linkages (Issing, 2002). Growing global macroeconomic imbalances create further uncertainty for market agents and policymakers. Growing openness of the economy and the increasing use of electronic money also create uncertainty in regard to monetary transmission. Thus, even though monetary policy is conducted exclusively for domestic goals, the international linkages have to be taken into account in policy formulation.

3.39 In an environment of such a heightened uncertainty, it is suggested that monetary policy strategies should have the following three features (ECB, 2001). First, following 'Brainard's conservatism principle',[2] monetary policy should be more cautious than activist. Accordingly, monetary policy should eschew attempts to fine-tune the economy in the short-run and should have a medium-term focus. This approach is reflected in the interest rate smoothing approach followed by modern central bankers. Second, monetary policy should be based on a diversified approach to the analysis of information which is robust to different views about the functioning of the economy. Hence, central banks should not rely exclusively on any particular indicator or model in isolation. Rather, a multiple indicators approach could be useful. Finally, central banks should not themselves become a source of additional uncertainty. This requires greater transparency and better communication of the key objective(s) of monetary policy.

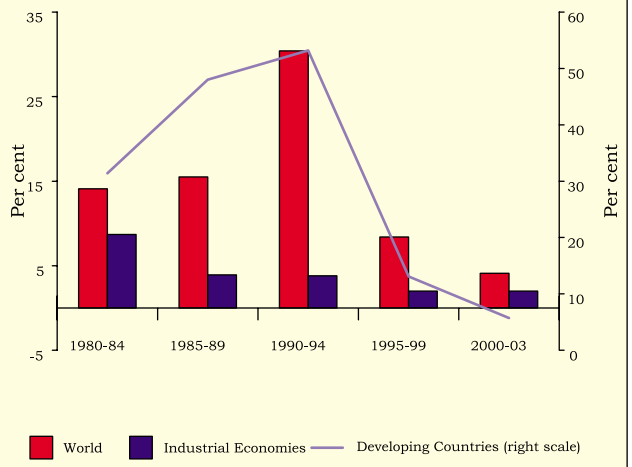
3.40 In this context, inflation targeting (IT) has emerged as an important monetary policy approach. Full-fledged IT is based on five pillars (an institutional commitment to price stability, absence of other nominal anchors, absence of fiscal dominance, policy instrument independence, and policy transparency and credibility), although some countries adopted IT without satisfying all of them (Mishkin and Schmidt-Hebbel, 2001). The advantages of IT, with its focus on low and stable inflation, *vis-à-vis* the monetary aggregate or exchange rate anchored frameworks, are deemed to be the following: support to macroeconomic stability and growth; an enhancement in the transparency and accountability of the monetary as well as fiscal policies; a scope for the central bank to undertake short-run stabilisation; and an impetus for institutional and structural reforms in the economy. Empirical evidence, however, does not show a definitive superiority of the IT regimes. Besides the IT-central banks, non-IT central banks were also successful in reducing inflation during the 1990s.

3.41 As regards emerging market economies (EMEs), inflation targeting is considered relatively more difficult on account of their greater openness, liability dollarisation and weak credibility (Eichengreen, 2002). There are a number of additional constraints in pursuing the sole objective of price stability. First, structural factors and recurrent supply shocks limit the role of monetary policy in the inflation outcomes. Second, the persistence of fiscal dominance implies that the debt management function gets inextricably linked with the monetary management function while steering liquidity conditions. Third, the absence of fully integrated financial markets suggests that the interest rate transmission channel of policy is generally weak and yet to evolve fully. In particular, the lags in the pass-through from the policy rate to bank lending rates constrain the adoption of inflation targeting. Fourth, the high frequency data requirements including those on a fully dependable inflation rate for targeting purposes are not adequately met. Finally, in view of large fluctuations in headline inflation rate, inflation targeting countries typically focus on a core measure of inflation which excludes volatile components. In developing countries, a measure of core inflation excluding food items - which can account for more than half of the weight in the index - may not be very meaningful. As such, the loss of information content in the construction of core inflation and the relatively greater public acceptability of the headline inflation make the core measures useful only as indicators of the underlying inflationary process rather than as policy targets (RBI, 2003).

3.42 On the positive side, the forces of globalisation bring about deregulation and greater competition which have a stabilising influence on inflationary expectations. Competition reduces unwarranted price mark-ups; this, however, leads only to a one-time reduction in price levels. A more sustained reduction in inflation is enabled by competition among countries to attract and retain mobile production factors which forces governments to reduce inefficiencies. This requires greater fiscal discipline as well as macroeconomic stability. The focus on macroeconomic stability is one of the factors that has led to greater central bank independence and, in turn, lower inflation (Wagner, 2001; Jadhav, 2003). Greater competition in the economy makes prices more flexible which reduces the impact of unanticipated inflation on output. This lowers the incentive of the monetary authority to systematically raise output above the potential (Rogoff, 2003). Indeed, inflation has declined globally during the 1990s and this is seen both in advanced and developing economies (Charts III.1 and III.2). The significant fall in inflation worldwide may be attributed as much to the mutually reinforcing mix of

[2] Uncertainty about key parameters describing the transmission of monetary policy provides a rationale for an "attenuated" approach to monetary policy-making in the sense of reacting less vigorously to incoming information than would be optimal if such uncertainty did not exist (Issing, 2002).

Chart III.1 : World Inflation



deregulation and globalisation and the consequent significant reduction in monopoly pricing power as to improved central bank design (Rogoff, 2003).

3.43 Apart from reduction in inflation, in recent years economic activity too has become less volatile, at least in the G-7 economies (Table 3.4). While moderation of inflation is primarily attributed to more effective monetary policy, the role of monetary policy in reduction of output volatility is a matter of debate. Relatively stable GDP growth in recent decades is attributed to a number of factors including the increasing share of services in GDP, better inventory management, and improved consumption-smoothing on account of financial innovations and deregulation. Stock and Watson (2003) have recently argued that lower output volatility is primarily due to the absence of major supply disruptions and other such macroeconomic shocks in the recent decades.

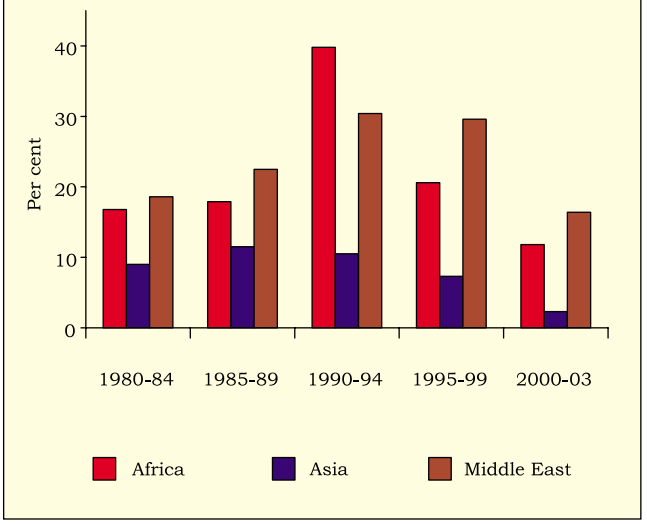
Table 3.4: Volatility of Output Growth in G-7 Countries

	Standard Deviation, 1960-1983	Standard Deviation, 1984-2002	Standard Deviation, 1984-2002/ Standard Deviation, 1960-1983	Variance, 1984-2002/ Variance, 1960-1983
1	2	3	4	5
Canada	2.3	2.2	0.96	0.91
France	1.8	1.4	0.71	0.51
Germany	2.5	1.5	0.60	0.36
Italy	3.0	1.3	0.43	0.19
Japan	3.7	2.2	0.59	0.35
UK	2.4	1.7	0.71	0.50
US	2.7	1.7	0.63	0.40

Note : Standard deviations are computed from four-quarter growth in real GDP per capita.

Source : Stock and Watson (2003).

Chart III.2 : Inflation in Developing Economies



3.44 A valuable lesson for an economy in the process of opening up is that increased globalisation and competition has contributed predominantly towards containment of inflation. With continued deregulation and globalisation, it is unlikely that there will be a reversal of the current trends in inflation. However, this is not to suggest that globalisation is a panacea. Any widespread relapses in the relatively favourable trends in globalisation and deregulation, or relatively benign fiscal policies could reverse the achievement of recent years. An important consideration for reining inflationary expectations relates to the need to have clarity on price stability, effective communication, consistency in conduct of policy and transparency in explaining actions. Central banks should speak clearly to markets and listen to markets more carefully to ensure the intended objectives of policy (Mohan, 2003).

Capital Flows and Monetary Management

3.45 As noted earlier, private capital flows have been substantial during the 1990s. More recently, the EMEs have recorded large current account surpluses. Recovery in capital flows coupled with growing current account surpluses has led to sharp reserve accretion in a number of EMEs. The reserve accretion, especially in the aftermath of the Asian crisis, reflected

attempts by EMEs to build up reserves to be able to meet unpredictable and temporary imbalances in international payments and thereby, provide confidence to financial markets. Nonetheless, the persistent external flows have begun to pose problems in the conduct of discretionary monetary policy since such flows can threaten domestic macroeconomic stability.

3.46 Following Mundell, it is well-known that the trinity of desirable objectives, *viz.*, a fixed/managed exchange rate (for relative price stabilisation purposes and as a credible nominal anchor), an independent monetary policy (for output stabilisation purposes) and an open capital account (for greater efficiency) can not be achieved simultaneously. For instance, if the domestic macroeconomic conditions necessitate that the domestic interest rates should be higher than international rates, this would attract capital flows from the rest of world for an open economy. Sustained capital flows would put upward appreciation pressure on the exchange rate with implications for external competitiveness. Alternatively, the monetary authorities may attempt to moderate the appreciation through absorption of these flows; this would, however, have an expansionary effect on domestic money supply which, over time, could create inflationary pressures. Since only two out of the three desirable objectives are mutually consistent, the policy makers have to give up one of the objectives leading to what is called "policy trilemma" (Obstfeld and Taylor, 2002) (Box III.3).

3.47 Sterilisation through open market operations is the most popular policy response and has been used by several countries facing capital surges during the 1990s (RBI, 2003). Such operations leave domestic money supply unaffected and avoid the burden of higher reserve requirements on the banking system. Moreover, by limiting the role of the banking system in intermediating the flows, sterilisation operations reduce banks' vulnerability to sudden reversal of flows (Lopez-Mejia, 1999). Empirical evidence, however, suggests that the effectiveness of sterilisation over time is limited by its implications for domestic interest rates as well as quasi-fiscal costs (Lee,1996). Furthermore, intensification of sterilisation operations could be counter-productive

Box III.3

Macroeconomic Policy Trilemma

A historical analysis of the monetary and exchange rate arrangements since 1870 shows shifting perspectives of the policy authorities in resolving the trilemma. The gold standard era (1870-1914) was marked by a policy preference for an open capital account and a fixed exchange rate at the cost of monetary policy independence. In the subsequent decades, the pursuit for an independent monetary policy geared towards domestic stabilisation has been the preferred policy choice; the way out of the trilemma was provided by capital controls during the Bretton Woods era and by a flexible exchange rate policy in the recent decades (Table). The efficacy of flexible exchange rates in recent years in providing a resolution to the trilemma is debatable. Calvo and Reinhart (2002) among others, for instance, argue that even countries with flexible exchange rates do not pursue independent monetary policies. This is due to "fear of floating" on account of concerns such as exchange rate pass-through or high levels of foreign currency-denominated debt.

Table: The Macroeconomic Policy Trilemma

Era	Resolution of Trilemma: Countries Choose to Sacrifice		
	Activist Policies	Capital Mobility	Fixed Exchange Rate
1	2	3	4
Gold Standard (1970-1914)	Most	Few	Few
Inter-war	Few	Several	Most
Bretton Woods	Few	Most	Few
Post-Bretton Woods Float	Few	Few	Many

Source : Obstfeld and Taylor (2002).

Obstfeld *et al.* (2003) find empirical evidence in support of the policy trilemma in that countries with open capital account and fixed exchange rates lose considerable monetary independence while non-pegged countries have a reasonable amount of monetary independence. Frankel *et al*. (2002) noted that interest rates in countries with fixed exchange rates show greater sensitivity to foreign interest rates *vis-à-vis* countries with flexible exchange rates. They, however, find considerable differences between industrial and developing economies. In case of developing countries, it is difficult to draw any clear inferences for the 1970s and 1980s, given the imprecise estimates. For industrial countries, empirical estimates over the same period are generally more precise and the results suggest that only pegged regimes exhibited full interest rate transmission, while other regimes fell significantly short of it. Furthermore, they document falling monetary independence during the 1990s as all countries in their sample, with the notable exception of Germany and Japan, displayed full or near-full adjustment - and in some case, more than full adjustment - of local interest rates to foreign interest rates, irrespective of the exchange rate regime.

as the resultant higher interest rates attract more short-term inflows and increase the overall volume of capital inflows rather than reducing them (Montiel and Reinhart, 1999). The availability of sufficient marketable government securities with the central bank could also constrain the extent of sterilisation operations (see Chapter VI).

3.48 Shifting of public sector and government deposits from the commercial banks to the central bank, if not already held with the latter, can also provide a one-off measure to absorb liquidity from the market. Foreign exchange swaps - sale of foreign exchange by the central bank against domestic currency and a simultaneous agreement to buy the same amount at a certain date in the future at the forward exchange rate - provide another avenue for the central banks to absorb liquidity. To be effective, such swaps might have to be done at a margin favourable to commercial banks, but this would involve quasi-fiscal costs (QFCs). If capital flows persist, the monetary policy instruments would need to be supplemented by other durable macroeconomic policies such as fiscal adjustment, liberalisation of trade policies and capital outflows, and finally, a greater degree of flexibility in the exchange rate (see Chapter VI).

Changing Monetary Policy Paradigm in India

3.49 The evolving international situation as also domestic contingencies in the early 1990s called for changes in the formulation and conduct of monetary policy in India. Accordingly, monetary policy evolved with increasing current and capital account liberalisation, liberalisation of the financial sector, changing pattern of credit requirements from the real sector and rapid changes in the world economic scenario. The operating procedure of monetary policy in terms of targets and instruments, therefore, saw substantial changes.

3.50 The twin objectives of monetary policy *viz.*, maintaining price stability and ensuring availability of adequate credit to productive sectors of the economy to support growth have remained unchanged, though their relative emphasis varied depending on the circumstances. In line with this, in recent years, a preference emerged for a soft and flexible interest rate environment within the framework of macroeconomic stability. At the same time, the large inflows of external capital have contributed to the liquidity conditions remaining very comfortable. Consequently, the emphasis of monetary policy within the broad objectives of price stability and growth has been on liquidity management so as to ensure orderly conditions in financial markets without impeding the legitimate credit needs of industry.

3.51 Reflecting the development of financial markets and the opening up of the economy, the use of broad money as an intermediate target has been de-emphasised, but the growth in broad money (M3) continues to be used as an important indicator of monetary policy. A multiple indicator approach was adopted in 1998-99, wherein interest rates or rates of return in different markets (*i.e.*, money, capital and government securities markets) along with high-frequency data on currency, credit extended by banks and financial institutions, fiscal position, trade, capital flows, inflation rate, exchange rate, refinancing and transactions in foreign exchange are juxtaposed with output data for drawing policy perspectives.

3.52 With increasing market orientation of the financial structure and deregulation of the operations of commercial banks, the Reserve Bank has restructured its armoury of instruments with direct instruments gradually giving way to indirect instruments. The thrust of monetary policy in recent years has been to develop an array of instruments to transmit liquidity and interest rate signals in the short-term in a more flexible and bi-directional manner. A Liquidity Adjustment Facility (LAF) was introduced in June 2000 to modulate short-term liquidity and signal short-term interest rates. The LAF operates through repo and reverse repo auctions thereby setting a corridor for the short-term interest rate consistent with policy objectives. The Reserve Bank is able to modulate the large market borrowing programme by combining strategic devolvement/private placement of government securities with active open market operations.

Recent Challenges

3.53 In recent period, monetary policy had to contend with a surge in capital inflows. Coupled with modest current account surpluses, this led to a sharp increase in the Reserve Bank's market purchases of foreign currency. Such operations in the foreign exchange market cause unanticipated expansion of base money and money supply, which may not necessarily be consistent with the prevailing monetary policy stance. The appropriate management of monetary policy may require the monetary authorities to consider offseting the impact of such foreign exchange market intervention, partly or wholly, so as to retain the intent of monetary policy through such intervention (RBI, 2003).

3.54 The Reserve Bank took a number of steps to manage the excess supply in the foreign exchange market. These included a phased liberalisation of the policy framework in relation to current as well as capital account, encouraging pre-payment of external debt and flexibility in the exchange rate of the rupee *vis-à-vis* the US dollar. The declining level of the stock of the Government of India securities with the Reserve Bank has raised concerns about its ability to continue sterilising capital flows of the present order. Against this background, the Reserve Bank's Working Group on Instruments for Sterilisation observed that while the Reserve Bank may continue to use the existing instruments of sterilisation, certain new instruments would enhance its ability to sterilise the impact of increases in its foreign currency assets (see Chapter VI).

3.55 In sum, in a world of generalised uncertainty, the conduct of monetary policy has become increasingly complex. The operation of monetary policy has to take into account the risks that greater interest rate or exchange rate volatility entails for a wide range of participants in the economy. The vicissitudes of capital movements have important bearing on the conduct of monetary policy. Monetary policy has played an important role in taming inflation in recent years. In India, the operating procedure of monetary policy changed dramatically with the opening up of the Indian economy in the 1990s. It was driven by (i) the need for a market-oriented policy mix of open market operations and interest rate signals consistent with the process of price discovery; (ii) the need to manage capital flows following the opening up; and (iii) the need for swift policy reactions to maintain orderly conditions in the financial markets.

IV. FINANCIAL SECTOR OPENNESS

3.56 The financial sector of an economy, comprising institutions, markets and instruments, is multi-dimensional in nature with both domestic and external facets. At the risk of generalisation, one can discern the following broad contours of financial liberalisation, *viz*., (i) withdrawal of credit controls and excessively high reserve requirements; (ii) interest rate deregulation; (iii) privatisation; (iv) deregulation and development of markets; (v) lowering of entry barriers, limits on participation of foreign banks, and restrictions on specialisation or diversification of banks; and (vi) easing of restrictions on international financial transactions, such as on current and capital account convertibility, and the use of multiple exchange rates. It is interesting to note that out of the six broad attributes, only the last two are related to financial openness. In other words, financial openness is merely a subset, *albeit* an important one, of features characterising financial liberalisation.

Financial Openness

3.57 Three decades have lapsed since Mckinnon (1973) and Shaw (1973) had indicated the prevalence of financial repression in developing countries. Theories and cross-country evidence have shown that financial repression is harmful for economic growth. Worldwide, financial reforms mainly involved elimination of financial repression with steps to contain the vulnerability of the financial system. It has been observed that trade openness is correlated with financial market development, especially when cross-border capital flows are free, and that changes in openness are correlated with changes in the size of financial markets (Rajan and Zingales, 2001).

3.58 While it is widely accepted that reduction or removal of financial repression and financial openness enhances efficiency and potential growth of an economy, there is no such unanimity regarding the pace and sequence of reforms. The initial condition of the economy undoubtedly would influence the pace and sequence of desirable policy changes or reforms. This calls for a detailed discussion of the benefits and cost of reforms in charting out the optimal pace and roadmap (Box III.4).

Evolution of Financial Openness in India

3.59 In India, unlike in most other countries, liberalisation of the financial sector was initiated simultaneously with liberalisation of the real sector and led the latter in terms of the extent of reforms undertaken. Opening up of the financial sector in terms of entry of foreign entities and easing of restrictions on international transactions took place within the broader process of reforms. The constant policy concern in this respect has been that of preparing the financial sector for global competition and taking preventive measures for the potential vulnerabilities that it might engender. Notwithstanding their extensive branch network, the biggest banks in India are miniscule compared to most multi-national banks, in terms of standard parameters like assets or deposits. Illustratively, India accounted for only 1.1 per cent of world's bank deposits in 2000. Hence, the initial focus of reforms in the financial sector has been

Box III.4

Cost-Benefit Analysis of Financial Sector Openness: Theory and Evidence

The benefits of opening up of the economy are varied. Financial openness permits domestic firms to finance investment projects with rates of return greater than the costs of borrowing, and makes higher yielding assets accessible to savers. As long as the marginal return on investments is at least equal to the cost of capital, net resource inflows can supplement the domestic saving, a binding constraint to higher growth in developing countries. Openness also provides to the residents the gains of greater portfolio diversification. This would increase levels of physical capital per worker. The potential benefits are particularly large for certain types of capital inflows like FDI. By facilitating the transfer of managerial and technological know-how, and by improving the skills composition of the labour force, FDI may have significant positive long-run effects on growth. World capital markets play a counter-cyclical role as a country can borrow from abroad in bad times and lend at good times. Opening up would thus permit an improved inter-temporal allocation of consumption. This counter-cyclical role is justified if shocks are temporary in nature. By increasing the rewards of good policies and the penalties for bad policies, financial openness may induce countries to follow more disciplined macro policies and reduce the frequency of policy mistakes. To the extent that greater policy discipline translates into greater macro-stability, it may also facilitate higher rates of growth.

On the impact on banks, it has been observed that opening of the economy, among others, results in more competition and greater banking efficiency and stability. It enables the banks to reap economies of scale and scope. It helps in diversification of risks. Foreign bank penetration improves the quality and availability of domestic financial services by increasing competition and enabling the application of more sophisticated banking techniques and technology. The risk management capabilities are upgraded. It serves to stimulate the development of the domestic bank supervisory and legal framework. It enhances a country's access to international capital, either directly or through their parent banks. It contributes to the stability of the domestic financial system, if, for example, during turbulent times depositors shift their funds to foreign institutions that are perceived to be stronger than local banks, instead of transferring their assets abroad. Empirical evidences in Asia support the view that presence of foreign financial intermediaries leads to decline in cost of financial intermediation and improvement in quality of financial services.

The capital flows can be harmful also. The ability to monitor the financial system gets eroded with increasing capital flows. Large capital inflows can lead to rapid monetary expansion, inflationary pressures, and real exchange rate appreciation. Under a fixed exchange rate regime loss in competitiveness and external imbalances may eventually lead to currency crisis. Many countries can borrow in world capital markets in good times, whereas in unfavourable times, they face credit constraints. Procyclicality, particularly of short-term flows, as well as herding, contagion and volatility of capital flows expose the economy to greater instability. The capital inflows may finance low quality investments, such as speculation in the real estate sector, which would have limited impact on growth and may increase instability. Low-productivity investments in the non-tradable sector may reduce over time the economy's capacity to export and lead to growing external imbalances.

Entry of foreign banks may lead to relatively greater flow of resources to large firms while the flow of resources to small firms may be rationed. This would have adverse impact on output and employment. The foreign banks may enjoy regulatory advantages and the possibility of domestic savings fleeing the economy also increases. Mergers, resulting from increased competitiveness, may create banks that are too big to fail and lead to greater moral hazard. Opening up of the economy and greater competition also impel domestic banks and firms to take on greater foreign exchange risks and riskier projects than domestic financial liberalisation. By calling loans and drying up credit lines, foreign banks may aggravate a shock. They can also propagate the crisis by calling loans elsewhere.

Based on cross country experience in 1980s and 1990s, it has been observed that instability of banking systems distinguishes economic crises from ordinary recessions. Some of the suspected reasons for banking crises were found to be lending booms, exchange rate regime, destabilising external factors, rapid financial liberalisation, inadequate prudential supervision and weakness in the legal and institutional framework. Robust causes of banking crises have been found to be rapid domestic credit growth, large bank liabilities relative to the reserves, and deposit rate control. There is little evidence of any particular relationship between the exchange rate regime and banking crises. The relationship that weak institutional environment causes greater risks of financial liberalisation was empirically found to be weak. The relationship between deposit insurance and crisis risks in emerging markets was also not well established (Eichengreen and Arteta, 2002).

On implications for global stability, it has been argued that financial events, such as devaluation or defaults, trigger adverse chain reactions in other countries in the presence of "the unholy trinity": (i) these events follow a large surge in capital flows; (ii) they come as a surprise; and (iii) they involve a leveraged common creditor. Similar events, however, have little international repercussions when they are widely anticipated or take place at a time when capital flows are already subsided (Kaminsky *et al.*, 2003).

to strengthen the domestic financial infrastructure, make it more competitive and to provide banks greater freedom in their foreign operations. While there has been a significant progress towards globalisation in the recent past in India, the extent to which India is globalised is considerably low as compared with other emerging economies. This indicates not only the existence of enormous opportunities but also challenges in terms of transition from a low base. More importantly, the issue of financial integration and in particular the integration of banking sector has to be considered in terms of overall sequencing in the process of integration with the rest of the world.

Policies towards Developing and Strengthening Financial Infrastructure

3.60 Given that inherent soundness of bank balance sheets, presence of well-established institutions, presence of adequate safety nets and vigilant supervision are the pre-requisites for successful financial liberalisation, the reform process in India within the banking system sought to strengthen the balance sheets of individual banks, empower banks to respond in the most optimal manner to market stimuli and to establish institutions to ensure a level playing field for all market participants and provide a back-up system for contingencies.

3.61 Measures to strengthen the financial sector include capital adequacy requirements, prudential norms and means to enhance transparency in the balance sheets of banks and financial institutions by appropriate disclosures. With greater integration of financial markets and institutions, steps have been taken towards consolidated accounting and supervision and standardisation of accounting norms. Prudential norms have progressively been brought closer to international best practices and the process of convergence continues. Higher provisioning norms, tighter asset classification norms, dispensing with the concept of 'past due' for recognition of NPAs, guidelines in respect of debt restructuring/rescheduling/renegotiating, and lowering of ceiling on exposure to a single borrower are among the important measures in this area.

3.62 Measures to enable banks to operate freely in a commercially justifiable manner and competitive environment include the reduction of statutory pre-emptions, deregulation of interest rates and giving banks greater autonomy and flexibility in day to day operations. Other measures in this direction include greater streamlining of the operations of development financial institutions and deregulation of the capital market. Competition has been infused into the financial system by licensing new private banks since 1993. Foreign banks have also been given more liberal entry. The Union Budget 2002-03 announced the intention to permit foreign banks, depending on their size, strategies and objectives, to operate either as branches of their overseas parent, or, as subsidiaries in India. The latter would impart greater flexibility to their operations and provide them with a level-playing field *vis-à-vis* their domestic counterparts. Progress has also been generated through demonstration and spread effects of advanced technology and risk management practices accompanying new private banks and foreign banks. Given the fiscal constraint being faced by the Government and in keeping with the evolving principles of corporate governance, the Government permitted public sector banks to raise fresh equity from markets to meet their capital shortfalls or to expand their lending. Several public and private sector banks have accessed the domestic equity market. Public sector banks have also raised capital through GDR/ADRs while many banks have raised subordinated debt through the private placement route for inclusion under tier-II capital.

3.63 The quality of financial regulation and supervision as well as of information and the legal system are important for reaping the benefits of globalisation. Hence, enactment of enabling legislation has been a priority area of the reforms. With the switchover to international best practices on income recognition, asset classification and provisioning, the problem of non-performing loans (NPL) assumed critical importance. It was widely perceived that the level of NPLs in India was high by international standards. The problem needed to be tackled urgently and from different fronts. A menu approach has been adopted to tackle this major constraint confronting the banking sector. These policy measures have resulted in reduction in gross NPAs in the banking system from about 15 per cent of gross advances at end-March 1999 to 8.8 per cent at end-March 2003.

3.64 The need for monitoring and supervising becomes even more important systemically with the opening up of the economy. Thus, the prudential regulations were fortified by reorientation of 'on-site inspections' and introduction of 'off-site surveillance'. The focus of inspection has shifted from ensuring appropriate credit planning and credit allocation under

a closed economy framework to assessment of the bank's safety and soundness and to identify areas where corrective action is needed to strengthen the institution and improve its performance. The Board for Financial Supervision (BFS) was constituted in 1994, with the mandate to exercise the powers of supervision and inspection in relation to the banking companies, financial institutions and non-banking financial companies.

Financial Openness in Indian Banking

3.65 An analysis of the financial openness of the Indian banking sector in the broader context of reforms discussed above reveals that the presence of foreign entities within the Indian banking sector has increased and international transactions of Indian banks have increased substantially.

Liberalisation of Operation of Domestic Banks

3.66 The process of opening up is reflected in the foreign exchange related operations of the domestic banks. Authorised dealers (ADs)[3] have been given substantial autonomy to conduct foreign currency business by augmenting the delegated powers vested with them.

3.67 Between 1998-99 and 2002-03, turnover in foreign exchange business of banks has increased at nearly five per cent per annum in US dollar terms. It is important to note that merchant banking business of the ADs has grown much faster than inter-bank transactions (Table 3.5).

Table 3.5: Growth in Foreign Exchange Turnover of ADs

(Per cent)

	Merchant		Inter-Bank		Total	
	Purchase	Sale	Purchase	Sale	Purchase	Sale
1	2	3	4	5	6	7
1998-99	20.6	20.2	-3.1	-0.7	0.4	2.9
1999-00	4.8	-4.7	-13.8	-12.8	-10.5	-11.2
2000-01	7.7	15.4	26.7	20.7	22.7	19.6
2001-02	1.3	-7.2	2.4	8.5	2.2	5.3
2002-03	22.7	19.1	3.2	3.5	6.8	6.3
Annual Average	11.4	8.6	3.1	3.8	4.3	4.6

International Banking by Banks in India

3.68 In view of the growing liberalisation of the external sector, monitoring of the cross-border flow of funds has assumed importance. The Reserve Bank now compiles and disseminates international banking statistics (IBS) on the lines of the reporting system devised by the Bank for International Settlements (BIS). The locational banking statistics (LBS) provide the gross position of international assets and international liabilities of all banking offices located in India. They report exclusively banks' international transactions including the transactions with any of their own branches/subsidiaries/joint ventures located outside India.

3.69 International liabilities of banks recorded a sharp increase during both 2001-02 and 2002-03 driven by their large-scale foreign currency borrowings (Table 3.6). The share of international liabilities in the total liabilities of scheduled commercial banks hovers above 11 per cent.

3.70 There was a change in the composition of banks' international assets, with a large scale substitution of *nostro* balances, including term deposits with non-resident banks, with foreign currency loans to residents, reflecting higher domestic demand for relatively cheaper foreign currency loans.

3.71 The consolidated claims of banks based on immediate country risk as at end-March 2003 were mainly concentrated on the US, Hong Kong and the UK. The distribution of consolidated international claims of banks on various countries, other than India, according to residual maturity reveals that banks continue to prefer to invest/lend for short-term purposes although there was a slight shift to longer-term maturities during 2002-03.

Foreign Banks in India

3.72 Minimum capital requirements have been stipulated for foreign banks with the additional requirement that the capital be brought into the country before the start of banking operations.[4] Additional branches are permitted after monitoring performance of existing branches of the banks, their financial results, inspection findings, *etc.* The number of licences offered per year is fixed in conformity with

[3] Banks authorised to deal in foreign exchange.

[4] The market access for foreign financial service providers to undertake 'banking activity' as defined under Section 6 of the Banking Regulation Act, 1949, is limited to branch operations of a foreign bank licensed and supervised as a bank in its home country. The different forms of market access by foreign suppliers of banking services include (i) representative office; (ii) agency arrangements with individuals, firms/companies or other organisations in India; and (iii) equity participation in domestic Indian banks up to a stipulated limit.

Table 3.6: International Liabilities of Banks in India: Classified According to Type

(Rupees Crore)

Liability type	Amount outstanding as at end-March		
	2001	2002	2003
1	2	3	4
1. Deposits and Loans	1,04,148	1,20,604	1,45,930
of which:			
Foreign Currency Non-Resident Bank [FCNR(B)] scheme	37,991	39,636	43,989
Foreign Currency Borrowings*	1,222	5,514	18,411
Non-resident External Rupee (NRE) Accounts	29,413	33,233	53,124
Non-Resident Non-Repatriable (NRNR) Rupee Deposits	25,867	27,181	15,207
2. Own Issues of Securities Bonds (including IMDs /RIBs)	43,652	43,582	44,087
3. Other Liabilities	4,580	7,150	10,475
ADRs / GDRs	850	1,862	3,833
Equities of banks held by non-residents	382	547	556
Capital/remittable profits of foreign banks in India and other unclassified international liabilities	3,348	4,741	6,086
Total International Liabilities	**1,52,380**	**1,71,336**	**2,00,493**
Memo:			
International Liabilities as per cent of Total Liabilities of SCBs	**11.8**	**11.2**	**11.8**

* Inter-bank borrowing in India and from abroad, external commercial borrowings of banks. SCBs: Scheduled Commercial Banks.

India's commitment made to the World Trade Organisation (WTO). As on March 31, 1993, there were 24 foreign banks operating in India with 138 bank offices. By end-September 2003, the number increased to 35 with 207 branches. Foreign banks have also set up representative offices in India. As on September 30, 2002, there were 26 representative offices in India. They are essentially metropolitan based and cater to large corporates.

3.73 An analysis of the performance of foreign banks in India during the 1990s reveals that the share of foreign banks increased during the 1990s. In the last two years, however, due to the merger of a large financial institution (FI) to a new private sector bank, the share of foreign banks has declined (Table 3.7).

3.74 To sum up, cross-country empirical evidence has shown that the cost of financial intermediation declines and quality of financial services improves with opening of the economy. Openness should, however, be preceded by deregulation and strengthening of institutional framework in order to limit contagious influences. The strategy adopted in India was to maximise the beneficial effects of openness while minimising the adverse consequences. Financial crises, internally or from contagious influences in the neighbourhood, have been averted, while the financial system has been progressively deregulated and strengthened. The convergence of the domestic prudential norms with

Table 3.7: Share of Banking Market

(Per cent)

Year	Bank Group	Assets	Loans	Deposits
1	2	3	4	5
1991	Public sector Banks	90.1	91.6	90.9
	Private Banks			
	Old	3.6	3.4	4.1
	New	-	-	-
	Foreign Banks	6.3	5.0	5.1
1996	Public sector Banks	82.4	82.2	85.4
	Private Banks			
	Old	6.2	1.9	1.3
	New	1.5	7.0	6.7
	Foreign Banks	7.9	8.9	6.6
1999	Public sector Banks	81.0	80.4	82.6
	Private Banks			
	Old	6.9	7.5	7.3
	New	4.1	4.1	4.0
	Foreign Banks	8.1	8.0	6.2
2002	Public sector Banks	75.2	74.4	80.3
	Private Banks			
	Old	6.1	6.6	6.7
	New	11.4	11.5	7.4
	Foreign Banks	7.3	7.5	5.6
2003	Public sector Banks	75.7	74.2	79.6
	Private Banks			
	Old	6.2	6.7	6.7
	New	11.3	12.1	8.5
	Foreign Banks	6.8	7.0	5.2

international best practices and of the performance of domestic banks *vis-à-vis* foreign banks in the domestic sector has provided the ground for further openness with minimisation of potential vulnerabilities. The policy of gradualism that has been followed by India focuses on evolution of appropriate institutional framework and the sequencing of reforms based on the experience gained as reforms progresses. Recent studies have also lent support to this approach towards reforms.

3.75 In the context of maximising benefits of financial integration and minimising the risks, the link with the real sector cannot be lost sight of. In India, reforms in financial sector started early in the reform cycle which imparts significant efficiency and stability to the financial sector. The financial sector can add competitive strength and growth if reforms in the financial and real sectors keep apace. In other words, flexibility in product and factor markets plays a part not only in capturing the gains from financial sector reforms but also more generally from globalisation. A major agenda for reform at this juncture for India, given the impressive all-round confidence in the economy, relates to the structure and functioning of institutions and in particular lowering the high transaction costs prevalent in our systems. There are several dimensions to the transaction costs - ranging from legal provisions, the judicial system and procedures to attitudes.

V. SYNCHRONICITY OF BUSINESS CYCLES

3.76 The globalisation process has been strengthened and reinforced in the 1990s and beyond under a confluence of forces, embracing trade, technology, and investment flows. The impact of globalisation on the degree of synchronicity of business cycles, however, remains unsettled in practice. Co-movement of business cycles across countries can arise mainly in two ways. First, countries may be hit by common shocks, which cause them to experience similar cyclical chacteristics irrespective of the degree of integration. Second, the cross-country transmission channels may intensify by way of increasing international trade - corporate connection (*e.g.*, FDI route), and financial linkages. Thus, co-movements could increase as a result of globalisation. Trade linkages lead to demand linkages across countries which could then lead to closely synchronised business cycles. On the other hand, financial linkages could generate or reinforce the demand side effects, leading to contagion effects, which could have quick cross-country ramifications through financial linkages. For instance, a dampened international stock market could have adverse implications for demand in the investor countries. While there are a number of studies that explore synchronisation of business cycles among OECD economies, the literature is not so rich in the context of other countries.

3.77 The Indian annual growth cycle during 1950 to 1975 indicated a close temporal relation with the growth cycles in GDP and industrial production of the market economies, in general, and, industrial production of North America, in particular (Chitre, 1982). While external demand has traditionally played a relatively limited role in the course of business cycles in India, the patterns of exports and industrial production have since started exhibiting co-movement with the global business cycle (RBI, 2001). Similarly, cyclical exports and cyclical output in India were found intertwined in a bi-directional causality. On the other hand, cyclical output of advanced countries had unidirectional causal effects on cyclical output in India. This clearly brings out the impact of business cycles of advanced countries on India's industrial sector (Chitre, 2003). Mall (2001) finds that the Indian output cycles have positive relationship with the UK as also with the US output cycles, especially during the post-1980s with a stronger relation with the former.

3.78 The business cycle literature on India has so far examined the cyclical trends in relation to a block of countries - the developed or the Association of South East Asian Nations (ASEAN) economies. An attempt has been made to test for synchronicity of the Indian business cycle with those of its major trading partners from the developed world and the emerging economies, as also the world output for the period 1972 to 2000. The analysis focused on ascertaining whether the opening up of the economy in the 1990s has increased the synchronicity of the Indian business cycles with those of her major trading partners. The Indian business cycle was represented by non-agricultural GDP as also by industrial GDP instead of aggregate GDP.[5]

3.79 An exercise undertaken to analyse correlation of business cycles of India with her trading partners indicates that the synchronicity with the developed world has been relatively strong during 1972-2000 with the UK and Canada, and

[5] This is because agricultural developments are largely weather-driven and market forces do not affect the sector much.

weak with Japan, Belgium and Germany, both in terms of non-agricultural as well as industrial GDP. On the other hand, relatively strong synchronicity was observed in the developing world with Philippines and Thailand, while the relation turned out to be weak in respect of China and Middle East. A comparative analysis of the periods before and after opening-up of the economy indicates that the cyclical synchronicity of India with the UK, Canada, Australia, New Zealand and the US has strengthened in the latter phase in terms of both non-agricultural GDP as well as industrial GDP. On the other hand, the relation has weakened in respect of Japan and Germany. Simultaneously, within the developing world, the relation has become stronger with the Philippines, Brazil, China and Hong Kong in the post-opening up phase. The exercise throws up divergent signals in terms of non-agricultural GDP as against industrial GDP in respect of the remaining developing countries like Singapore and Malaysia. The improved cyclical synchronicity with Singapore, Malaysia and Indonesia in terms of non-agricultural as against industrial GDP possibly testifies to the emergence of a new relationship based on services and information technology. On the whole, the cyclical correlation between India and the world turned out stronger in the post opening up phase both in terms of industrial and non-agricultural GDP (Table 3.8).

3.80 In order to ascertain the role of trade and capital account linkages as also of the structural features in the observed cross-country business cycle correlations, the cyclical correlations of India's non-agricultural GDP growth with her 16 major trading partners (excluding Brazil and Middle East) were regressed on the degree of trade openness and structural features in line with Cosby and Voss (2002).[6] The similarity of structures across countries is sought to be represented by differential in short-term real interest rates and standard deviation of bilateral exchange rate in respect of monetary policy, and differential in the manufacturing shares in GDP in respect of other structural features. It is generally perceived that large variation in exchange rates and manufacturing share should lead to a lower degree of synchronisation of cycles. The results indicate that the

Table 3.8: Correlation Coefficients of India's Business Cycles with Major Trading Partners

Country	Overall Period (1972-2000)		Pre-Opening up Phase (1972-90)		Post-Opening up Phase (1991-2000)	
	Non-Agricultural GDP	Industry GDP	Non-Agricultural GDP	Industry GDP	Non-Agricultural GDP	Industry GDP
1	2	3	4	5	6	7
Australia	0.43	0.31	0.23	-0.01	0.67	0.61
Belgium	0.05	0.06	-0.10	-0.04	0.21	0.27
Brazil	0.12	-0.01	-0.20	-0.50	0.66	0.64
Canada	0.47	0.45	0.35	0.32	0.72	0.71
China	-0.12	-0.21	-0.21	-0.57	0.05	0.22
Germany	-0.48	-0.41	0.11	0.35	-0.60	-0.57
Hong Kong	-0.10	0.10	-0.14	0.05	0.002	0.23
Indonesia	0.12	0.34	-0.17	0.42	0.21	0.36
Japan	0.24	0.28	0.34	0.37	0.12	0.18
Korea	0.25	0.28	0.33	0.24	0.23	0.32
Malaysia	0.04	0.30	-0.09	0.50	0.13	0.27
Middle East	-0.20	-0.04	0.00	0.25	-0.65	0.49
New Zealand	0.28	0.42	-0.07	0.26	0.55	0.58
Philippines	0.34	0.49	0.20	0.51	0.67	0.71
Singapore	0.09	0.40	-0.10	0.54	0.23	0.37
Thailand	0.28	0.48	0.40	0.66	0.26	0.44
UK	0.54	0.41	0.38	0.01	0.74	0.78
USA	0.36	0.37	0.35	0.37	0.54	0.55
World	**0.35**	**0.38**	**0.22**	**0.10**	**0.54**	**0.72**

[6] The degree of trade openness has been taken as export plus import to GDP ratios using data for the post-opening up phase from the Direction of Trade Statistics, IMF.

degree of trade openness seems to have a negative bearing on the synchronicity of Indian business cycles even though the relation is not statistically significant.[7] Thus, trade liberalisation of the early 1990s may not have contributed to the observed increasing synchronicity in the post-opening up phase. The increased bilateral trade in this phase could, thus, be a manifestation of specialisation in line with the comparative advantage rather than of intra-industry nature. The signs of all other determinants, *viz.*, exchange rate volatility, divergences in interest rate policy and manufacturing share have been in keeping with the theory even though the first two variables are not statistically significant. Thus, a flexible exchange rate regime, by absorbing any external shocks, might avoid greater synchronisation of cycles as against a fixed exchange rate system. Nevertheless, the observed synchronisation in the post opening up phase could have been facilitated by a process of convergence in the manufacturing base of India and her trading partners. In other words, the observed synchronicity appears to be rooted more in the emerging structural similarity than in the trade linkages.

3.81 The amplitude of business cycles is influenced by the degree of openness of an economy. Often globalisation is held responsible for increasing volatility of business cycles (Buch, 2002). Increased volatility could as well be an outcome of the rapid and badly coordinated capital account liberalisation across the countries. The Indian economy is found to have witnessed the influence of cyclical fluctuations during the post-opening up phase as reflected in the higher amplitude (Table 3.9). However, the amplitude of cycles remained lower than those of her five major trading partners, *viz.*, Indonesia, Korea, Malaysia, Thailand and Germany, which also witnessed higher amplitude in the post opening up phase.[8] Thus, the opening up of the Indian economy during the 1990s was marked by low fluctuations *vis-à-vis* her select major trading partners, vindicating the effectiveness of the post-reform policy framework in maintaining stability.

Table 3.9: Amplitude of Business Cycles: India and Major Trading Partners@

Country	1972-2000	1981-1990	1991-2000
1	2	3	4
Australia	1.8	2.2	1.5
Belgium	1.6	1.4	1.3
Brazil	3.1	4.2	2.0
Canada	2.0	2.7	1.6
China	3.1	4.1	1.9
Germany	2.5	1.4	3.6
Hong Kong	4.3	4.2	3.8
India (Industry GDP)	**3.1**	**1.9**	**3.5**
India (non-Agricultural GDP)	**1.9**	**1.0**	**2.1**
Indonesia	3.5	1.9	5.6
Japan	1.8	1.4	1.3
Korea	3.7	1.9	4.9
Malaysia	3.7	3.2	4.8
Middle East	3.5	3.1	1.2
New Zealand	2.9	3.5	3.1
Philippines	3.2	4.7	2.2
Singapore	3.1	3.7	3.3
Thailand	3.5	2.6	5.1
U.K.	2.0	1.7	1.6
U.S.A.	2.1	2.3	1.2
World	**1.2**	**1.3**	**0.9**

@ Measured as standard deviation of the cyclical component.

VI. CONCLUDING OBSERVATIONS

3.82 A large increase in cross-border trade and investment in recent years has brought about a growing integration of commodity and financial markets across the world. This has highlighted increasing interdependence among economies and the growing need for a new approach to public policy. The forces of change can only accelerate in the near future and this requires policymakers to proactively explore new instruments, targets and leading indicators for policy purposes.

3.83 Several initiatives have been taken in the Indian fiscal policy in line with the greater openness of the economy. The fiscal deficit, however, has proved to be largely intransigent. In this respect the

[7] BBCS = 0.54 - 0.05 OPENNESS - 0.016 VEXCHRATE - 0.016 DMFG - 0.011 INTDIFF
(3.5)*** (-0.6) (-1.4) (-2.6)** (-0.2)

$\bar{R}^2$ = 0.48 DW = 1.62

Where BBCS = Bilateral Business Cycle Synchronicity of India;
OPENNESS = Trade Openness (Export *plus* Import/GDP);
VEXCHRATE = Volatility of Bilateral Exchange Rate;
DMFG = Differential in Manufacturing Shares in GDP;
INTDIFF = Differential in Short-term Real Interest Rates; and
*** Significant at 1 per cent level

[8] The mean difference in amplitudes across the pre and post opening up phase was found to be statistically significant at one per cent level.

intermediate targets of the FRBM Act will have to be achieved if fiscal policy in India is to play its fitting role in the economy's growth process. Fiscal reforms at the State levels will assume greater importance in this context in consolidation of the variables at the margin.

3.84 In a world of generalised uncertainty, the conduct of monetary policy has become increasingly complex. The operation of monetary policy has to take into account the risks that greater interest rate or exchange rate volatility entails for a wide range of participants in the economy. The vicissitudes of capital movements have an important bearing on the conduct of monetary policy. Monetary policy in India has been responsive to the developments in the external sector and has been able to reinvent itself in tune with the new priorities and changed operational environment. A new challenge in the last two years has been the high order of capital inflows. This has resulted in burgeoning reserves and raised concerns regarding the ability of the Reserve Bank to continue its sterilisation operations into the future. Initiatives are already underway to explore new means and instruments of sterilisation. A medium term concern in this respect relates to enhancing the economy's absorptive capacity to achieve higher levels of real investment.

3.85 The external sector liberalisation in India, which led to a greater opening up of the economy, was undertaken as part of a gamut of reforms encompassing the real and financial sectors in addition to the monetary and fiscal sectors. Among the more visible impacts of the increased openness of the Indian economy has been the increased synchronicity of domestic and international business cycles and the increasing effects of trade cycles within the economy.

3.86 The financial sector has made rapid strides in reforming itself and aligning itself to the new competitive business environment. While the operational and supervisory practices in the sector has progressively approximated international best practices, the process of convergence is not yet complete. Openness should, however, be preceded by deregulation and strengthening of institutional framework in order to limit contagious influences. Greater conformity to prudential norms of international standards as also adoption of better systems of risk management will enhance the stability of the financial system even as banks expand the range and volume of their operations. A mature financial sector will go a long way in stabilising policy transmission channels and ensuring efficient allocation of resources. The strategy adopted in India was to maximise the beneficial effects of openness while minimising the adverse consequences. The financial system has been progressively deregulated and strengthened with the convergence of the domestic prudential norms with international best practices.

IV INTERNATIONAL TRADE DYNAMICS

Introduction

4.1 The benefits of buoyant world trade witnessed in the aftermath of the World War II could not be adequately reaped by a large number of developing countries. Policy makers in several developing countries took a pessimistic view on using international trade as the engine of growth and adopted instead, inward looking development strategies which emphasised import substitution rather than promotion of trade. The negative effect of the inward looking policies on efficiency, productivity and competition set off a process of rethinking among the policy makers in the 1970s. Consequently, a sizeable number of developing countries, especially from East Asia, opted for more outward looking policies. Over time, these countries transformed themselves from being producers of labour-intensive undifferentiated products to exporters of skill and technology-intensive products. The economic success of many of these countries encouraged other developing countries to increase their trade openness. As a result, since the 1980s, a large number of developing countries have unilaterally increased their openness towards international trade. The liberalisation of merchandise trade and other current account transactions by a large cross-section of countries provided a noticeable thrust to the world trade in the 1990s. Simultaneously, at the multilateral level, the successful conclusion of the Uruguay Round of trade negotiations under the aegis of the General Agreement on Tariffs and Trade (GATT) and the establishment of the World Trade Organisation (WTO) in 1995 created an environment for freer trade.

4.2 The US, East Asian countries and China played a crucial role in expanding world trade in the 1980s. Buoyancy in world trade in the 1990s was sustained despite the lacklustre economic performance of several industrialised countries especially those in Europe and Japan. Although the Asian crisis did cause a major disruption in international trade, the crisis-affected countries have rebounded in recent years with growing trade volumes. Interestingly, trade among developing countries has increased significantly in the recent years.

4.3 There have been a number of significant developments in global trade in recent times. First, following the spurt in commodity prices witnessed during the 1970s and 1980s, there was a downward pressure on many commodities during mid-1990s mainly due to slowdown in demand and increased competition. Second, with the shift of the international trade structure, analyses of price movements of manufactures traded by developing countries *vis-à-vis* those by developed countries have acquired greater importance. Third, there was a decline in net barter terms of trade for developing economies which was compensated to an extent by the surge in export volumes and consequent rise in the purchasing power of exports particularly for China, East Asia and India. Fourth, growing trade integration in emerging market economies witnessed since 1980s has been facilitated by significant reduction in import tariffs. Finally, overall experience suggests that greater trade openness tends to contribute positively to growth and is an important factor behind higher productivity and per capita income. It has also been observed that developing countries, which opted for exports as an engine of growth registered a substantial increase in the share of the manufacturing sector in their GDP.

4.4 India embarked on the path of globalisation in the early 1990s with the objective of improving overall productivity, competitiveness and efficiency of the economy in order to attain a higher growth profile. Concomitantly, industrial, financial and external sector reforms were initiated with a view to creating an environment conducive for the expansion of trade. As a result, growth in trade accelerated in the early part of the 1990s. This momentum, however, could not be sustained in the face of various domestic bottlenecks and exogenous constraints. In the later part of the decade with the crises in East Asia, Russia and some of the Latin American countries followed by the slowdown in the US economy, world trade witnessed a downturn. These external factors along with stagnation in investment rate, sluggish industrial growth and slowdown in manufacturing productivity predicated India's trade during the closing years of the 1990s. Clearly thus, while the opening up of the economy has presented a range of opportunities and advantages to the trade sector in India, the greater integration with the global economy has posed several challenges as well.

4.5 Since the initiation of economic reforms, India's outward orientation has increased considerably. The destination pattern of Indian exports has remarkably

changed whereby the importance of developing countries as an export market has considerably increased. There are, however, concerns that the country has not been able to fully utilise its potential in international trade. In contrast to the dramatic changes in exports of East Asia, India's experience has seemingly fallen short of expectation. India's share in global trade did not rise as impressively and the commodity structure of India's exports remained almost unchanged until the mid-1990s. Moreover, unlike the East Asian countries where industry has been the major driver of exports growth, the contribution of industrial exports in India has been comparatively low. This could perhaps be attributed to small scale industry reservations and inflexible labour laws besides other structural bottlenecks. The labour cost in India, however, is one of the lowest among its competitor countries. Moreover, given the exports structure of India, the potential for higher exports of manufactures, especially to the developed countries, is high.

4.6 On the imports side, despite some initial apprehensions, liberalisation has not adversely affected India's balance of payments. On the contrary, increased trade liberalisation along with prudent management and sequencing of capital account liberalisation has imparted significant strength to the balance of payments since the mid-1990s. With the increased competitiveness of Indian industry, imports of low and medium technology intensive products have declined. At the same time, imports of high-technology intensive products and imports used for export production have increased. There is growing evidence that accessibility to imports has a positive impact on the growth performance of the country. Moreover, the import intensity of India's exports appears to be steadily declining.

4.7 With the timing, pacing and sequencing of trade sector reforms attaining greater importance in an open economy framework, several issues have come into sharper focus: where does India stand in the evolving global trade pattern? Does global experiences suggest that trade liberalisation/ openness go together with higher growth? What is the link between international trade and foreign investment? Is there any discernible trend in the movement of terms of trade of developing countries like India *vis-à-vis* other industrial countries? How have India's exports and imports evolved since the reforms? Which are the areas of India's strength in exports? Has India's trade become more competitive in the international market over the years? What are the current issues concerning India in the multilateral and regional fora? How have India's trade policies shaped and what is the strategy ahead? These are some of the issues taken up in this Chapter.

4.8 This Chapter is organised in eight sections. Section I on global trade discusses trend and structure of world trade, growing integration of the world economy, terms of trade and other issues relevant to global trade with a focus on India's place in the evolving world trade landscape. Section II focuses on India's trade experience covering trade policy and trade openness. Section III examines the structure and composition of India's exports along with a gamut of relevant issues pertaining to it while Section IV analyses the various dimensions of India's imports. Section V looks into some select issues concerning India's trade dynamics. Section VI dwells on developments in the World Trade Organisation (WTO) and regional fora, while Section VII presents a future roadmap for India's trade sector. Finally, Section VIII offers some concluding observations.

I. GLOBAL TRADE: CHANGING PARADIGM

Developments in World Trade

4.9 The post-Second World War period has been associated with two broad phases of global trade integration: 1950-1980 and 1980 onwards. The period from 1950 to 1980 witnessed a revival of world trade, especially among the industrial countries. This was facilitated by the economic reconstruction following the two World Wars and reduction in transportation costs. Another important factor contributing to trade expansion was the multilateral initiative under GATT that enabled dismantling of trade barriers and non-tariff barriers among the industrial countries imposed during the inter-war period. The move towards currency convertibility on current account transactions by leading industrial economies which began in the late 1950s further facilitated growth in international trade.

4.10 The second phase of trade integration started during the late 1970s when a number of East Asian economies embarked on the path of export-led growth. This was reinforced further during the 1980s and the 1990s wherein a large number of developing countries gradually increased their degree of openness. During this period, outward oriented policies were undertaken on the grounds of efficient resource allocation, infusion of modern technologies, promotion of economies of scale, retention of consumer surplus, and reduction of rent-seeking and unproductive profit-seeking activities. For Latin America, the necessity to regain access to the international capital markets to refinance outstanding debt was an important consideration in their opening up during the 1970s.

4.11 In sharp contrast to the East Asian economies during most of this phase, India could not take full advantage of greater openness in trade regime. Despite some export promotion measures undertaken in the 1970s, Indian industries continued to remain protected. While the signs of liberalised trade policy were clearly discernible in the latter half of 1980s, it was only in the 1990s that the country embarked on a truly liberalised trade regime.

4.12 The waves of greater trade openness by developed countries and later by developing economies have resulted in significant changes in the characteristics of world trade. The major structural changes witnessed could be summarised, *inter alia,* as:

i) noticeable increase of Asia's share in world trade mainly due to high export growth of China and East Asia since 1980s (Table 4.1);

ii) transformation of the exports basket of developing countries from primary commodities to manufacturing exports;

iii) faster growth in exports of technology intensive products by developing countries compared to industrial economies; and,

iv) growth in the South-South trade.

4.13 During the 1970s, although output growth decelerated on account of oil price shocks, there was a sharp rise in the value of merchandise goods traded. The spurt in the value of exports, however, underwent self-correction during the 1980s resulting in muted growth in both volume and value of trade. Despite considerable increase in trade volumes, international price situation during the 1990s, however, remained subdued, reflecting, *inter alia*,

Table 4.1: Share in World Trade

	1948	1953	1963	1973	1983	1993	2002
1	2	3	4	5	6	7	8
				Exports (US $ billion)			
World	58.0	84.0	157.0	579.0	1,835.0	3,671.0	6,272.0
				Share (per cent)			
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0
North America	27.3	24.2	19.3	16.9	15.4	16.6	15.1
Latin America	12.3	10.5	7.0	4.7	5.8	4.4	5.6
Western Europe	31.5	34.9	41.4	45.4	38.9	44.0	42.4
C./E. Europe/Baltic States/CIS a	6.0	8.1	11.0	9.1	9.5	2.9	5.0
Africa	7.3	6.5	5.7	4.8	4.4	2.5	2.2
Middle East	2.0	2.7	3.2	4.1	6.8	3.4	3.9
Asia	13.6	13.1	12.4	14.9	19.1	26.1	25.8
Japan	0.4	1.5	3.5	6.4	8.0	9.9	6.6
China	0.9	1.2	1.3	1.0	1.2	2.5	5.2
India	**2.2**	**1.3**	**1.0**	**0.5**	**0.5**	**0.6**	**0.8**
Australia and New Zealand	3.7	3.2	2.4	2.1	1.4	1.5	1.3
Six East Asian traders@	3.0	2.7	2.4	3.4	5.8	9.7	9.6
				Imports (US $ billion)			
World	66.0	84.0	163.0	589.0	1,881.0	3,768.0	6,510.0
				Share (per cent)			
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0
North America	19.8	19.7	15.5	16.7	17.8	19.7	22.0
Latin America	10.6	9.3	6.8	5.1	4.5	5.1	5.4
Western Europe	40.4	39.4	45.4	47.4	40.0	43.0	40.8
C./E. Europe/Baltic States/CIS a	5.8	7.6	10.3	8.9	8.4	2.9	4.6
Africa	7.6	7.0	5.5	4.0	4.6	2.6	2.1
Middle East	1.7	2.0	2.3	2.8	6.3	3.3	2.7
Asia	14.2	15.1	14.2	15.1	18.5	23.3	22.4
Japan	1.0	2.9	4.1	6.5	6.7	6.4	5.2
China	1.1	1.7	0.9	0.9	1.1	2.8	4.5
India	**3.1**	**1.4**	**1.5**	**0.5**	**0.7**	**0.6**	**0.9**
Australia and New Zealand	2.6	2.4	2.3	1.6	1.4	1.5	1.3
Six East Asian traders @	3.0	3.4	3.1	3.7	6.1	9.9	8.4

a Figures are significantly affected by: (i) changes in the country composition of the region and major adjustment in trade conversion factors between 1983 and 1993, and (ii) the inclusion of the Baltic States and the CIS mutual trade between 1993 and 2002.
@ Thailand, Singapore, Malaysia, Korea, Hong Kong SAR, Taiwan Province of China.
Source: International Trade Statistics, WTO, 2003.

Table 4.2: World Growth in Output, Trade and Prices (Period Average)

(Per cent)

	1951-60	1961-70	1971-80	1981-90	1991-2000	1951-80	1981-2002
1	2	3	4	5	6	7	8
Growth in Production (in real terms) @							
Total	5.2	6.0	3.8	2.5	2.6	5.0	2.3
Agriculture	3.0	2.5	2.2	2.5	2.2	2.6	2.2
Mining	4.6	5.4	2.8	0.2	1.5	4.3	0.8
Manufacturing	6.7	7.4	4.3	3.0	2.7	6.1	2.6
World GDP Growth (in real terms)	4.5	5.5	4.1	3.2	2.3	4.7	2.6
Exports Growth (in US $)							
Total	8.1	9.3	20.9	5.7	6.4	12.8	5.5
Agriculture	4.1	4.9	17.2	3.7	3.1	8.7	3.3
Mining	9.3	9.3	31.1	-0.7	6.9	16.6	2.4
Manufacturing	11.2	11.6	19.4	8.6	7.1	14.1	7.1
Exports Growth (in volume)							
Total	7.8	8.6	5.4	4.0	6.4	7.3	4.8
Agriculture	5.0	3.9	3.6	1.6	4.1	4.2	2.8
Mining	8.3	7.2	1.9	1.1	4.1	5.8	2.4
Manufacturing	8.9	10.5	7.2	5.6	7.2	8.9	5.9
Unit Exports Prices (in US $)							
Total	0.3	0.6	14.8	1.6	0.0	5.2	0.6
Agriculture	-0.9	0.9	13.4	2.1	-1.0	4.5	0.5
Mining	1.2	2.0	29.2	-1.6	2.6	10.8	0.1
Manufacturing	2.1	1.0	11.4	2.8	-0.1	4.8	1.2
Sectoral Share in Exports (in US $ terms)*							
Agriculture	35.5	25.3	17.4	13.9	11.1	26.1	12.2
Mining	17.7	16.9	22.2	20.1	11.8	18.9	15.7
Manufacturing	44.7	54.4	57.2	63.1	74.1	52.1	69.2

@ World merchandise production differs from world GDP in that it excludes services and construction.
* The figures do not add up to 100 because of the presence of unspecified commodities.
Source: International Trade Statistics, WTO, 2003.

enhanced competition, productivity improvements and recessionary conditions in many industrialised countries (Table 4.2).

4.14 In contrast to earlier periods, global economic integration in the 1990s has been much more widespread and was primarily driven by liberalisation of trade and capital controls. The technological revolution witnessed in recent years and the emergence of the new economy has further aided this integration process. As the process of opening up of economies unfolded during the 1990s, world trade witnessed its strongest revival since the 1960s in terms of volume growth. Although the real growth performance of Western Europe, Japan, the transitional economies of Central Europe and Africa was rather lackluster during most of the 1990s, the strong revival in the volume of trade was mainly led by the US with support from developing countries including China, East Asia (especially prior to the 1997 crisis) and some Latin American countries (Table 4.3).

Table 4.3: Growth Rate in Trade Volume during the 1990s

(Per cent)

	1990-2001		1995-2000		2001		2002	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
1	2	3	4	5	6	7	8	9
World	5.5	6.0	7.0	7.0	-0.5	-0.5	3.0	3.0
North America	6.0	7.5	7.0	10.5	-5.5	-3.5	-3.0	4.0
United States#	5.7	7.2	7.1	9.9	-5.6	-2.9	-4.1	4.6
Western Europe	4.5	4.0	6.0	6.0	2.0	0.0	0.5	-0.5
Japan#	1.8	4.9	3.9	5.6	-10.1	-1.3	8.6	1.6
Asia	7.0	7.0	8.5	5.5	-4.0	-1.5	10.5	9.5
C/E (Europe/Baltic States/CIS)	5.5	5.0	7.0	8.0	8.0	14.5	8.0	11.5
Latin America	8.0	10.0	9.5	10.5	2.0	-1.5	1.5	-5.5
Africa#	2.9	4.9	3.9	8.1	NA	NA	NA	NA
Developing Countries#	9.8	9.9	11.0	8.8	1.5	0.7	NA	NA

NA: Not Available.
Source: 1. International Trade Statistics, WTO, 2002 & 2003.
2. # International Financial Statistics, IMF.

Table 4.4: Impact of the Asian Crisis on Trade Volume and Value of Developing Countries

(Annual per cent change)

	Trade Volume				Trade Value in US $			
	Exports		Imports		Exports		Imports	
	1997	1998	1997	1998	1997	1998	1997	1998
1	2	3	4	5	6	7	8	9
Developing countries	13.4	5.2	10.3	0.4	8.2	-7.9	6.5	-5.4
Africa	6.7	0.1	8.0	3.8	3.4	-13.6	4.1	-2.4
Developing Asia, *of which*	18.1	6.9	5.7	-5.8	12.2	-2.3	1.0	-13.6
Excluding China and India	10.9	9.1	1.5	-14.3	7.4	-4.0	-0.9	-23.2
Middle East & Turkey	7.7	2.0	13.8	2.3	1.2	-22.2	6.5	-1.6
Western Hemisphere	13.2	6.8	17.9	8.3	9.8	-3.7	18.1	4.6

Source: World Economic Outlook, IMF, September 2003.

4.15 Although almost all of the East Asian countries posted double-digit trade growth during the 1990s up to 1997, trade expansion in these countries suffered a major setback following the crisis of 1997. Their performance took a severe downturn in the years immediately after the crisis. The impact of the East Asian crisis on growth in volume of exports was less pronounced than for imports (Table 4.4).

4.16 China's trade performance (both exports and imports), continued to remain impressive throughout the 1990s. India too posted a healthy growth during the 1990s, especially during the initial years of economic reforms. Amongst the Latin American economies, Mexico witnessed significant growth in trade during the 1990s. The East Asian countries, especially Malaysia, Korea and Philippines, have also rebounded strongly since 2000 (Table 4.5).

Changing Pattern of World Trade

4.17 Along with growth in overall volume, the pattern of world trade also underwent changes following structural shifts in production caused by new technologies, demand pattern, new logistical factors, ways of organising and locating production, policies and new international trade rules and preference (Box IV.1). Primary products and resource-based manufactures have been gradually losing importance with world trade witnessing a shift towards non-resource-based products of increasing technology intensity (Table 4.6). In keeping with this trend, there has also been a rapid change in the composition of developing country exports, which have transformed themselves during the last two decades from being primary commodity exporters to exporters of manufactures. Manufacturing exports now account for the bulk of developing country exports, with their share being more than 80 per cent

Table 4.5: Growth Rate in Trade Value during the 1990s

(Per cent)

Country	Average Growth Rate							
	1992-2001		1992-96		1997-2001		2002	
	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports
1	2	3	4	5	6	7	8	9
Brazil	11.2	6.5	21.2	8.7	1.2	4.4	-15.0	3.7
China	14.9	14.5	17.2	16.5	12.7	12.4	21.2	22.3
India	**9.8**	**9.6**	**13.7**	**13.4**	**5.9**	**5.8**	**12.3**	**13.6**
Indonesia	3.8	7.4	11.0	11.4	-3.5	3.4	0.9	1.2
Korea	7.9	8.3	13.6	12.9	2.2	3.6	7.8	8.0
Malaysia	8.7	10.5	17.0	18.1	0.5	2.9	8.1	6.0
Mexico	13.3	14.4	13.1	17.8	13.5	10.9	0.0	1.4
Philippines	10.3	14.8	21.6	18.5	-1.1	11.1	12.3	11.0
Thailand	6.8	9.2	14.4	14.8	-0.9	3.5	4.3	5.7
United States	9.0	5.8	10.1	8.2	7.8	3.4	2.0	-5.1
World	6.1	6.1	9.0	9.1	3.3	3.0	3.7	4.3

Source: International Trade Statistics, WTO, 2002 and 2003.

Box IV.1

Modern Trade Theory

Although the time honoured principle of comparative advantage and factor endowments still has paramount importance in determining the structure, extent and direction of trade flows across nations, the nature of trade and its evolution in the recent period could be explained better by new trade theories. These theories incorporate returns to scale (especially when dynamic economies of scale associated with R&D and the learning curve are included), imperfect competition among the producers (mainly monopolistic and oligopolistic competition) and product differentiation in trade models. These theories also attempt to formalise equilibrium trade patterns with increasing returns to scale, endogenous technological change, differences in factor composition and monopolistic competition. Within such frameworks, trade patterns, R&D efforts and various economic policies get dynamically interlinked.

The new trade theory highlights the role of knowledge accumulation and international dissemination in explaining how trade structure and trade policy affect rates of growth. Market integration, technical innovation and other external returns have recently emerged as central issues in the new trade theory. The integration of a nation into the world trading system unleashes powerful forces that speed up growth. The extent to which the accumulation of knowledge capital is country-specific or international in scope also plays an important role in the determination of trade patterns and growth differentials across countries.

These above factors propounded in the modern trade theory explain significant parts of specialisation patterns, volumes of trade, factor content of trade and the broad patterns of trade across regions. However, as the nature of world trade has been changing rapidly with constant technological change, recent trade theory and empirical research are focusing on greater technological orientation with more emphasis on dynamics to explain trade developments.

for South Asia, East Asia and the Pacific. It is pertinent to note that developing countries are growing faster than industrial countries in exports of more technology intensive products.

4.18 Product-wise analysis shows that items under 'office and telecom equipments', 'chemicals' and 'machinery and transport equipments' witnessed the highest growth during the 1990s (Table 4.7). A recent study by UNCTAD reveals that the 40 most dynamic products in world exports (comprising just 5 per cent of the 786 products as per the Standard International Trade Classification (SITC)) accounted for nearly 40 per cent of the value of total exports in 2000 (UNCTAD, 2002). Exports of these products grew at a rate of 12 per cent per annum between 1985-2000 (as against an overall export growth of 8.2 per cent) and their market share increased by almost 15 per cent. About half of these products relate to three items under manufacturing sector, namely, 'electronics', 'automotive products' and 'apparel'.

4.19 Another significant feature in the evolution of trade pattern in recent period has been that developing countries have become important markets for each others' products. This is, however, almost entirely on account of robust trade in the

Table 4.6: Structure of World Trade According to Technology Intensity

(Per cent)

Product	Developed Countries		Developing Countries	
	1985	2000	1985	2000
1	2	3	4	5
Primary Products	38.0	40.4	61.2	56.0
Manufactures based on natural resources	68.7	68.2	29.8	26.6
Manufactures not based on natural resources, *of which,*	81.9	66.8	17.5	30.8
Low Technology	66.4	49.7	32.4	46.6
Medium Technology	89.2	78.6	10.4	18.8
High Technology	83.2	63.4	16.6	35.4
Other Transactions	71.2	58.4	28.6	40.4
Total	**68.9**	**63.5**	**30.3**	**33.6**

Source: World Investment Report, UNCTAD, 2002.

Table 4.7: World Merchandise Exports by Product, 2002

Commodity	Value (US $ billion)	Share (Per cent)			Annual change (Per cent)			
	2002	1990	1995	2002	1990-2001	1995-00	2001	2002
1	2	3	4	5	6	7	8	9
All products @	**6,272**	**100.0**	**100.0**	**100.0**	**5.0**	**5.0**	**-4.0**	**4.0**
Agricultural products	**583**	**12.2**	**11.7**	**9.3**	**3.0**	**-1.0**	**0.0**	**5.0**
Food	468	9.3	9.0	7.5	3.0	-1.0	3.0	5.0
Raw materials	114	2.9	2.7	1.8	1.0	-2.0	-9.0	4.0
Mining products	**788**	**14.4**	**10.7**	**12.6**	**4.0**	**10.0**	**-9.0**	**-1.0**
Ores and other minerals	63	1.6	1.2	1.0	2.0	1.0	-4.0	1.0
Fuels	615	10.7	7.3	9.8	5.0	13.0	-9.0	0.0
Non-ferrous metals	110	2.1	2.2	1.8	4.0	3.0	-10.0	-2.0
Manufactures	**4,708**	**70.4**	**74.3**	**75.1**	**6.0**	**5.0**	**-4.0**	**4.0**
Iron and steel	142	3.1	3.1	2.3	2.0	-1.0	-6.0	7.0
Chemicals	660	8.7	9.7	10.5	7.0	4.0	3.0	10.0
Other semi-manufactures	460	7.8	7.9	7.3	5.0	3.0	-2.0	6.0
Machinery and transport equipment	2,539	35.7	38.8	40.5	7.0	6.0	-6.0	3.0
Automotive products	621	9.4	9.2	9.9	5.0	5.0	-1.0	9.0
Office and telecom eqpt.	838	8.8	12.1	13.4	10.0	10.0	-13.0	0.0
Other machinery and transport eqpt.	1,080	17.5	17.5	17.2	5.0	5.0	-2.0	1.0
Textiles	152	3.1	3.0	2.4	3.0	0.0	-5.0	4.0
Clothing	201	3.2	3.2	3.2	6.0	4.0	-2.0	4.0
Other consumer goods	553	8.8	8.7	8.8	5.0	5.0	-2.0	4.0

@ Includes unspecified products. They accounted for 3 per cent of world merchandise exports in 2002.
Source: International Trade Statistics, WTO, 2002 and 2003.

Asian region (Table 4.8). The share of developing country exports destined for Asia has more than doubled while the share of developing country imports from Asia has almost trebled between 1980 and 2000.

Terms of Trade

4.20 An analysis of commodity prices reveals that the world-wide spurt witnessed during 1970s and 1980s ebbed considerably by the beginning of the last

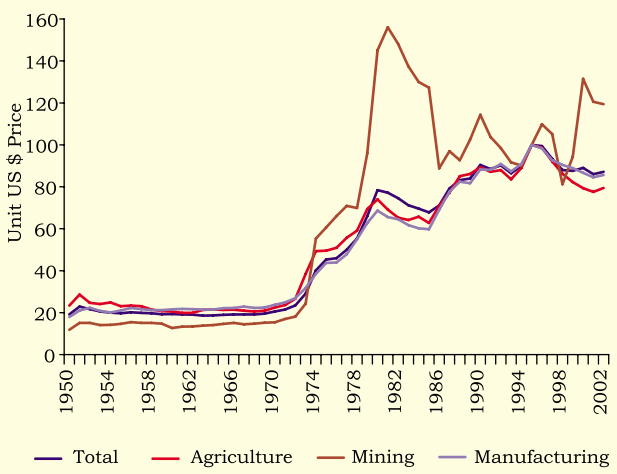
Table 4.8: Destination of Exports from and Source of Imports of Developing Countries

(Per cent)

	1980	1990	2000	2001	2002
1	2	3	4	5	6
Exports from developing countries to:					
Industrial countries	63.6	61.0	57.5	57.0	55.3
Developing Countries	27.7	35.8	41.0	41.5	42.9
Africa	2.4	2.0	1.7	1.9	2.0
Asia	10.1	20.2	26.4	26.2	27.1
Europe	4.0	6.0	5.3	5.4	5.9
Middle East	4.3	3.7	2.9	3.2	3.3
Western Hemisphere	7.0	3.9	4.7	4.8	4.6
Imports of developing countries from:					
Industrial countries	60.9	61.7	54.3	52.9	52.0
Developing Countries	30.1	36.2	44.1	45.6	45.6
Africa	2.4	1.7	1.9	1.9	1.9
Asia	8.1	19.0	26.5	27.2	27.2
Europe	2.8	5.8	6.0	6.4	6.0
Middle East	11.2	5.9	5.5	5.5	3.3
Western Hemisphere	5.5	3.9	4.3	4.6	4.6

Source: Direction of Trade Statistics, IMF, Various Issues.

Chart IV.1 : Index of World Export Commodity Prices (1995=100)



Source: International Trade Statistics, WTO, 2003.

decade. Nominal prices, in fact, started to exhibit a definite downturn by mid-1990s. The slowdown in demand in addition to enhanced competition were the main factors in keeping downward pressure on the prices of many commodities. At the same time, market support policies in developed countries for some agricultural commodities also contributed to weakness in their world prices (Chart IV.1).

4.21 The movements of terms of trade among economies, their determinants, and possible trends have important welfare implications. Although the downward movement of the terms of trade for exports of primary commodities continues to remain an area of concern for some developing countries, the recent trend among developing countries towards exporting manufacturing commodities has increasingly turned the attention on the relative movement in the prices

Table 4.9: Net Barter Terms of Trade

(1995=100)

	1970	1980	1990	2000	2001
1	2	3	4	5	6
World	89.3	90.0	95.5	97.6	97.7
Industrial Countries	103.2	85.6	95.3	97.2	98.3
Developing Countries	57.3	106.5	96.7	98.9	95.7
Asia	97.2	101.7	98.2	90.6	89.0
Brazil	148.7	122.9	109.9	83.5	79.5
China	96.8	101.5	101.4	101.2	102.1
India	**90.5**	**66.8**	**79.3**	**92.9**	**90.9**
Korea	111.7	83.4	97.6	64.0	61.1
Thailand	170.9	129.6	102.0	85.7	77.9

Source: International Financial Statistics, CD ROM, IMF, 2003.

Table 4.10: Purchasing Power of Exports

(1970-79=100)

	1970-79	1980-89	1990-2000
1	2	3	4
Argentina	100	150	299
Brazil	100	174	256
China	100	295	884
India	**100**	**167**	**386**
Indonesia	100	218	406
Korea	100	348	1,151
Malaysia	100	236	879
Mexico	100	204	458
Philippines	100	177	382
Taiwan Province of China	100	234	593
Thailand	100	214	784

Source : Trade and Development Report, UNCTAD, 2003.

of manufactures exported by developing countries *vis-à-vis* developed countries. Such price movements primarily reflect the differences in terms of technological capacity, labour market institutions and prevalence of surplus labour among the country groups. As a result, while some developing countries like China and India experienced a relatively stable terms of trade, others such as Korea, Brazil and Thailand witnessed a secular decline since the 1970s (Table 4.9).

4.22 The rapid volume increase in most of the developing country exports, however, has compensated to an extent, for the decline in the net barter terms of trade. While the purchasing power of exports increased for most of the developing countries, this rise was most rapid for East Asian economies and China. India has also registered a markedly high growth in its purchasing power of exports during the last three decades and especially since the 1990s (Table 4.10).

Trade Openness

4.23 Trade openness, conventionally measured as the sum of exports and imports of goods as a ratio of GDP, brings out clearly the growing trade liberalisation over time (Table 4.11). For most of emerging economies (including India), their openness in 2002 was almost double or even higher than that during the 1980s. This has been facilitated, *inter alia*, by significant reduction in import tariffs (Table 4.12). Tariffs have been reduced by more than half in most of the developing countries, including India, since the beginning of the last decade. Despite reductions, tariffs in India remain one of the highest amongst the emerging market economies (EMEs).

Table 4.11: Trade Openness

(Per cent)

Country	Average 1980s	Average 1990s	1995	1996	1997	1998	1999	2000	2001	2002
1	2	3	4	5	6	7	8	9	10	11
Argentina	12.2	15.1	15.9	17.5	19.4	19.3	17.2	18.2	17.4	37.3
Chile	37.0	44.8	44.3	45.9	46.9	45.6	45.4	50.4	53.1	53.3
China	19.9	35.6	40.1	35.5	36.2	34.2	36.4	43.9	43.3	49.0
Germany	48.8	43.2	40.2	41.2	45.3	47.3	48.2	55.8	56.9	55.4
India	**11.7**	**16.9**	**18.5**	**19.0**	**18.8**	**18.7**	**18.9**	**20.4**	**19.7**	**21.4**
Indonesia	37.0	47.0	42.6	40.9	44.1	79.8	51.9	63.7	61.8	48.2
Japan	20.7	15.7	14.7	16.1	17.6	16.9	16.3	18.0	18.0	18.9
Malaysia	97.0	156.7	170.7	155.4	157.5	182.2	189.5	199.9	184.0	182.5
Mexico	27.3	44.3	54.3	57.1	56.2	59.0	59.2	60.0	53.6	52.9
Philippines	38.6	63.8	60.7	64.6	75.8	91.5	90.8	102.6	93.8	94.5
Thailand	47.9	74.0	75.7	70.4	79.7	87.1	88.7	106.9	110.3	105.5
Turkey	27.8	30.2	33.1	37.5	39.3	35.5	34.3	41.1	49.8	47.3
United Kingdom	42.2	41.5	44.7	46.2	44.2	41.2	40.1	42.7	41.1	39.0
United States	14.9	17.4	18.3	18.5	19.1	18.5	19.0	20.8	18.9	18.2

Note : Trade openness is measured by the ratio of exports plus imports to GDP.
Source : 1. International Financial Statistics, IMF, 2002.
2. World Economic Outlook Database, IMF.

4.24 Indicators such as trade openness and reduction in tariffs, however, do not completely capture an economy's trade integration. A number of approaches are used to estimate barriers to trade. Sachs and Warner (1995) have used a series of trade related indicators - non-tariff barriers, average tariff

Table 4.12: Tariff Barriers: Cross-Country Comparisons

Country	Year	All Products					Primary Products		Manufactured Products	
		Simple Mean Tariff *	Standard Deviation of Tariff Rates	Weighted Mean Tariff@	Share of lines with international peaks #	Share of lines with specific tariff	Simple Mean Tariff *	Weighted Mean Tariff @	Simple Mean Tariff *	Weighted Mean Tariff@
1	2	3	4	5	6	7	8	9	10	11
Argentina	1992	12.2	7.7	12.8	31.0	0.0	12.8	5.8	12.3	13.6
	2001	11.6	7.2	9.2	39.1	0.0	9.2	4.8	11.7	9.7
Bangladesh	1989	106.2	79.2	88.2	98.5	1.0	88.2	53.6	108.7	109.6
	2000	21.6	13.6	21.0	52.9	0.0	21.0	18.6	21.5	22.3
Brazil	1989	42.2	17.2	32.0	92.4	0.2	32.0	18.6	42.4	37.1
	2001	12.9	7.2	11.1	46.3	0.0	11.1	4.7	12.9	12.5
China	1992	41.2	30.6	32.5	78.2	0.0	32.5	14.0	41.6	35.6
	2001	15.3	10.0	14.3	40.5	0.5	14.3	18.6	15.0	12.9
Egypt	1995	25.6	33.2	16.7	53.1	1.2	16.7	7.6	25.6	22.2
	1998	20.5	39.5	13.8	47.4	9.5	13.8	7.5	20.2	17.5
India	**1990**	**79.0**	**43.6**	**56.2**	**97.1**	**0.9**	**56.2**	**25.4**	**79.9**	**70.8**
	2001	**30.9**	**12.4**	**28.2**	**91.8**	**0.1**	**28.2**	**28.5**	**30.6**	**29.0**
Indonesia	1989	22.0	19.7	13.2	50.5	0.3	13.2	5.9	22.1	15.1
	2000	8.4	10.8	5.4	11.2	0.0	5.4	2.8	8.9	6.6
Korea	1988	18.8	7.9	13.8	73.0	10.3	13.8	8.2	18.6	17.0
	1999	8.7	5.9	6.0	4.8	0.8	6.0	5.6	7.8	6.1
Malaysia	1988	17.0	15.1	9.9	46.4	6.7	9.9	4.6	17.3	10.8
	1997	9.2	33.3	5.8	24.7	0.4	5.8	10.0	10.2	5.5
Mexico	1991	13.4	4.3	12.0	20.9	0.0	12.0	8.3	13.4	13.0
	2001	16.2	9.3	15.4	50.8	0.5	15.4	19.9	16.1	14.7
Pakistan	1995	50.8	21.6	46.3	92.3	3.5	46.3	24.0	51.5	50.8
	2001	20.6	19.2	14.7	58.5	0.5	14.7	8.5	20.5	16.8
Thailand	1989	38.5	19.5	33.0	72.9	21.8	33.0	24.3	39.0	34.9
	2000	17.0	14.3	9.7	47.1	1.2	9.7	7.7	15.9	10.1

* Simple mean tariff is unweighted average of the effectively applied rates for all products subject to tariffs.
@ Weighted mean tariff is the average of effectively applied rates weighted by the product import shares corresponding to each partner country.
# International peaks are tariff rates that exceed 15 per cent.
Source: World Development Indicators, World Bank, 2003.

rates, black market premia, social organisation and the existence of state monopoly on exports - to construct a composite openness index. Some authors have analysed the price differentials of commodities across international markets to measure goods market integration. Leamer (1988) used an empirical Hecksher-Ohlin model and took the differences between predicted and actual trade intensity ratios as indicators of trade barriers. More recently, many researchers have used Gravity Model of international trade to evaluate a country's actual trade *vis-à-vis* potential trade (Box IV.2).

Export as an Engine of Growth

4.25 Open trade and liberal capital account policies allow a country to exploit comparative advantage in production, promote lowest cost product import with embedded advanced technology, and to deploy larger variety of intermediate and capital goods to enhance the productivity of its own resources. Since 1985, the developing countries that achieved the fastest economic growth were the countries that had the highest ratio of exports and imports to GDP as well. Moreover, the countries that substantially liberalised their trade over this period

Box IV.2

Gravity Model of International Trade

The Gravity Model of international trade is increasingly used to derive measures of divergence in expected volume of trade between trading partners and their actual trade. Borrowing from Newtonian physics, the model consists of a single equation postulating that the amount of trade between two countries depends positively on the joint size of the two trading economies and is negatively related to the distance between them. Over time the Gravity Model of trade has been extended to incorporate a wide variety of other factors. This approach has the benefits of capturing the overall impact of a country's policy and institutional environment, including a wide variety of artificial impediments and not just trade policy. A country is found to "under-trade" if its actual trade across trading partners is, on an average, below the level predicted by the Gravity Model without explicit policy variables (Rose 2002; IMF, 2002).

Analysis of developing countries' trading pattern, as per the Gravity Model, suggests the following: (i) balance of payments and trade restrictiveness remain important reasons for developing countries to trade less than industrial countries; and (ii) international vertical specialisation, which had played an important role in East Asia, is likely to become more significant for other developing countries with open trading regimes, abundant labour and flexible economies. Full liberalisation of both trade and balance of payments policies in all countries would increase trade between industrial countries (the North-North trade) by about 40 per cent, the North-South trade by about 63 per cent, and trade between developing countries (the South-South trade) by about 94 per cent (IMF, 2002).

According to the IMF estimates, India's merchandise trade between 1995-99 was, on an average, about 36 per cent below its "expected" level. This represents an improvement since the early 1990s, when under-trading is estimated to have been about 50 per cent. Estimates suggest that India's relatively restrictive policies accounted for about 25 per cent of the shortfall in its trade openness compared with other developing countries over 1995-99, with the remainder attributable to India's relatively low per capita income, geographic factors, and restrictions imposed by other countries.

Table: Trade Effects of Policy Liberalisation[1]

Region	Trade Policy[2]		Balance of Payments Policy[3]		Trade Policies
	Liberalisation[4]	Trade Effect	Liberalisation[4]	Trade Effect	Trade Effect
1	2	3	4	5	6
Liberalisation in Industrial Countries only					
North-North Trade	-5.3	30.5	-1.5	7.3	40.0
North-South Trade	-2.7	14.4	-0.6	3.1	17.9
Liberalisation in Developing Countries only					
North-South Trade	-3.9	21.4	-2.7	13.7	38.0
South-South Trade	-8.0	49.0	-5.4	29.9	93.6
Liberalisation in All Countries					
North-North Trade	-5.3	30.5	-1.5	7.3	40.0
North-South Trade	-6.5	38.9	-3.3	17.2	62.8
South-South Trade	-8.0	49.0	-5.4	29.9	93.6

1. Effects of reduction in indicators to lowest possible rank scale. Trade effects are given by the coefficient and the reduction in the indicators. The indicators are averages over bilateral trade relations for the period 1997-99 and were constructed under the assumption of additivity.
2. Indicator variable ranging from 2-20, based on restrictiveness indicated by the average tariff rate and the coverage of non-tariff barriers.
3. Dummy variable ranging from 0-8 indicating the degree of openness of a country's current account, capital account, the existence of multiple exchange rate for capital account transactions, and the stringency of surrender and repatriation requirements.
4. Reduction in average rank index values implied by liberalisation.

Source: World Economic Outlook, IMF, 2002.

Table 4.13: Developing Countries- Policies and Economic Performance[1]

	Low Growth [2]		Medium Growth		High Growth	
	1970-84	1985-95	1970-84	1985-95	1970-84	1985-95
1	2	3	4	5	6	7
Initial Conditions						
GDP per capita in initial years [3]	1,697	2,185	2,266	2,188	1,776	2,734
Human Capital [4]	2.2	3.3	3.2	3.8	3.5	5.4
Macro Conditions						
Savings [5]	17.8	16.5	18.5	19.2	26.0	31.4
Investment [5]	19.0	19.4	22.1	21.1	27.4	31.9
Inflation rate per year	11.0	14.1	10.9	11.1	11.3	7.8
Fiscal Conditions						
Fiscal balances [5]	-5.7	-5.6	-4.2	-3.3	-2.0	-2.4
Monetary Conditions						
Money plus quasi-money [5]	33.0	38.4	28.7	36.4	25.6	64.9
Bank Credit to the private sector [5]	20.4	25.4	18.5	31.0	21.0	63.1
External Sector						
Exports [5]	11.3	17.2	14.9	17.2	18.2	33.0
Imports [5]	12.2	17.7	17.4	18.1	19.5	32.4
Balances on current account [5]	-1.0	-2.6	-3.7	-1.4	-1.9	0.3
Net private capital flows [6]	20.2	11.8	12.9	19.9	66.9	68.3

1. Excludes major oil exporting countries, Cyprus and Malta.
2. Low growth is defined as per capita real income growth of less than one-half of 1 per cent a year, which is roughly the mean growth rate minus one-half of the standard deviation of growth in the sample for the specific period. Correspondingly, high growth refers to rates above the mean plus one-half of the standard deviation (2.9 per cent).
3. Group average in U.S. dollar terms, using purchasing power parity weights.
4. Average schooling years in population aged 15 and over.
5. In per cent of GDP.
6. In per cent of total private capital flow to developing countries. Excludes Asian newly industrialised economies.

Source : World Economic Outlook, IMF, 1997.

also experienced a noticeable increase in their absolute income levels (Table 4.13). This raises the issue as to whether trade liberalisation *per se* leads to higher growth. While the available empirical evidence as to whether exports cause economic growth or *vice versa* still remains inconclusive, most recent studies suggest that trade liberalisation contributes to growth and that trade openness is an important factor behind higher productivity and per capita income. At the same time, protected industries appeared to have slower growth than others, reflecting the fact that growth in productivity is as much because of acquisition of sophisticated technology as it is due to learning by doing. It may be difficult, however, to segregate the effect of trade openness on growth from other institutional mechanisms or policy reforms. Moreover, the differential impact of exports on economic growth depends also on the stage of economic or industrial development of the country. Empirical evidence shows that trade liberalisation alone is not sufficient for ensuring faster growth, unless trade liberalisation is accompanied by other complementary policies such as a stable and non-discriminatory exchange rate system and prudent monetary and fiscal policies (Baldwin, 2003).

4.26 In the Indian case, analysis of the nature of causal relationship between exports and economic growth, examined within the framework of bi-variate vector autoregression (VAR) model for the period 1951-2003, suggests that there is uni-directional Granger's causality running from real export growth to real GDP growth. This suggests that there are likely to be other factors besides domestic supply shocks that effect export performance. The long run co-integrating vector indicates that the elasticity of output growth with respect to export growth is highly significant at around 0.3.

Export-Led Industrialisation in East Asia

4.27 The benefits of trade liberalisation have been clearly evident in East Asia. The process of export-led industrialisation in these countries is perceived to have led to intra-regional spillover effects mainly emanating from technological transfers through direct investment from Japan,

and indirectly from "hollowing out" of the industrial economies. Each shift in the industrial focus of the Japanese economy, from light to heavy to electronics and high-tech industries, created market opportunities for other economies in the region such as Korea and Taiwan. Even within the electronics industries, mid-range goods gradually began to be supplied by Korea, Taiwan, Singapore, and Malaysia, and only the most sophisticated goods were produced in Japan. More recently, as Korea, Taiwan and Singapore started specialising in heavy and high-tech goods sectors, the light industries were picked up by Thailand, Philippines, and Indonesia. This sequence of industrialisation, often called the ''flying geese pattern'', succeeded in the East Asian economies in passing on the comparative advantages in manufacturing from a leader to the followers, and then to the followers' followers. A sequential pattern of industrialisation was observed from the agricultural sector to the industrial sector with small capital requirements to heavy and petrochemical industries, and to precision and electronics industries with late-comers repeating the changes in industrial composition.

4.28 High exports growth in the Asian countries has been possible on the back of a strong domestic industrial sector which created a base for sustainable growth. The value added in the industrial sector during the high growth phase exceeded 10 per cent (per annum) in these economies. In contrast, the growth in Indian industry has been comparatively lower, with only a marginal increase in the share of industry in GDP, thereby keeping the share one of the lowest among EMEs (Table 4.14).

Table 4.14: Growth Rate of Value Added in Different Sectors and Sectoral Share of GDP: Select Asian Countries

(Per cent)

Country	Sector	Growth rate of Value added				Sectoral Share of GDP			
		1971-80	1981-90	1991-96	1997-2003	1970	1980	1990	2001
1	2	3	4	5	6	7	8	9	10
China	Agriculture	3.5	5.5	4.3	2.9	42.2	30.1	27.0	11.3
	Industry	8.9	11.7	16.6	9.4	44.6	48.5	41.6	64.5
	Services	5.2	12.4	9.7	7.7	13.2	21.4	31.3	24.1
Korea	Agriculture	1.4	5.3	2.1	0.8	29.8	14.9	8.5	5.2
	Industry	14.2	10.4	7.7	5.4	23.8	41.3	43.1	44.8
	Services	7.8	17.7	8.2	4.5	46.4	43.7	48.4	50.0
India	**Agriculture**	**1.9**	**3.1**	**3.8**	**1.2**	**44.5**	**38.1**	**31.0**	**23.9**
	Industry	**4.0**	**7.1**	**6.1**	**5.0**	**23.9**	**25.9**	**29.3**	**26.7**
	Services	**4.5**	**6.8**	**7.3**	**7.9**	**31.6**	**36.0**	**39.7**	**49.5**
Indonesia	Agriculture	3.9	3.5	3.2	1.4	35.0	24.8	19.4	16.2
	Industry	12.5	6.1	10.4	1.4	28.0	43.4	39.1	43.7
	Services	9.4	7.5	7.5	0.7	37.0	31.8	41.5	40.2
Malaysia	Agriculture	3.9	3.9	1.9	0.6	NA	22.9	15.2	8.7
	Industry	9.1	7.4	11.3	2.2	NA	35.8	42.2	41.1
	Services	8.4	3.9	9.5	6.0	NA	41.3	42.6	50.2
Philippines	Agriculture	4.9	1.0	1.9	2.4	28.2	25.1	21.9	20.0
	Industry	8.3	-0.9	2.9	2.7	33.7	38.8	34.5	34.0
	Services	5.2	2.9	3.2	4.6	38.1	36.1	43.6	46.0
Singapore	Agriculture	2.2	-6.2	1.9	-3.5	2.2	1.3	0.4	0.1
	Industry	9.8	5.4	8.7	3.6	36.4	38.1	34.4	31.3
	Services	8.8	7.2	8.2	4.1	61.4	60.6	65.3	68.6
Thailand	Agriculture	5.7	3.8	3.8	1.8	30.2	23.2	12.5	10.4
	Industry	12.0	10.3	10.0	2.2	25.7	28.7	37.2	44.2
	Services	11.2	7.7	7.5	0.4	44.1	48.1	50.3	45.4

NA: Not Available.

Source: Asian Development Bank, Asian Development Outlook, Various Issues.

Table 4.15: Trade Share of Major Products in Select Asian Countries

(Per cent)

Country	Exports				Imports			
	Agricultural Products		Manufacturing Products		Fuel		Manufacturing Products	
	1990	2001	1990	2001	1990	2001	1990	2001
1	2	3	4	5	6	7	8	9
Average	**16.3**	**7.4**	**68.8**	**82.4**	**10.4**	**12.7**	**72.6**	**73.4**
China	16.2	6.2	71.4	88.6	2.4	7.2	79.5	78.0
Taiwan Province of China	5.6	2.6	92.5	95.0	10.9	11.0	67.1	76.3
India	**19.5**	**15.5**	**69.7**	**79.5**	**27.5**	**34.4**	**51.6**	**44.0**
Indonesia	16.2	12.5	35.2	56.0	8.9	17.8	76.2	61.1
Korea	4.6	2.6	93.2	90.0	15.8	24.1	63.1	60.0
Malaysia	25.4	8.2	53.7	80.1	5.1	5.2	78.2	80.9
Philippines	20.7	6.1	69.7	91.0	14.9	11.4	68.7	75.8
Singapore	7.8	2.7	71.2	84.3	15.8	12.6	73.1	80.3
Thailand	33.8	18.5	63.2	74.1	9.3	12.0	75.1	75.1

Source: International Trade Statistics, WTO, 2002.

4.29 The trade structure of East Asia has been dominated by manufacturing sector (Table 4.15). At the same time, foreign investment in these countries was primarily directed to reduce the technology gap and enmesh it in their production line. On the other hand, the compulsion of petroleum import pre-empted a large portion of India's capital imports. This led to a comparatively low industrial growth with technological obsolescence, which in turn affected the competitiveness of India's exports.

Foreign Investment and Trade

4.30 Existing empirical evidence appears inconclusive on whether FDI serves as a complement or as a substitute to trade, since the nature of investment strategy, the level of data aggregation, and host and home-country specifics complicate this relationship. A growing proportion of world trade is conducted by the multinationals that are also active in undertaking FDI. It is widely held that these companies may export capital goods and intermediate goods from host countries to their overseas affiliates so as to assist the latter to import products from them to serve their home market, thereby promoting the linkage between FDI and foreign trade. It is, however, accepted that this relationship is not uniform across developing countries. The overall relationship between trade and FDI needs to be judged taking into account the whole menu of the relevant country-specific factors including the size of the local market, factor cost in the host market, locational advantage as also trade and investment restrictions/regime in the host/home countries. As a generalisation, it may be stated that FDI in developed countries is market seeking while that in most of the low-cost developing countries is mainly efficiency seeking.

4.31 The liberalisation of FDI especially since the 1980s in East Asian economies is widely acknowledged to have provided a boost to their exports with inward FDI shifting the incentives from import substitution production to export orientation (Table 4.16). The contribution of FDI to export expansion has been particularly large for the ASEAN members and China as against exporting economies of Hong Kong, Korea and Taiwan, as the former countries attracted mainly export oriented FDI. Foreign affiliates accounted for about half of total export of China during 2002 and even higher in some high-tech industries. In contrast to these economies, inward looking trade and investment policies have stymied exports and FDI inflows to India upto the 1990s.

Table 4.16: Ratio of Exports and FDI to GDP in East Asia

(Per cent)

Country		Average 1980s	Average 1990s	1995	1996	1997	1998	1999	2000	2001	2002
1		2	3	4	5	6	7	8	9	10	11
Argentina	: Exports/GDP	7.3	7.5	8.1	8.7	9.0	8.8	8.2	9.3	9.9	27.7
	FDI/GDP	0.5	2.6	2.2	2.6	3.1	2.4	8.5	3.7	0.8	0.8
Chile	: Exports/GDP	19.1	21.8	22.2	20.7	21.7	20.6	23.5	25.7	27.1	27.6
	FDI/GDP	1.8	4.8	4.1	6.6	6.4	6.1	12.3	4.9	6.6	2.6
China	: Exports/GDP	9.3	18.8	21.2	18.5	20.3	19.4	19.7	23.1	22.6	25.7
	FDI/GDP	0.5	3.9	5.1	4.9	4.9	4.6	3.9	3.6	3.8	3.9
India	**: Exports/GDP**	**4.5**	**7.8**	**8.7**	**8.9**	**8.6**	**8.2**	**8.2**	**9.2**	**9.1**	**10.0**
	FDI/GDP	**..**	**0.4 ***	**0.6**	**0.6**	**0.9**	**0.6**	**0.5**	**0.6**	**0.9**	**0.6**
Indonesia	: Exports/GDP	22.3	27.1	22.5	22.0	24.8	51.2	34.8	41.4	39.9	33.5
	FDI/GDP	0.4	1.1	2.2	2.7	2.2	-0.4	-2.0	-3.0	-2.3	-0.9
Malaysia	: Exports/GDP	52.3	80.3	83.2	77.7	78.6	101.5	106.9	108.9	100.0	98.3
	FDI/GDP	3.2	5.8	4.7	5.0	5.1	3.0	4.9	4.2	0.6	3.4
Mexico	: Exports/GDP	15.1	21.0	27.8	28.9	27.5	27.9	28.4	28.6	25.4	25.2
	FDI/GDP	1.2	2.2	3.3	2.8	3.2	2.8	2.7	2.8	4.2	2.3
Philippines	: Exports/GDP	16.3	26.7	23.2	24.2	29.7	44.2	48.0	53.2	45.3	46.8
	FDI/GDP	0.6	1.9	2.0	1.8	1.5	3.4	2.3	1.8	1.4	1.4
Thailand	: Exports/GDP	20.9	34.6	33.6	30.6	38.0	48.7	47.7	56.3	56.5	54.4
	FDI/GDP	1.0	2.6	1.2	1.3	2.6	6.5	5.0	2.7	3.3	0.7
Turkey	: Exports/GDP	9.9	11.4	12.5	13.0	13.8	13.1	13.6	13.9	21.5	19.4
	FDI/GDP	0.2	0.4	0.5	0.4	0.4	0.5	0.4	0.5	2.2	0.6

.. Negligible
* Pertains to 1991 to 1999.
Source : 1. International Financial Statistics, CD ROM, IMF, 2003.
2. World Economic Outlook Database, IMF.

II. INDIA'S TRADE PERFORMANCE

Trade Policy of India: A Review

4.32 India adopted an inward looking development strategy after independence wherein import substitution constituted a major element of both trade and industrial policies. The strategy was based on the premise that given the export base, technological capabilities, production structure, "elasticity pessimism" of the traditional export sector and a large domestic market, it may be difficult for the country to have a growth strategy mainly based on exports. The focus in the initial stages of planned development was on stimulating "home-grown" industrialisation, essentially based on the "infant industry argument", wherein production for domestic market was shielded behind high tariff walls and high effective protection. This strategy of import-substituting industrialisation created self-fulfilling biases against the export-producing sectors and as such, exports were relegated to the periphery as a "residual" sector. This policy not only underestimated the export possibilities but also the import intensity of the import substitution process itself (Rangarajan, 1993).

4.33 The need to correct the "anti-export" bias was gradually recognised and, in the 1970s, several export promotion measures were put in place in the form of export incentives and export services to generate higher exports on a sustained basis. Protective quotas, however, remained more or less intact and domestic industry continued to be shielded from import competition. The policies relating to foreign trade became subject of intense discussions in the early 1980s with exports competitiveness receiving maximum attention. It became increasingly clear that production for exports cannot be isolated from production for the home market and that trade policy would have to be integrated with the policy for domestic industrialisation. The licensing and highly regulated trade policy slowly started giving way to a more open regime from the early 1980s, gathering further momentum during the second half of the decade. A three-yearly Export-Import Policy was introduced in 1985 to provide a definite focus to the trade sector. A major ingredient of this policy was the provision of easy access to essential capital goods, raw materials and components from abroad since these were viewed as a major incentive for exporters in undertaking technological upgradation for reducing costs and improving quality. Notwithstanding these measures, the trade regime in the 1980s continued to be characterised by the overwhelming presence of the licensing mechanism and a high level of tariffs isolating the economy from external competition, constrained further by restrictive industrial and foreign investment policies.

Table 4.17: India's Trade Sector Performance Since the 1950s

Annual Average	Growth Rate								
	In Rupee Terms		In US Dollar terms		In Real terms (Volume)#		As per cent to GDP		
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	(Exports+ Imports)@
1	2	3	4	5	6	7	8	9	10
1950-51 to 1959-60	3.6	6.1	3.6	6.1	3.0	4.1	5.1	6.7	11.8
1960-61 to 1969-70	8.9	6.3	3.5	0.8	2.7	1.4	3.4	5.5	8.9
1970-71 to 1979-80	16.8	20.7	15.8	20.1	7.3	6.7	4.5	5.3	9.8
1980-81 to 1989-90	16.4	14.9	8.0	7.2	4.2	7.3	4.6	7.2	11.8
1990-91 to 1995-96	25.3	23.4	11.8	10.7	14.4	14.5	7.5	8.5	16.0
1992-93 to 1995-96	24.7	26.8	15.7	17.5	17.5	21.3	8.1	9.0	17.1
1996-97 to 2002-03	13.6	13.6	7.9	7.9	8.6*	7.1*	8.9	10.8	19.7
1990-91 to 1999-2000	19.5	20.1	8.6	9.6	11.0	12.2	7.8	9.3	17.1

Refers to calendar year. Volume obtained by dividing value of exports (f.o.b) and imports (c.i.f) with their respective unit prices.
* 1996-97 to 2001-02.
@ Figures may not add-up due to rounding off.
Source: 1. Directorate General of Commercial Intelligence and Statistics, Government of India.
2. International Financial Statistics, CD ROM, IMF, 2003.

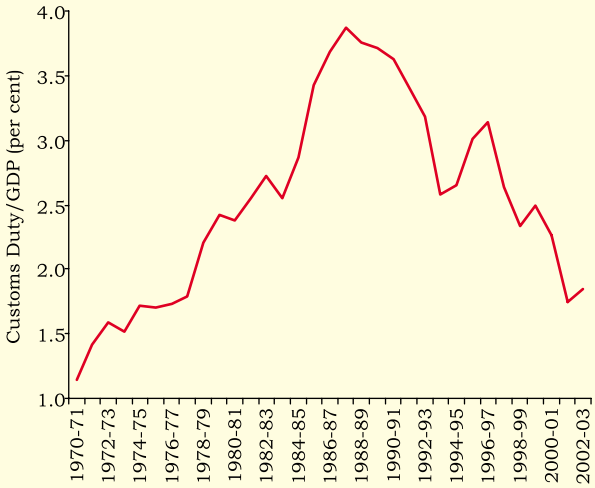
4.34 In the 1990s, a liberalised trade regime was put in place, which marked a significant turnaround from the earlier controlled regime. The challenge of restoring the macro-economic balance initially was combined with a long-term new trade policy which formed a major ingredient of the economic reforms programme. It was recognised that trade policies, exchange rate policies and industrial policies should form part of an integrated policy framework if the aim was to improve the overall productivity and efficiency of the economic system, in general, and the external sector, in particular. Apart from devaluation of the exchange rate and a move-over to a unified market-determined exchange rate system in 1993, the new trade policy was characterised by a short negative list of exports and imports, lowering of the level and dispersion of nominal tariffs, withdrawal of quantitative restrictions on imports and phasing out of the system of import licensing. The trade policy reforms also encompassed significant changes in the system of export incentives, moving away from direct subsidies to indirect export promotional measures.

4.35 The multi-pronged strategy undertaken in the beginning of the 1990s gradually had its desired effects on the economy and ushered in a phase of a stable and high growth (Table 4.17). The rising exports combined with significant surge in capital flows provided opportunities for further liberalisation of essential imports from quantitative restrictions (QRs). The stability in the exchange rate of the rupee maintained the competitiveness of Indian exports and at the same time prevented the upsurge of cheap imports, which could have fuelled protectionist sentiments to gain ground and stalled the tariff and non-tariff liberalisation measures. The loss of the East European markets since the early 1990s was successfully countered by diversifying into newer markets of developing countries of Asia and the Organisation of the Petroleum Exporting Countries (OPEC).

Tariff and non-Tariff barriers: Increasing Openness

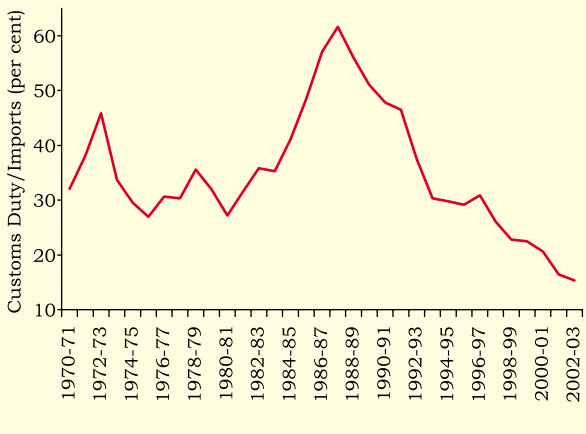
4.36 A key aspect of the trade reforms of the 1990s was the reduction in import duties. The broad approach to reforms regarding customs tariffs and exemptions was laid out in the Report of Tax Reforms Committee, 1991 (Chelliah Committee). India's customs tariff rates have been declining since 1991. The "peak" rate has come down progressively from 150 per cent in 1991-92 to 25 per cent in 2003-04. Effective January 9, 2004, the peak rate of customs duty on non-agricultural goods has been furthur reduced to 20 per cent. The average tariff rate has also declined over the 1990s. The share of customs duty in GDP has come down significantly from about 3.9 per cent in 1987-88 to 1.8 per cent in 2002-03 (Chart IV.2). Customs duty collection as a proportion of total imports, which increased during the major part of 1980s reaching a peak of 61.6 per cent in 1987-88, declined significantly over the years and bottomed to about 15.3 per cent in 2002-03 (Chart IV.3). The collection rates fell drastically across all commodity groups during the 1990s. The most significant reduction in collection rates was observed in 'chemicals', 'man-made fibre' and 'metals' (Table 4.18).

Chart IV.2 : Customs Duty as Percentage of GDP



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

Chart IV.3 : Customs Duty Collection as a Percentage of Imports



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

4.37 Non-tariff barriers are generally considered less desirable than tariffs. The most common non-tariff barriers are the restrictions or prohibitions on imports maintained through the import licensing requirements. In the Indian context, for several decades QRs on imports of a wide range of products (mainly consumer goods) were justified for balance of payments reasons under Article XVIII-2(b) of the GATT. Out of nearly 5,000 Harmonised System Tariff lines at the 6-digit level, about 80 per cent were subject to some form of import licensing restrictions as in mid-1991 (Acharya, 1999). With the external sector gathering strength, along with a reduction in tariffs, India has been following a consistent policy for gradual removal of restriction on imports since 1991. In the initial phase of reforms in 1991-92, about 3,000 tariff lines, covering raw materials, intermediates and capital goods, were freed from licensing restrictions. Tariff line-wise import policy at 10 digit level of Harmonised System (HS)-International Trade Classification (ITC) was first announced in 1996 wherein 6,161 tariff lines out of a total number of 10,202 lines were freed. The share of unrestricted products (tariff lines) under imports

Table 4.18: Collection Rates for Selected Import Groups*

(Per cent)

Commodity group	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Food products	47	27	12	19	22	23	19	16	15	15	31	40	30
POL	34	31	31	36	31	30	32	29	29	23	16	10	11
Chemicals	92	82	71	52	44	44	49	37	34	36	38	29	29
Man-made fibres	83	63	45	18	18	36	36	36	49	64	49	31	32
Paper & newsprint	24	23	18	13	11	8	11	13	11	9	8	6	7
Natural fibres	20	21	20	14	9	12	13	17	22	24	18	8	10
Metals	95	110	97	69	53	52	45	44	51	55	48	36	36
Capital goods	60	64	53	31	38	33	39	41	42	36	36	28	24
Others	20	14	13	10	11	13	14	15	11	12	12	9	9
Non-POL	51	49	39	28	29	28	31	27	23	22	23	19	17
Total	**47**	**44**	**37**	**30**	**29**	**29**	**31**	**27**	**23**	**22**	**21**	**16**	**15**

* Collection rate is defined as the ratio of realised import revenue (including additional customs duty/countervailing duty (CVD), and special additional duty) to the value of imports of a commodity.

Source: 1. Economic Survey, Government of India, Various Issues.
2. Ministry of Commerce and Industry, Government of India.

Table 4.19: Different Types of Non-Tariff Barriers on India's imports, 1996 to 2003*
(Number of tariff lines, 10 digit level#)

Type of NTB	1996	1997	1998	1999	2000	2001	2002	2003
1	2	3	4	5	6	7	8	9
Prohibited	59	59	59	59	59	59	52	52
Restricted	2,984	2,322	2,314	1,183	968	479	554	484
Canalised/STE	127	129	129	37	34	29	33	32
SIL	765	1,043	919	886	226	–	–	–
Free	6,161	6,649	6,781	8,055	8,854	9,582	11,032 ##	11,103
Total	**10,096**	**10,202**	**10,202**	**10,220**	**10,141**	**10,149**	**11,671**	**11,671**

* As on April 1.
# As per Harmonised System of India Trade Classification, HS-ITC classification of export & import.
This includes 148 items with conditions.
Note: 1. STE : State Trading Enterprises.
2. SIL : Special Import License.
3. — : Nil.
Source: 1. Economic Survey, Government of India, 2001-02.
2. Ministry of Commerce and Industry, Government of India.

increased to more than 95 per cent in 2003 from about 61 per cent in 1996 (Table 4.19). Action has been completed on removal of restriction on tariff lines, notified under the WTO cover. QRs are, however, still being maintained in about 5 per cent of tariff lines as permissible under Articles XX and XXI of GATT on the grounds of health, safety, moral conduct and essential security.

4.38 There has been a steady decline in both nominal and effective rates of protection. Although there has been a significant decline in average tariff rates, the dispersion of tariff has not declined enough. Unlike major tariff liberalisation initiatives in East Asia and Latin American countries due to regional trade agreements, it may be noted that trade liberalisation in India has mainly been the result of its own unilateral initiative rather than brought about by multilateral trade commitments or regional trade agreements. In fact, in most items, India's customs tariff rates are at present significantly lower than the corresponding "bound" rates stemming from obligations undertaken in the WTO. In contrast, multilateral commitments and regional trade initiatives appear to have played an important role in complementing domestic policy initiatives in the elimination of QRs in consumer goods especially since the mid-1990s (Table 4.20).

Table 4.20: MFN Bound and Applied Tariff Rates for India under the WTO

	Binding coverage	Simple average (Per cent)	Maximum ad valorem	Last year of impli-mentation	Duty-free (Per cent)	Dutiable (Per cent)		
						Total	Non ad valorem	Interna-tional peaks
1	2	3	4	5	6	7	8	9
MFN bound tariffs								
All products	73.8	49.8	300.0	2005	2.1	71.7	5.3	65.2
Agricultural products	100.0	114.5	300.0	2004	0.0	100.0	0.3	98.2
Non-Agricultural products	69.8	34.3	150.0	2005	2.5	67.3	6.1	60.1

	Year	Total tariff lines (Number)	Simple average	Maximum	Duty-free	Dutiable (Per cent)		
			(Per cent)			Total Dutiable	Non ad valorem	Interna-tional peaks
MFN applied tariffs								
All products	2001	5516	31.4	210.0	1.1	98.9	5.2	86.9
Agricultural products	2001	745	37.0	210.0	2.6	97.4	0.3	87.0
Non-Agricultural products	2001	4771	30.5	105.0	0.8	99.2	6.0	86.9

Source: World Trade Report, WTO, 2003.

III. STRUCTURE AND COMPOSITION OF INDIA'S EXPORTS

4.39 The changing structure of India's exports throws some interesting light on both the demand pattern and supply factors that are increasingly influencing India's exports and the manner in which its production structures, institutions and policies are responding to it. Although in terms of value, exports from India account for less than one per cent of global exports, as per the World Investment Report, 2002, UNCTAD, it ranks among the top 15 nations in terms of export gains during 1985-2000. The nature and extent of the export performance, however, need to be assessed not only by India's share in global exports but also with regard to its structural pattern, compositional shift and competitiveness. India's merchandise exports are predominated by the manufacturing sector which accounted for more than three-fourth of its total exports during the 1990s. There has, however, been considerable re-orientation of relative importance of products within the manufacturing sector. The main drivers within the manufactured product groups were chemicals and allied products, engineering goods, ready-made garments, textile yarn, fabrics, made-ups, and gems and jewellery. The importance of primary products in the export basket has witnessed a steady decline over the years and especially since the 1990s whereas petroleum products exports have shown a dramatic rise since 2000-01 (Table 4.21).

4.40 Despite some diversification of manufacturing goods in the recent period, the top ten export items of India account for about three-fifths of total exports. Except for 'marine products', none of these ten major export items belong to the category of primary products. Interestingly, the USA features as export destination for all of these major products and the East Asian countries and China, appear to be the main competitors to most of India's major export items in the destination countries (Table 4.22).

4.41 Although the opening up of the Indian economy since the early 1990s provided an impetus for higher growth for most export commodities, some products gained more than the others. Export products like iron and steel, petroleum products and pharmaceuticals gained both in terms of growth rate as well as share in the export basket. On the other hand, there were products such as, cotton, leather, tea and readymade garments that lost out in the export market in terms of export share (Table 4.23).

Table 4.21: Structure of India's Exports

Items	1990-91	1995-96	2002-03	1990-91	1995-96	2002-03
	(US $ billion)			(Share in per cent)		
1	2	3	4	5	6	7
Primary Products	**4.3**	**7.3**	**8.3**	**23.8**	**22.8**	**15.8**
Agriculture and Allied Products	**3.3**	**6.1**	**6.4**	18.5	19.1	12.2
Rice	0.3	1.4	1.1	1.4	4.3	2.1
Marine Products	0.5	1.0	1.4	2.9	3.2	2.6
Ores and Minerals	**1.0**	**1.2**	**1.9**	**5.3**	**3.7**	**3.6**
Iron Ore	0.6	0.5	0.9	3.2	1.6	1.6
Others	0.4	0.7	1.0	2.0	2.1	2.0
Manufactured Goods	**13.0**	**23.7**	**38.4**	**71.6**	**73.9**	**72.7**
Leather and Manufactures	1.4	1.8	1.8	8.0	5.5	3.4
Chemicals and Allied Products	1.3	2.4	4.7	7.2	7.4	9.0
Engineering Goods	2.2	4.4	8.4	12.4	13.8	15.9
Readymade Garments	2.2	3.7	5.4	12.3	11.6	10.2
Textile Yarn, Fabrics, Made-ups, *etc.*,	1.5	3.5	4.9	8.5	11.1	9.4
Gems and Jewellery	2.9	5.3	8.9	16.1	16.6	16.8
Petroleum Products	**0.5**	**0.5**	**2.4**	**2.9**	**1.4**	**4.6**
Others	**0.3**	**0.6**	**3.6**	**1.7**	**1.8**	**6.9**
Total Exports	**18.1**	**31.8**	**52.7**	**100.0**	**100.0**	**100.0**

Source: Directorate General of Commercial Intelligence and Statistics, Government of India.

Table 4.22: India's Leading Exports

	Commodity	Export Share (Per cent)			Destination	Major Competitors
		1990-91	1995-96	2002-03		
	1	2	3	4	5	6
1.	Gems and Jewellery	16.1	16.6	16.8	USA (36.6), Hong Kong (19.2) Belgium (11.5);	Israel Belgium China (studs), Italy (plain gold) Thailand (gemstones)
2.	Readymade Garments	12.3	11.6	10.2	USA (31.3), UK (8.9), Germany (7.7), UAE (7.0), France (6.8)	China, Korea, Taiwan, Indonesia, Thailand, Malaysia, Bangladesh
3.	Basic Chemicals, Pharmaceuticals and Cosmetics	6.8	6.8	8.3	USA (14.1), Germany (5.6), China (4.4), UK (3.7), UAE (2.8)	China, Brazil (in castor oil)
4.	Cotton Yarn, Fabrics, Made-ups *etc.*	6.4	8.1	6.2	USA (18.4), Korea (5.4), UK (4.7), Italy (4.6), Bangladesh (4.6)	China, USA, Australia (for yarn and made-ups), China, Pakistan, Bangladesh (for fabrics)
5.	Petroleum Products	2.9	1.4	4.6	NA	NA
6.	Machinery and Instruments	3.8	2.6	3.5	USA (13.9), Germany(7.5), UAE (6.8), UK (5.8), Nigeria (3.2)	Germany, Japan, Italy, China, Taiwan, Korea
7.	Iron and Steel	0.9	2.2	3.4	China (27.5), USA (15.8), UAE (4.9), Bangladesh (3.7), Taiwan (3.5)	Indonesia, Korea, Malaysia, Australia, Brazil, South Africa
8.	Manufactures of Metals	2.5	2.6	3.3	USA (23.6), UAE (10.8), UK (9.9) Germany (3.6),	Russia, South Africa, Korea
9.	Marine Products	2.9	3.2	2.6	USA (27.9), Japan (22.6), China (7.6)	Indonesia, Thailand, Vietnam, Bangladesh
10.	Man-made yarns, Fabrics, Made-ups *etc.*	1.2	2.4	2.5	UAE (19.7), Saudi Arab (5.3), Turkey (5.2), UK (4.7), USA (4.7)	Korea, China, Mexico, Bangladesh, Pakistan

N A: Not Available.
Note : Figures in parenthesis indicate the share of exports, as on 2002-03, directed to the respective countries in total exports of that commodity.
Source : Directorate General of Commercial Intelligence and Statistics, Government of India.

4.42 The export basket can be categorised into primary commodities (Group I), manufactures based on labour and natural resources (Group II), manufactures characterised by low technology intensity (Group III),

Table 4.23: Major Export Gainers and Losers during the 1990s

(Per cent)

Item	Share in India's Exports		Growth rate 1990-91 to 2002-03@
	1990-91	2002-03	
1	2	3	4
Gainers			
Primary & Semi-Finished Iron & Steel	0.6	3.0	25.2
Plastic & Linoleum	0.6	2.2	21.4
Manmade Yarn, Fabrics, Madeups *etc.*	1.3	2.5	15.8
Electronic Goods	1.3	2.2	14.1
Petroleum Products	2.9	4.6	13.6
Drugs, Pharmaceuticals & Fine Chemicals	3.1	4.7	13.1
Losers			
Cotton Raw including Waste	2.6	0.0	-27.6
Finished Leather	5.2	0.9	-5.4
Tea	3.3	0.6	-4.7
Footwear of Leather	2.8	0.8	-1.7
Iron Ore	3.2	1.6	3.3
Readymade Garments: Man-made Fibre	2.5	1.3	3.8

@ Growth rate of exports in US dollar terms.

Note : In order to have reasonable comparative analysis, commodities having an export share of 2 percent or more during 2002-03 were taken to judge the top gainers. On the other hand, only those items having an export share of 2 per cent or more in 1990-91 were analysed so as to assess the loss of market shares.

Source : Directorate General of Commercial Intelligence and Statistics, Government of India.

Table 4.24: Technology Intensity of India's Exports, 1980-2000

(Percentage of total non-oil exports)

Commodity Group	1980	1990	2000
1	2	3	4
Group I (Primary commodities)	**40.9**	**26.6**	**18.9**
Food	25.2	14.7	12.9
Non-Ferrous metals	0.2	0.5	0.7
Other primary commodities	15.5	11.4	5.3
Group II (Manufactures based on labour and natural resources)	**38.5**	**51.1**	**52.6**
Textiles	15.3	12.8	14.2
Clothing	7.9	14.9	14.5
Footwear, leather and travel products	6.3	6.8	3.6
Wood and paper products	0.3	0.1	0.2
Paper, print and publishing	0.2	0.2	0.5
Non-metallic mineral products	8.5	16.4	19.7
Group III (Manufactures characterised by low technology intensity)	**5.7**	**4.8**	**6.6**
Iron and steel	1.1	1.7	3.2
Fabricated metal products	2.9	2.0	2.5
Simple transport equipment	1.6	0.9	0.6
Ships and boats	0.0	0.2	0.2
Group IV (Medium technology intensity)	**7.0**	**6.6**	**6.6**
Rubber and plastic products	0.6	1.1	1.3
Non-electrical machinery	3.4	3.2	2.6
Electrical machinery (excl. semiconductors)	1.5	1.2	1.5
Road motor vehicles	1.6	1.1	1.2
Group V (High technology intensity)	**5.1**	**9.3**	**11.7**
Industrial chemicals	2.8	5.1	7.2
Pharmaceuticals	1.5	2.7	3.0
Computers and office equipment	0.0	0.6	0.4
Communication equipment and semiconductors	0.2	0.4	0.4
Aircraft	0.0	0.0	0.1
Scientific instruments	0.6	0.4	0.6
Other manufactures *	2.7	1.6	3.6

* Other manufactures includes sanitary and plumbing products; toys and sporting goods; office and stationary supplies; works of art; jewellery and musical instruments.

Source: Trade and Development Report, UNCTAD, 2003.

medium technology intensity (Group IV), and high technology intensity (Group V).[1] Disaggregating India's exports according to this classification shows that although the share of other low and high technology intensive exports has improved since the 1980s, the bulk of the structural shift has been concentrated in labour and natural resource based manufactures (Group II) (Table 4.24). As a result, the products wherein India has the maximum presence in international market in terms of export share continued to be the Group I and II commodities (such as, spices, marine products, precious and semi-precious stones, textiles, *etc.*) during most of the 1990s. Data for recent years, however, indicate that the commodity structure of India's exports has slowly begun to shift towards higher technology intensive manufactures.

4.43 In contrast to India, the improvement in technology intensity of exports has been almost dramatic for most of the East Asian countries and to some extent also for China (Table 4.25). The areas in which South East Asian countries achieved their highest export growth during the 1980s were typically labour intensive, relatively low technology products such as textiles, clothing, toys, shoes and sports goods. Subsequently, during the 1990s, they graduated up to somewhat higher technology consumer goods and then to even higher technology and capital intensive sectors such as capital goods and petro-chemicals.

4.44 Despite the slow compositional changes in India's exports, the index of structural similarity (SS)[2], constructed to compare the relative manufacturing base of the leading exporters and the destination countries, indicates that the structure of India's exports and the manufacturing base of leading developed countries are highly divergent. This suggests that there is immense potential for India's exports to meet the demand emanating from these countries, if given sufficient thrust (Table 4.26).

4.45 The preceding discussions on the structure and composition of India's exports indicate considerable improvements since the initiation of the reform process. At the same time, it is also clear that export performance of the country has not been able to fully utilise the potentials. Reservations for the small scale industries, high transaction costs and low levels

[1] Classification of exports by the OECD and the United States National Science Foundation (and also used by the UNCTAD) based on SITC codes that differentiates technology intensity using R&D expenditure as a share of turnover as the indicator.

[2] The index value, suggested by Krugman (1991), is the sum of the absolute differences between the home country and the foreign country in the share of the different sectors of manufacturing industry in total exports of manufactures or in total manufacturing value-added. This measure varies between zero and two; a value of zero indicates identical sectoral composition of the two economies, and a value of two indicates complete dissimilarity of export structure.

Table 4.25: Technology Intensity of Exports: 1980-2000

(Percentage of total non-oil exports)

Country	Year	Group I	Group II	Group III	Group IV	Group V
1	2	3	4	5	6	7
Argentina	1980	76.0	8.7	3.1	5.4	6.7
	1990	68.2	10.0	8.1	5.4	8.2
	2000	59.9	8.8	4.9	14.9	11.1
Brazil	1980	60.3	9.4	6.4	15.0	8.3
	1990	46.3	12.7	13.5	15.6	11.0
	2000	39.8	12.9	8.6	19.3	18.8
China	1980	NA	NA	NA	NA	NA
	1990	20.4	38.9	5.9	13.7	14.8
	2000	8.7	33.2	8.4	15.7	26.2
Egypt	1980	69.6	26.5	1.9	0.1	1.7
	1990	39.8	44.8	6.7	1.2	7.0
	2000	36.3	36.9	5.3	5.5	13.1
Korea	1980	9.9	42.5	19.1	8.2	16.8
	1990	5.5	33.3	14.7	13.3	27.9
	2000	4.0	14.8	11.5	21.5	46.3
India	**1980**	**40.9**	**38.5**	**5.7**	**7.0**	**5.1**
	1990	**26.6**	**51.1**	**4.8**	**6.6**	**9.3**
	2000	**18.9**	**52.6**	**6.6**	**6.6**	**11.7**
Malaysia	1980	74.9	6.7	0.7	3.0	14.3
	1990	33.7	12.3	3.2	8.5	39.0
	2000	10.3	9.3	1.9	10.9	66.1
Mexico	1980	40.6	8.7	2.2	19.4	24.9
	1990	30.3	7.8	7.5	35.8	16.5
	2000	7.5	12.8	4.5	43.6	29.3
Taiwan Province of China	1980	10.7	40.6	8.6	12.3	18.6
	1990	6.7	28.3	10.3	18.7	27.5
	2000	3.6	14.1	10.5	19.5	48.2
Turkey	1980	70.6	22.2	1.4	3.0	2.4
	1990	30.6	42.0	13.6	4.9	8.0
	2000	16.9	44.2	9.9	16.4	10.3

NA: Not Available.
Source: Trade and Development Report, UNCTAD, 2003.

of factor productivity are some of the factors, which are often cited as reasons for less than satisfactory export performance by the country. These issues are discussed in the following sub-sections.

Table 4.26: Structural Similarity Indices for Exports of Manufactures and Manufacturing Value-Added for Select Economies: 1980-81 and 1997-98

Country	Structural Similarity with											
	United States				Japan				Germany			
	Exports		Value-added		Exports		Value-added		Exports		Value-added	
	1980-81	1997-98	1980-81	1997-98	1980-81	1997-98	1980-81	1997-98	1980-81	1997-98	1980-81	1997-98
1	2	3	4	5	6	7	8	9	10	11	12	13
China	1.14	0.89	0.68	0.62	1.31	0.90	0.61	0.57	1.08	0.99	0.60	0.60
India	**1.26**	**1.27**	**0.69**	**0.68**	**1.34**	**1.34**	**0.58**	**0.63**	**1.24**	**1.19**	**0.61**	**0.66**
Korea	1.06	0.53	0.61	0.38	0.90	0.52	0.52	0.36	0.94	0.58	0.59	0.31
Malaysia	1.32	0.71	0.71	0.67	1.19	0.71	0.59	0.68	1.31	0.88	0.72	0.61
Mexico	0.90	0.47	0.91	0.80	0.93	0.45	0.82	0.74	0.91	0.50	0.85	0.73
Philippines	1.30	0.92	0.75	0.67	1.35	0.93	0.77	0.63	1.25	1.05	0.79	0.71
Singapore	0.74	0.70	0.47	0.57	0.63	0.36	0.47	0.57	0.72	0.89	0.46	0.51
Taiwan Province of China	1.08	0.57	0.66	0.64	0.97	0.57	0.55	0.55	1.05	0.67	0.59	0.52
Turkey	1.59	1.21	0.74	0.73	1.55	1.24	0.62	0.67	1.50	1.14	0.66	0.74

Source: Trade and Development Report, UNCTAD, 2003.

Reservation of the Small-Scale Industries and Export Growth

4.46 Exports by small scale industries (SSIs) form an important component of India's exports. The SSI sector exhibited an impressive export performance during the 1990s. The relative contribution of SSIs to India's exports had gradually gone up from 15.9 per cent during the 1970s (1973-74 to 1979-80) to 25.6 per cent during the 1980s and further to a peak of 36.7 per cent in 1993-94 (Table 4.27). At present, direct exports by the SSI sector account for nearly 35 per cent of total exports. Besides direct exports, it is estimated that small-scale industrial units contribute around 15 per cent to exports indirectly. SSIs account for nearly 45 per cent of the manufactured exports from India of which 52 per cent pertain to non-traditional product (Government of India, 2001).[3] Exports from SSI sector have grown mainly on account of garments, leather, plastic products, chemicals and gems and jewellery (Table 4.28). The product groups where the SSI sector dominates in terms of exports are sports goods, readymade garments, woollen garments and knitwear, plastic products, processed food and leather products.

4.47 The SSI sector has been provided protection in the form of reservation of items, purchase preferences and several fiscal incentives. The reservation policy was initiated with the twin objectives of ensuring increased production of consumer goods in small-scale sector and expanding employment opportunities through setting up of small scale units. Non-SSI units were allowed to manufacture reserved items only with an additional condition of export obligation up to 50 per cent of their production.

4.48 The policy of SSI reservation has, however, denied successful SSIs to expand and achieve economies of scale and upgrade technology. As a result, Indian manufacturing industry has been unable to improve the technology content of its product on a sustained basis. This is clearly evident from the earlier analysis of exports by categorising them in terms of their technology intensity.

Table 4.27: Export Performance of SSI Sector

(Per cent)

	1981-82 to 1989-90	1990-91 to 2000-01
1	2	3
Growth in Total Exports	17.7	20.2
Growth in SSI Exports	19.6	22.9
Share of SSI in total Exports	25.6	33.7
Contribution of SSI in Export Growth	19.7	36.7

Note : Growth rates are calculated by using value of total and SSI exports in terms of Rupees.

Source: 1. Handbook of Industrial Policy and Statistics, Government of India.
2. Handbook of Statistics on the Indian Economy, RBI.
3. SIDBI Report on SSI Sector.

4.49 The increasing openness of the economy has posed a challenge before domestic SSI sector on account of cheaper imports and entry of new producers. Increasing competitive pressure and required technological up-gradation have induced de-reservation in a phased manner to enable the SSI sector to achieve economies of scale benefits. Despite de-reservation, 675 items were still reserved, as at the end of May 2003, for exclusive manufacture in SSI sector as against 836 items reserved for SSIs in 1989. This process of SSI de-reservation is a step in the right direction and needs to be accelerated to foster scale economies, enhance efficiency and promote competitiveness.

4.50 SSI reservation also affected entrepreneurial skills, manufacturing production and employment growth. This handicap has affected the growth of exports from this sector, thereby impeding the growth potential of some of the most dynamic export products

Table 4.28: Growth in Exports in respect of Selected Industry Groups with Reserved Items

Major Industry Group	No. of reserved items (As on May 2003)	Export Growth (Per cent)	
		1991-95	1995-2002
1	2	3	4
Mechanical engineering	183	12.2	11.1
Rubber, glass, paints, enamels and products	48	19.9	7.5
Plastic Products	13	43.1	12.5
Chemicals, organic chemicals and Drugs and Pharma.	113	11.7	11.4
Sports Goods	7	10	0.8
Food and allied Products	12	18.7	4.5

Source: 1. Handbook of Statistics on the Indian Economy, RBI.
2. Small Industries Development Organisation.

[3] Government of India (2001), Handbook of Industrial Policy and Statistics 2001, Office of Economic Adviser, Ministry of Commerce and Industry.

of India. Deregulation of SSIs may unleash this structural constraints through better economies of scale (Mohan, 2002).

Competitiveness of Exports

4.51 Exports of a country are deemed to be competitive if the country is able to sell its products at a lower or same price and earn the same return as its competitors. Competitiveness could emanate from favourable endowment base in the economy, lower cost consideration or from better quality of the commodity produced. Variables such as remuneration of factors of production, exchange rate, productivity - through the use of better technical skills and human resource development, as also economies of scale have a large influence on the extent of competitiveness of exports in the globalised world. Institutional and policy mechanisms that impart flexibility to the economy in shifting the resources to their most productive uses also play a pivotal role in enhancing the competitiveness. Finally, with growing market for differentiated products, other non-price factors such as quality and branding are also important factors contributing towards export competitiveness.

4.52 Analysis of competitiveness of manufactured exports, as measured by a menu of indicators, reveals that India has comparative advantage with respect to some key indicators, *viz*., real exchange rate, labour productivity and unit labour cost. In fact, the unit labour cost of manufacturing exports in India is one of the lowest among the developing countries. At the same time, productivity growth in India since the 1980s, unlike most Latin American countries, has outpaced the real wages in this sector (Table 4.29).

Table 4.29: Indicators Related to the International Competitiveness of Exporters of Manufactures for the year 2000

Country	Index (1980=100)							(Per cent)		
	Real US $ exchange rate based on consumer price index[a]	Real US $ exchange rate based on unit labour cost[b]	REER[c]	Nominal wage per worker#	Labour Produ-ctivity *	Unit Labour Cost **	Real wages	Average annual growth of exports of manu-facturing	Share of manu-factures in total non-oil merchan-dise exports in 2000	Effective Market Growth @@ (1993-2002
1	2	3	4	5	6	7	8	9	10	11
Argentina (1984-96)	47.7	23.3	66.7	240.5	50.5	101.9	73.5	13.9	40.1	6.7
Brazil (1985-95)	50.9	39.9	43.3	152.2#	114.8 #	96.3	137.4	8.6	60.2	5.9
China (1980-99)	NA	NA	343.2	NA	142.3	NA	NA	27.4 *	91.3	6.8
Egypt (1980-97)	92.4	148.7	NA	146.1	158.8	42.5	69.3	11.8	63.7	6.3
India	**215.8**	**300.1**	**215.6**	**141.3**	**279.9**	**52.8**	**145.9**	**12.0**	**81.1**	**6.8**
Indonesia (1980-99)	331.3	285.5	332.2	114.7	228.2	81.7	188.0	24.8	76.5	7.0
Korea	129.1	130.4	129.0	533.5	459.5	72.1	329.8	12.1	96.0	7.5
Malaysia	187.5	160.2	151.8	241.1	255.2	84.9	216.5	22.1	89.7	7.1
Mexico (1984-2000)	78.2	67.0	73.9	213.4	113.0	90.2	100.7	23.8	92.5	9.0
Philippines (1980-97)	120.6	105.3	118.9	263.2	202.6	80.5	163.0	17.5	92.9	7.4
Taiwan Province of China (1980-96)	86.7	49.7	91.4	550.7	205.9	121.0	248.6	12.9	96.4	7.1
Thailand (1982-94)	108.5	75.4	171.3	141.6	98.6	140.9	105.9	30.4	79.8	7.1
Turkey	139.3	184.6	108.8	161.7	197.0	54.5	107.8	17.4	83.1	6.0

a. Index of bilateral exchage rate with the US $ multiplied by the ratio of index of US consumer prices to the index of domestic consumer prices; and index number higher than 100 indicates a real depreciation of the total currency.
b. Ratio of domestic unit labour costs to the United States unit labour costs.
c. Based on relative consumer prices.
\# In US dollar.
* Real value added per worker calculated by deflating value added (in US $) per worker by the GDP deflator.
** Ratio of nominal wages in manufacturing (deflated by CPI) to value added in manufacturing (deflated by GDP deflator).
@@ Weighted average of import volume growth in the country's export market.
NA: Not Available.
Source: 1. Trade and Development Report, UNCTAD, 2003.
2. Global Economic Prospects, World Bank, 2004.

4.53 The limit to export growth is often set by the extent of the world import volume growth. In this context, Effective Market Growth (EMG), which is a weighted average of import volume growth in the countries' export markets, provides an useful measure of the demand growth emanating from the export destinations of the developing countries. Cross-country analysis reveals that India is at par with other developing countries in this regard.

4.54 Empirical evidence suggests that no single indicator provides an unambiguous assessment of competitiveness. One of the commonly used approaches is the Revealed Comparative Advantage (RCA)[4] which evaluates an economy's export share in a given sector relative to its overall export share. Information based on export data for India's four major exporting items *viz*., iron and steel, chemicals, textiles and clothing, for the year 1990 and 2000 reveals that India has been able to successfully consolidate its position in international markets in all these export sectors. Moreover, in sectors, such as, 'iron and steel' and 'chemicals', exports from India have made significant strides since the opening up of the economy. In fact, for these sectors, India appears to have a relatively more dominant presence in the world market *vis-à-vis* comparable countries such as China and Korea (Table 4.30).

4.55 Another measure of export competitiveness is the Competitive Industrial Performance index. This index measures the ability of countries to produce and export manufactures competitively and is constructed from four indicators: manufacturing value-added per capita, manufactured exports per capita, share of medium and high technology products in manufacturing value-added, and share of medium and high technology products in manufactured exports. The first two indicators provide information on industrial capacity, while the other two show the technological complexity and industrial upgrading of a country. The index recently constructed by the Asian Development Bank for a total of 87 economies places India at the middle level (Table 4.31).

4.56 Global Competitiveness Report, 2003-04 of the World Economic Forum, encompassing 102 countries, has published two indices *viz*., (i) Growth Competitiveness Index (GCI) (measuring the capacity of the national economy to achieve sustained economic growth over the medium term) made up of three factors, *viz.,* technological capacity, quality of public institutions, and quality of macroeconomic environment, and (ii) Business Competitiveness Index (BCI) (which examines the microeconomic bases of a nation's GDP per capita that is sustainable in the long run) consisting of two factors, *viz*., the degree of company sophistication and the quality of the national business environment. While the GCI was developed by Sachs and McArthur, the BCI is mainly based on the Porter framework (1990), known as "competitiveness diamond", where the idea of competitive advantages as opposed to comparative advantage is introduced. Even this measure shows that India is relatively well-placed at the middle level (Table 4.32).

4.57 Transaction costs, which also impact upon competitiveness, constitute another crucial determinant in international movements of goods and factors. Transaction costs are expense which do not enter directly in the physical process of production but are incurred at the pre and post-production stages, and arise out of the several procedural complexities associated with administrative processes, availability of finance and transportation problems. Exporters incur transaction costs in terms of time and/or in the form of monetary resources in the export consignment

Table 4.30: Revealed Comparative Advantage of Select Manufacturing Sectors: Comparison of India, China and Korea

Country	Year	Iron and Steel	Chemicals	Textiles	Clothing
1	2	3	4	5	6
India	**1990**	**0.4**	**0.8**	**4.0**	**4.4**
	2000	**1.4**	**1.0**	**5.3**	**4.3**
China	1990	0.6	0.7	3.7	4.8
	2000	0.5	0.5	2.4	4.0
Korea	1990	1.3	0.3	2.3	2.9
	2000	1.4	0.6	2.2	0.7

Source: International Trade Statistics, WTO, 2002.

Table 4.31: Competitive Industrial Performance Index

Country	Rank		Index Value	
	1998	1985	1998	1985
1	2	3	4	5
China	37	61	0.13	0.02
India	**50**	**50**	**0.05**	**0.03**
Indonesia	49	65	0.05	0.01
Korea	18	22	0.37	0.25
Malaysia	22	30	0.28	0.12
Philippines	25	45	0.24	0.04
Thailand	32	43	0.17	0.06

Source: Asian Development Outlook, Asian Development Bank, 2003.

[4] RCA is measured as an economy's share of total world exports in a given sector divided by the economy's average export share in all manufacturing sector.

Table 4.32: Cross-Country Ranking of Some Competitiveness Indices

Country	Growth Competitive-ness	Technology	Public Institution	Macro-economic environment	Business Competitiveness	Company Operations and Strategy Environment	Quality of National Business
1	2	3	4	5	6	7	8
Korea	18	6	36	23	23	19	25
Malaysia	29	20	34	27	26	26	24
Thailand	32	39	37	26	31	31	32
China	44	65	52	25	46	42	44
Philippines	66	56	85	60	65	48	74
Indonesia	72	78	76	64	60	62	61
India	**56**	**64**	**55**	**52**	**37**	**40**	**36**

Source: Global Competitiveness Report, World Economic Forum, 2003-04.

process. The procedural complexities identified consist of obstacles and difficulties associated with administrative processes, obtaining various licenses and refunds like duty drawbacks, sourcing of finance, transportation, *etc.* (Box IV.3).

4.58 In an attempt to estimate the magnitude of transaction costs of Indian exports, the Export-Import (EXIM) Bank of India conducted sample surveys in 1998 (of 111 firms covering 12 sectors) and 2003 (of 82 firms spread over 10 sectors). The study found that although transaction costs have declined in general between 1998 and 2003, they still continue to impose significant costs in certain sectors of Indian exports. Among the leading export sectors, the study finds that the incidence of transaction costs is highest in textiles, followed by pharmaceuticals, chemicals and engineering goods. In textiles and pharmaceuticals sectors, delays in getting various refund constituted the major transaction costs for exporters. Firms in the engineering goods, chemicals, plastic industry, paper products and biotech suffered delays in obtaining various licenses and getting duty refunds. In the software sector, high costs of working capital loans and delays in outward remittances as also time over-runs in obtaining various licenses have led to high transaction costs. The study also found that most of the Indian firms incurred cost disadvantage in terms of bureaucratic procedures, economies of scale, interest rates, transportation facilities, custom duties and clearances. In this context, it may be

Box IV. 3

Transaction Costs in International Trade

Transaction costs are those expenses that do not enter directly in the physical processes of production of goods but arise mainly from the transfer of ownership. Transaction costs can be broadly divided into four areas: (i) costs of entering and retaining markets before the actual foreign trade has taken place - mainly information and communication costs; (ii) transportation and product adaptation costs - mainly freight, insurance and packaging (terminal) costs; (iii) monetary transaction costs- mainly bank fees for international money transactions and costs for protection against possible exchange rate, interest rate or price fluctuations; and (iv) statutory transaction costs - mainly customs tariffs, legal costs, non-tariff barriers such as import quotas or product and health standards, special export taxes or costs related to restrictions of the movement of capital flows.

Samuelson (1954) had argued that the existence of an international transfer problem depends critically on whether there is a home bias in consumption, and he showed explicitly how a home bias could be derived from transport costs. Limao and Venables (2001) find that transport costs rises by more than 50 per cent for landlocked countries and the level of infrastructure development is an important variable in explaining differences in shipping costs. Obstfeld and Rogoff (1996) incorporated trade costs (transport costs plus tariffs, non-tariff barriers and possibly, other broader factors that impede trade) and showed that Samuelson's transfer problem analysis can be extended to a modern dynamic setting. In one of the most influential contributions in recent times, Obstfeld and Rogoff (2000) found that international trade costs in goods market[5] could explain some of the major puzzles in international macroeconomics, *viz.*, (i) home-bias-in-trade puzzle (wherein individuals have strong preference for consumption of their home goods), (ii) Feldstein-Horioka puzzle (OECD current account imbalances being small relative to saving and investment measured over any sustained period), (iii) home-biased portfolio puzzle (wherein investors overwhelmingly preferred to hold home equity assets), (iv) consumption correlation puzzle (consumption not being highly correlated across OECD countries), (v) purchasing power parity puzzle (the half-life of real exchange rate innovations being about 3-4 years), and (vi) exchange rate disconnect puzzle (why exchange rate are so volatile and so apparently disconnected from fundamentals).

[5] Along with other factors such as elasticities, imperfect competition, wage price rigidities etc.

noted that as the duty rates fall, the need for refunds etc., will commensurately decline thereby bringing down the transaction cost.

Export Oriented Industries and Productivity

4.59 Export opportunities in the manufacturing sector perform a valuable role in developing the labour skills, technology, market experience and expertise which can move developing countries into a virtuous cycle of productivity. Empirical studies suggest that innovation and productivity are higher among export-oriented firms. The evidence for most Asian countries points towards a significant effect of trade liberalisation on productivity (Das, 2002). The evidence on the impact of trade liberalisation on the productivity performance for Indian industries, however, is mixed. This is particularly because estimates of productivity are critically contingent, *inter alia*, upon the underlying assumptions about the structure of the production function and the methodology of estimation. While Goldar and Kumari (2002) and Chand and Sen (2002) find positive impact of trade policy changes on productivity growth covering the period from the early 1970s to late 1990s, studies by the NCAER (2001) and Unni, *et al*. (2001) suggest a decline in productivity growth in the 1990s *vis-à-vis* the 1980s. A preliminary exercise, on the assumption of constant returns to scale, in a growth accounting framework, suggests a decline in total factor productivity growth (TFPG) of the manufacturing sector in the 1990s (Table 4.33). The decline in TFPG could be a reflection of underlying structural and cyclical factors (Das, 2003). Among the structural factors, exit restrictions for labour and cumbersome bankruptcy procedures could have led to higher incidence of industrial sickness, adversely impacting upon the manufacturing TFPG. Furthermore, the cyclical downturn from the mid-1990s may have resulted in higher excess capacity and concomitantly, lower TFPG. At the sectoral level, however, there are evidences of improved TFPG for the exporting sectors *vis-à-vis* the non-exporting ones (Dholakia and Kapur, 2001; Unel, 2003).

4.60 Apart from TFPG, the role of factor (capital and labour) accumulation and productivity in the growth of manufacturing, particularly in the 1990s, needs to be placed in perspective. While capital intensity has increased during the 1990s, growth in capital productivity in overall manufacturing has declined during 1991-2000 *vis-à-vis* the previous decade. During the 1990s, growth in deflated fixed capital outweighed the growth in deflated value added in most of the respective industry groups. This has possibly led to a lower or negative capital productivity growth in majority of the industries during the 1990s. On the other hand, growth in labour productivity increased during the same period. Industry-wise analysis reveals that labour productivity growth witnessed an increase in respect of seven industry groups, while two sectors witnessed a rise in terms of growth of capital productivity (Table 4.34).

4.61 Summing up, India is relatively better placed than some of its competitors with respect to manufactured items traded with industrial countries.

Table 4.33: Total Factor Productivity Growth (TFPG) in Indian Manufacturing

Industry Group	TFPG (1980-90)	TFPG (1991-2000)
1	2	3
Food products and other food products	4.6	-2.0
Beverages, tobacco and related products	2.9	-1.8
Cotton textiles, Wool, silk and man-made fibre textiles, Jute and other vegetable fibre textiles (except cotton)	1.0	-6.2
Textile products (including wearing apparel)	4.7	-3.0
Wood and wood products, furniture & fixtures	0.6	3.0
Paper and paper products and printing, publishing and allied Activities	2.2	-5.1
Leather and leather & fur products	3.2	-1.7
Chemicals and chemical products except Products of Petroleum & coal	2.0	1.7
Rubber, plastic, petroleum and coal products	6.2	-13.7
Non-metallic mineral products	1.7	0.2
Basic metal and alloy industries	3.0	0.9
Metal products and parts (except machinery and Equipment)	-1.4	-1.4
Machinery and equipment other than transport equipment (industrial and electrical machinery)	2.6	-3.8
Transport equipment and parts	6.1	-2.3
Other manufacturing industries	1.2	7.8
Total Manufacturing	**3.9**	**2.1**

TFPG = Growth in GVA [Share of labour in GVA (Growth of Labour) + Share of Capital in GVA (Growth in Capital)].

Note: TFPG is estimated using growth accounting method using the variable of gross value added, workers, wages and fixed capital from the Annual Survey of Industries. Estimates are based on double-deflation method.

Table 4.34: Growth in Labour and Capital Factor Productivity

Industry Group	LPG		KPG	
	1980-90	1991-2000	1980-90	1991-2000
1	2	3	4	5
Food products and other food products	10.3	5.9	4.4	-4.2
Beverages, tobacco and related products	9.5	10.6	0.2	-4.8
Cotton textiles, wool, silk and man-made fibre textiles, Jute and other vegetable fibre textiles (except cotton)	4.7	3.4	-2.5	-11.4
Textile products (including wearing apparel)	8.3	2.8	3.0	-9.9
Wood and wood products, furniture & fixtures	6.2	12.7	-2.7	1.9
Paper and paper products and printing, publishing and allied Activities	6.4	4.6	2.2	-4.6
Leather and leather & fur products	5.1	5.1	3.5	-1.9
Chemicals and chemical products except POL & coal	5.6	8.7	0.5	1.2
Rubber, plastic, petroleum and coal products	10.7	3.1	9.7	-5.7
Non-metallic mineral products	8.8	6.9	-3.1	-6.9
Basic metal and alloy industries	8.3	7.0	3.1	-0.2
Metal products and parts (except machinery and Equipment)	3.3	4.9	0.2	-3.1
Machinery and equipment other than transport equipment (industrial and electrical machinery)	5.8	5.0	1.4	-6.1
Transport equipment and parts	6.9	9.1	4.7	-8.1
Other manufacturing industries	5.3	11.5	1.2	1.1
Total Manufacturing	**6.5**	**7.8**	**1.3**	**-0.7**

LPG : Labour Productivity Growth; KPG: Capital Productivity Growth.

Note: Value-added is deflated by using WPI and fixed capital is deflated by computing deflators for gross fixed capital formation as per the National Accounts Statistics data.

Labour productivity in the 1990s has grown faster than that in the 1980s in India However, the policy of reservation for SSIs has affected export growth, manufacturing production and employment generation.

4.62 It is expected that the future export drivers for India will be textiles, engineering goods, including automobiles and capital goods and processed food items. Textiles have long been a traditional export item for India accounting for nearly one fifth of the total exports during the 1990s. With the phasing out of the Multi-Fibre Arrangement (MFA) and dismantling of quotas from January 1, 2005, the potential for India's textile exports is likely to increase significantly. India's advantage in textile production, which is labour intensive, lies in its competitive advantage in labour, raw materials including cotton and low import intensity. However, the textile industry has, to a large extent, been reserved for the small scale industry, with the entry of the organised sector not permitted until recently. This has led to fragmentation of the sector leading to lack of economies of scale, low productivity, weak quality control and technological obsolescence. To tap the potential, the textile industry requires significant technological upgradation, scale building and a shift in focus from low value fabric exports to high value apparels and garments.

4.63 In the recent period, exports of engineering goods particularly those of automobiles, including two-wheelers have increased significantly which in turn has resulted in increased exports of auto components. Apart from low labour cost and adequate skill sets, the key driver for increase in automobile exports has been its low development cost. The rise in exports of auto-components can also be attributed to cost-cutting pressure by global manufacturers. The future penetration of automobile exports in the world market will crucially hinge on the availability of adequate infrastructure and orientation of the domestic industry to a global scale.

4.64 The exports of agricultural products generally displayed a relatively lower rate of growth, except for a brief period in the mid-1990s (1993-96). Nonetheless, in the recent years, sharp expansion was observed in exports of high value and processed agricultural products such as, fruits and vegetables, processed fruits, juices, and meat and meat preparation. Contemporaneously, the exports of traditional commodities such as, tea, coffee, rice, spices and oil meal have decelerated. India's agro-export performance has been disproportionately lower than its domestic production base. In recent period, India has emerged as a leading producer of many agricultural products in the world. For instance, India is the largest producer of coconut, arecanut, cashewnut, ginger, turmeric, black pepper, and the second largest producer of fruits and vegetables. The progress on the domestic production front has, however, not been translated into enhanced exports of these commodities.

4.65 For export expansion in the agro-processing sector, removal of the supply-side constraints such as infrastructure bottlenecks, including warehousing facilities, is needed. India can exploit the potential in these areas to her export

advantage if these domestic constraints are removed expeditiously. It is in this context, that the recent amendment to the Warehousing Corporations (Amendment) Bill, 2001, which, *inter alia*, enables Central Warehousing Corporation to set up warehouses abroad and also to enter into joint ventures assumes importance.[6] Another major step taken in recent times with a view to giving a boost to agri-exports, is the setting up of Agriculture Export Zones (AEZs).[7] State Governments have been assigned to identify specific products for end-to-end development for exports from a geographically contiguous area. Further, in the EXIM policy for 2003-04, emphasis has been placed on providing encouragement to "corporate sector with proven credentials to sponsor new zones or takeover of already notified zones or their part for boosting agri-exports". These corporates will be providing services such as, pre and post harvest treatment and operations, plant protection, processing, packaging, storage and related research.

4.66 A National Agricultural Policy (NAP) was announced in July 2000 with the aim of attaining technologically, environmentally and economically sustainable growth rate in agriculture of over 4 per cent per annum. Further, the policy envisages achieving demand-driven growth catering to domestic and international markets, maximising the benefits from exports of agricultural products in the face of the challenges arising from economic liberalisation and globalisation. In the context of India's WTO commitments in general and removal of QRs in particular, the policy provides for promoting exports and commodity-wise strategies on imports and arrangements for protecting the growers from adverse impact of undue price fluctuations in the world markets. The policy also envisages protection to plant varieties through a *sui generis* legislation to encourage research and breeding of new varieties, particularly in the private sector, in line with the India's obligations under TRIPS Agreements.

IV. STRUCTURE AND COMPOSITION OF INDIA'S IMPORTS

4.67 The structure of India's imports has undergone change since the opening up of the Indian economy. In the post liberalisation phase, the 'tolerance' level of imports has undergone a significant upward revision in the face of greater avenues for foreign exchange inflows, thereby unshackling the hitherto dormant economic growth potential. With the move away from 'import substitution' and towards promotion of trade based on dynamic advantage, the policy distinction between essential imports and otherwise has gradually subsided. Commodity-wise analysis reveals that while petroleum still continues to have a dominant presence in India's imports, capital goods and other intermediary products for export purposes have emerged as key items of imports in the 1990s (Table 4.35).

Table 4.35: Structure of India's Imports

Items	1990-91	1995-96	2002-03	1990-91	1995-96	2002-03
	(US $ billion)			(Share in per cent)		
1	2	3	4	5	6	7
Bulk Imports	**10.8**	**14.3**	**24.1**	**45.1**	**39.0**	**39.3**
Petroleum, Crude and Products	**6.0**	**7.5**	**17.6**	**25.0**	**20.4**	**28.7**
Bulk Consumption Goods	**0.6**	**1.0**	**2.4**	**2.3**	**2.7**	**3.9**
Edible Oils	0.2	0.7	1.8	0.8	1.9	2.9
Other Bulk Items	**4.3**	**5.8**	**4.1**	**17.7**	**15.8**	**6.7**
Fertilisers	1.0	1.7	0.6	4.1	4.6	1.0
Non Ferrous Metals	0.6	0.9	0.6	2.6	2.5	1.0
Metalliferrous Ores, Metal Scrap, *etc.*	0.9	0.8	1.0	3.5	2.2	1.6
Iron and Steel	1.2	1.4	0.9	4.9	3.8	1.5
Non-Bulk Imports	**13.2**	**22.4**	**37.3**	**54.9**	**61.0**	**60.7**
Capital Goods	**5.8**	**10.3**	**12.7**	**24.2**	**28.1**	**20.8**
Machinery except Electrical and Electronic	2.1	3.9	3.4	8.7	10.6	5.6
Electrical Machinery except Electronic	0.9	0.4	0.6	3.9	1.1	1.0
Electronic Goods	–	1.8	5.3	–	4.9	8.7
Transport Equipment	0.9	1.1	1.8	3.9	3.0	2.9
Project Goods	1.4	2.4	0.5	5.9	6.5	0.8
Mainly Export Related Items	**3.7**	**5.3**	**10.2**	**15.3**	**14.4**	**16.7**
Pearls, Precious and Semi-Precious Stones	2.1	2.1	6.0	8.7	5.7	9.9
Organic and Inorganic Chemicals	1.3	2.6	3.0	5.3	7.1	4.8
Others	**3.7**	**6.8**	**14.3**	**15.4**	**18.5**	**23.3**
Professional, Scientific Instruments, Photographic	0.6	0.7	1.1	2.5	1.9	1.7
Coal, Coke and Briquittes, *etc.*	0.4	0.9	1.2	1.8	2.5	2.0
Total Imports	**24.1**	**36.7**	**61.4**	**100.0**	**100.0**	**100.0**

Source: Directorate General of Commercial Intelligence and Statistics, Government of India.

[6] The recent amendment to the Warehousing Corporations (Amendment) Bill, 2001 got the Presidential assent on August 29, 2001.
[7] As on end-December 2003, 48 AEZs have been set up in 19 states.

Table 4.36: Commodity Balance of Petroleum and Petroleum Products

(Million tonnes)

Items	1990-91	1997-98	1999-2000	2000-01	2001-02*
1	2	3	4	5	6
Crude					
Refinery Throughput	51.8	65.2	86.0	103.4	107.3
Domestic Production	33.0	33.9	31.9	32.4	32.0
Imports	20.7	34.5	45.0	74.1	78.7
Products					
Domestic Consumption	55.0	84.3	97.1	100.1	100.1
Domestic Production	48.6	61.3	79.4	95.6	100.0
Imports	8.7	19.5	16.6	9.3	7.0
Net Imports	6.0	16.6	15.9	0.9	-3.1

* Provisional
Source: Economic Survey, Government of India, 2002-03.

4.68 There have been a number of subtle compositional shifts within the broad level of aggregation during the last decade that need to be recognised. For instance, within the petroleum imports, there has been a shift from import of petroleum products towards crude imports following a large scale increase of refinery capacity over time. Furthermore, India has transformed itself from a net importer of finished petroleum products to net exporter of the same in 2001-02 (Table 4.36).

4.69 Another significant development during the 1990s has been the channellising of imports of gold through official routes. Since 1997 when banks were allowed to import gold, the import of gold through passenger baggage has declined significantly (Table 4.37).

4.70 The position of major gainers and losers in terms of imports since 1990-91 provides a mirror reflection of the changing growth pattern of the economy. The industries that have shown the least import propensity since the 1990s and thereby have gradually been phased out from the import commodity basket were mainly under the medium to low technology labour intensive sectors where Indian industry itself has acquired comparative advantage. Similarly, the industries that have registered the highest growth rate in terms of imports during the last decade have been mostly those with medium to high technology content and intermediary products needed for exports (Table 4.38).

4.71 Subsequent to the opening up, India's imports are being sourced from a wider range of countries. Traditionally important trading partners like Germany, Japan, UK and Australia have subsided in terms of their market share and new import partners from Africa and

Table 4.37: Gold Imports

Year	(US $ million)			Share in total Imports (per cent)	Gold Demand in India (tonnes)*	World Gold Demand (tonnes)*	International Gold Prices (in US $/ ounce)*
	Customs Imports	Imports through Passenger Baggage	Total Gold Imports				
1	2	3	4	5	6	7	8
1992-93	220.3	1,083.1	1,303.4	6.0	454	2,519	344
1993-94	245.8	1,224.9	1,470.7	6.3	405	2,605	360
1994-95	470.0	1,894.1	2,364.1	8.3	415	2,592	384
1995-96	540.7	1,891.0	2,431.7	6.6	477	2,726	384
1996-97	688.8	2,629.6	3,318.4	8.5	508	3,104	388
1997-98	2,774.8	2,652.8	5,427.6	13.1	688	3,770	331
1998-99	4,525.0	162.1	4,687.1	11.1	774	3,451	294
1999-00	4,154.1	12.5	4,166.6	8.4	731	3,511	279
2000-01	4,121.6	8.7	4,130.3	8.2	723	3,343	279
2001-02	4,170.4	12.5	4,182.9	8.1	727	3,413	273
2002-03	3,791.2	18.0	3,809.2	6.2	576	3,067	310

* In Calendar Year
Source: 1. Directorate General of Commercial Intelligence and Statistics, Government of India.
2. Gold Demand Trends, World Gold Council, Various Issues.

Table 4.38: India's Trade: Top Gainers and Losers since the 1990s

(Per cent)

Item	Share in India's Imports		Growth rate
	1990-91	2002-03	1990-91 to 2002-03
1	2	3	4
Gainers			
Computer Goods	0.1#	0.5	36.4*
Electronic Goods	3.9#	8.7	21.7*
Edible Oils	0.8	2.9	21.1
Textile Yarn, Fabrics, Made-ups, etc.	1.0	1.6	12.0
Cashew Nuts	0.3	0.4	10.8
Losers			
Cereals and Cereal Preparations	0.4	0.0	-11.2
Project Goods	5.9	0.9	-8.1
Fertilisers	4.1	1.0	-4.2
Electrical Machinery except Electronic	3.9	1.0	-3.2
Iron and Steel	4.9	1.5	-1.9

Import share in 1993-94. * Growth rate since 1993-94.
Source: Directorate General of Commercial Intelligence and Statistics, Government of India.

East Asia (including China) have emerged and are increasingly gaining importance. In recent years, Belgium, from where India imports its major export oriented item of gems and jewellery, has emerged as one of the principal sources of imports. Another interesting feature has been the gradual dissipation of the Commonwealth of Indepedent States (CIS) countries as major sources of India's imports (Table 4.39).

Table 4.39: Major Sources of India's Imports

	1990-91			2002-03		
Rank	Country	Share (Per cent)	Top Non-Oil Products	Country	Share (Per cent)	Top Non-Oil Products
1	2	3	4	5	6	7
1	U S A	12.1	Machinery (except electrical and machine tools), Metaliferrous ores and metals scrap, Fertiliser manufactured	U S A	7.2	Electronic Goods, Fertiliser manufactured, Machinery (except electrical and electronics)
2	Germany	8.0	Machinery (except electrical and machine tools), Project goods, Iron and Steel	Belgium	6.1	Pearls, precious and semi-precious stones, Transport equipments, Machinery (except electrical and electronics)
3	Japan	7.5	Machinery (except electrical and machine tools), Transport equipments, Iron and Steel	China	4.5	Electronic goods, Chemicals - Organic and Inorganic, Textile Yarns, Fabrics, Made up Articles
4	Saudi Arabia	6.7	Artificial resins, plastic materials etc., Sulphur and Unrostd Iron Pyrts, Organic Chemicals	U K	4.5	Pearls, precious and semi-precious stones, Non-ferrous metals, Machinery (except electrical and electronics)
5	U K	6.7	Pearls, precious and semi-precious stones, Machinery (except electrical and machine tools), Project goods	Germany	3.9	Machinery (except electrical and machine tools), Electronic goods, Chemicals - Organic and Inorganic
6	Belgium	6.3	Pearls, precious and semi-precious stones Organic Chemicals ,Iron and Steel	Switzerland	3.8	Gold and Silver, Machinery (except electrical and electronics), Organic Chemicals
7	CIS	5.9	Project goods, Non-ferrous metals, Fertiliser manufactured	South Africa	3.4	Gold and Silver, Coal, coke and briquittes etc., Chemicals - Organic and Inorganic
8	U A E	4.4	Metaliferrous ores and metals scrap, Sulphur and Unrostd Iron Pyrts', Inorganic chemicals	Japan	3.0	Machinery excluding Electric and Electronic, Electronic Goods, Professional Instruments (except electric), Iron and Steel
9	Australia	3.4	Coal, coke and briquittes etc., Transport equipments, Pulses	Korea	2.5	Electronic Goods, Machinery excluding Electric and Electronics, Transport Equipments
10	Singapore	3.3	Machinery (except electrical and machine tools), Electrical machinery, Transport equipments	Malaysia	2.4	Vegetable oil fixed (edible), Electronic Goods, Wood and wood products
Top 10 Countries' Share		**64.3**			**41.3**	

Note : The share shown in the table is inclusive of petroleum, crude and products.
Source : Directorate General of Commercial Intelligence and Statistics, Government of India.

Import Intensity of Exports In India

4.72 In view of the changing contours of Indian trade over the years, especially since the 1990s, one pertinent question is the effect of imports on India's exports - more specifically how much of imports get translated into exports. Import intensity of exports can simply be defined as the degree of value addition of an imported item that subsequently gets exported. In the Indian context, gems and jewellery is a typical example of such export product having high import intensity. Another way of defining import intensity of exports is to identify those exports which are heavily dependent on imported inputs. These imported inputs may belong to the same sector or a different sector altogether. Imports may not only have a direct impact on exports through the import content but may also have an indirect effect in augmenting exports through other indirect spillover channels. Thus, a broader definition of import intensity of exports incorporates not only the direct quantum of imports that is channelled to exports but also the indirect effects of imported products that augment exports.

4.73 Due to difficulties in identifying a one-to-one correspondence between the items imported and those exported, various methodologies have been used to arrive at estimates of import intensities of exports. One approach is to measure the Net Foreign Exchange Inflow Rate (NFIR) which is the ratio of net exports (*i.e.* exports of an industry minus imported raw material of that industry) to total exports of a specific industry (Mani, 1991 and Sathe, 1997). Another approach pertinent to India is the analysis of import licenses issued to registered exporters under different export promotion schemes (EXIM Bank, 1991). The results of most of these studies indicate that import intensity of Indian industry has declined over a period of time indicating growing value addition (Table 4.40).

4.74 Based on the ITC (HS) commodity classification, a select set of items could be identified that are mainly imported for export purposes, such as 'gems and jewellery', 'chemicals and allied products' and 'textile yarn, fabrics, made-ups', *etc.* A comparison of corresponding finished products that are exported by value-adding these import items show a high import intensity in 'gems and jewellery' and 'chemicals and allied products'. The extent of such import intensity, however, appears to be declining for both the items since the early 1990s (Table 4.41).

4.75 The eight Special Economic Zones (SEZs) of India contribute about 4 per cent of India's exports. Industries in these SEZs, however, have a high import intensity. The average import intensity for the industries in these zones during the 1990s has been

Table 4.40: Import Licenses under Export Promotion Schemes

(Rupees crore)

Year	Value of Import Licenses	Share of Import Licenses in total exports (in per cent)	Share of Import Licenses in total imports (in per cent)	Value of Import Licenses as a percentage of export obligations
1	2	3	4	5
1990-91	12,979	39.9	30.0	42.6
1991-92	14,643	33.2	30.6	34.5
1992-93	18,232	34.0	28.8	38.5
1993-94	19,292	27.7	26.4	43.1
1994-95	27,017	32.7	30.0	51.2
1995-96	31,325	29.5	25.5	45.7
1996-97	35,025	29.5	25.2	54.0
1997-98	31,642	24.3	20.5	47.0
1998-99	34,741	24.9	19.5	33.1
1999-2000	36,376	22.8	16.9	28.2
2000-01	49,461	24.3	21.4	33.6
2001-02	58,515	28.0	23.9	35.9
2002-03	58,217	22.8	19.6	24.7

Note : 1. Import licenses are for DES (Duty Exemption Scheme), DRS (Duty Remission Scheme), DFRC (Duty Free Remission Scheme), DEPB (Duty Exemption Passbook Scheme), Advance License, Intermediate License, Physical Export, Deemed Export, Release Order, Special Imprest License, Diamond Gem & Jewellery Export Promotion, and EPCG (Export Promotion Capital Good Scheme).

2. From 1997-98, in case of DEPB, value refers to duty credit.

Source : Ministry of Commerce and Industry, Government of India.

Table 4.41: Import Intensity of Select Export Commodities

	1990-91	1999-2000	2001-02	2002-03 P
1	2	3	4	5
Imports of Export Related Items (US $ million)				
Pearls, Precious and Semi-Precious Stones	2,083.1	5,436.0	4,622.6	6,054.0
Organic and Inorganic Chemicals	1,275.6	2,866.3	2,799.6	2,965.6
Textile Yarn, Fabrics, Made-ups, etc.	246.7	538.4	747.5	956.1
Exports of the above items (US $ million)				
Gems and Jewellery	2,924.1	7,502.3	7,306.3	8,853.5,
Chemicals and related Products	1,715.2	4,692.4	6,051.8	7,030.6
Textiles and Readymade Garments, *of which,*	3,775.9	8,953.8	9,474.9	10,310.4
Readymade Garments	2,236.1	4,765.1	5,006.6	5,373.5
Textile Yarn, Fabrics, Made-ups, etc.,	1,539.8	4,188.7	4,468.3	4,936.9
Import Intensity (in per cent)				
Gems and Jewellery	71.2	72.5	63.3	68.4
Chemicals and Allied Products	74.4	61.1	46.3	42.2
Textile Yarn, Fabrics, Made-ups, etc.*	11.0	11.3	14.9	17.8

* Imports of ready-made garments as a percentage of exports of textile yarn, fabrics, made-ups etc. are taken.
P Provisional.
Source: Directorate General of Commercial Intelligence and Statistics, Government of India.

over 50 per cent. Even in this case, import intensity of exports has fallen over the years (Table 4.42).

4.76 In addition to the analyses of import intensity of exports, it is also useful to examine the link between imports and overall industrial production (Box IV.4). Furthermore, analysis of import elasticity of output[8] suggests that imports have grown at a much faster rate with respect to GDP for India in the 1990s as compared to the 1980s which is consistent with the liberalisation of trade policy during the 1990s and with the experience of some of the other emerging market economies (Table 4.43).

4.77 Summing up, there have been compositional shifts in the structure of India's imports towards higher technology intensive and export oriented products during the 1990s. The position of major gainers and

Table 4.42: Imports and Exports by SEZs/EPZs during the 1990s

(Rupees crore)

Year	Imports by SEZs/EPZs	Share of SEZ/EPZ Imports in Total Imports (in per cent)	Exports from SEZs/EPZs	Share of SEZ/EPZ Exports in Total Exports (in per cent)	Percentage of SEZ/EPZ Import to SEZ/EPZ Exports
1	2	3	4	5	6
1990-91	640.4	1.5	986.7	3.0	64.9
1991-92	753.1	1.6	1,192.8	2.7	63.1
1992-93	942.7	1.5	1,376.3	2.6	68.5
1993-94	1,346.3	1.8	1,959.9	2.8	68.7
1994-95	1,812.6	2.0	2,653.1	3.2	68.3
1995-96	2,268.6	1.8	3,235.6	3.0	70.1
1996-97	2,514.0	1.8	4,338.9	3.7	57.9
1997-98	2,661.9	1.7	4,817.9	3.7	55.3
1998-99	2,120.3	1.2	5,252.5	3.8	40.4
1999-2000	3,079.7	1.4	6,707.9	4.2	45.9
2000-01	3,669.4	1.6	8,552.3	4.2	42.9
2001-02	3,984.7	1.6	9,189.6	4.4	43.4
2002-03	5,708.2	1.9	10,053.4	3.9	56.8

Note: EPZs: Export Processing Zones.
Source: Ministry of Commerce and Industry, Government of India.

[8] Measured in terms of change in the ratio of average growth in merchandise imports (in current dollar) and average growth in GDP (in current dollar).

Box IV.4

Relationship between Imports and Industrial Growth

Imports, especially those of capital goods, are often taken as a leading indicator for industrial production and to gauge the near-term investment climate in the economy. A sizeable portion of imports gets channelled as inputs for industrial production. A definite relationship between imports and industrial production, however, may be difficult to establish as the imported commodities could be either complements or substitutes to domestic industry. As a result, empirical test of these relations remain largely country-specific. In the Indian case, non-oil imports, thus far, have been mostly in the form of capital goods, raw materials, and intermediate goods, which complement industrial production.

A number of studies have attempted to establish the link between imports and industrial growth in the Indian context. Although some studies suggesting that imports would have a negative effect on the industrialisation process in India have turned out to be contentious, a number of recent analyses show a positive relation between industry-related imports and industrial growth (Nambiar, Mungekar and Tadas, 1999; Neogi and Ghosh, 1998; Singh and Ghosh, 1988).

In order to investigate the relationship between imports and industrial production in the Indian context since liberalisation, a study was undertaken using quarterly import data (aggregated from the monthly data of the DGCI&S) and quarterly GDP at current prices for industries. For this purpose, a set of 33 import items (mainly capital goods, intermediaries and POL) out of a total of 68 items based on ITC (HS) classification as provided by the DGCI&S were identified and quarterly figures of these 'select imports' were analysed with respect to quarterly data on 'industry' sector gross domestic product at current prices for the period April 1996-March 2003. This analysis was further disaggregated to quarterly 'manufacturing' sector output under 'industries'. After correcting for non-stationarity of the data series and selecting the appropriate lag using standard information criteria, Granger test was undertaken to ascertain the direction of causality. After verifying the direction, ordinary least square estimation was performed to estimate the system in an unrestricted vector autoregression (VAR) framework. The results obtained from the above exercise show that (i) imports have a unidirectional impact on industrial output, (ii) both total imports and the 'select imports' positively affect industrial output as also manufacturing output with an approximate lag of four quarters.

losers in terms of imports since 1990-91 provides a mirror reflection of the changing growth pattern of the economy. The industries that have shown the least import propensity since the 1990s were the medium to low technology labour intensive products where Indian industry itself has acquired comparative advantage. The analysis reveals that the import intensity of India's exports appears to be steadily declining. Moreover, the relationship between imports and industrial production reveals that imports are one of the leading indicators of industrial output.

Table 4.43: Import Elasticity of Output

Country	1980-90	1991-2000
1	2	3
Argentina	-1.6	2.8
Brazil	-0.3	2.1
China	2.1	0.8
India	**0.7**	**1.6**
Indonesia	1.5	-9.9
Korea	0.8	1.8
Malaysia	1.6	1.5
Mexico	9.1	2.9
Philippines	1.4	2.1
Taiwan Province of China	1.1	1.0
Thailand	1.4	2.7

Source: Trade and Development Report, UNCTAD, 2003.

4.78 In this context, it is interesting to note that despite significant liberalisation of imports - reduction in tariffs, phasing out of QRs and allowing official bullion imports - the country's current account deficit has remained modest during the 1990s. Furthermore, the overall balance of payments has been in surplus in recent years and the country's foreign exchange reserves in terms of import cover have improved significantly from around 2.5 months at end-March 1991 to over 14 months of import cover by end-December 2003. Thus, in contrast to fears expressed at the time of the economy's opening up, import liberalisation policies, in conjunction with overall structural reforms, have considerably strengthened the country's external sector since 1990-91.

V. INDIA'S TRADE: SELECT ISSUES

4.79 In this section, a set of issues pertinent to India's trade that are of policy relevance are analysed. First, an empirical evaluation of the determinants of exports and imports and the extent of the pass-through of exchange rate on the prices

of tradables is attempted. Second, the effects of the movement in exchange rate and import prices on domestic prices are estimated. Third, issues relating to terms of trade movements for India over the last three decades are briefly examined. Next, the relationship between foreign investment and trade in India is investigated. Finally, we focus on the magnitude and evolving importance of East Asia and China in India's trade dynamics.

Determinants of Exports and Imports and Exchange Rate Pass Through

4.80 Following the above discussion on changes in the volume and composition of exports as well as imports, an empirical evaluation of determinants of India's merchandise trade would be useful in providing further insights. Growth at home and abroad along with changes in domestic and foreign prices and exchange rate are believed, *a priori*, to be the key factors that have an effect on a country's trade. In particular, the degree of pass-through of exchange rate movements to export and import prices is crucial, especially, in the context of shift to flexible exchange rate regimes. In this regard, it is imperative to have empirical estimates of relevant elasticities. Since trade is subject to twin influences of demand and supply factors, the estimation of relevant parameters through a single equation framework presents problem of identification, resulting in simultaneity bias. In order to overcome this difficulty, simultaneous equations of demand and supply functions for exports and imports are estimated using the methodology pioneered by Goldstein and Khan (1978) which was emulated in several studies for different countries (Hussain and Thirlwall,1984 for Sudan; Patra and Pattanaik,1994, and Ranjan, 1995 for India).

Export Demand

4.81 The volume of merchandise exports is assumed to respond to growth in world GDP, prices of exports facing the foreign buyer and world export prices. In the demand function for exports, it is expected that world GDP will have a positive sign. Indian export price is expected to have a negative sign indicating that if the price of Indian exports rise, demand for India's exports would switch to other competitors. World export prices is expected to have a positive sign indicating that if the world export prices rise, the incentive for production for exports increases. In the present empirical exercise (results reported in the footnote below), the long run elasticity of demand for India's exports with respect to growth in world GDP turns out to be around 1.54 confirming that with the growth in world trade, the pull factor operating on India's exports is sizeable. The signs of price of exports facing the foreign buyer and world export prices were as expected and statistically significant.[9]

Export Supply

4.82 The supply of exports is postulated to be a function of supply price of exports and domestic wholesale price index.[10] The hypothesis underlying the export supply function is that as export prices increase relative to domestic price, production for exports becomes more profitable, which leads to more supply. When the supply function of exports is inverted to be expressed as export price function[11], it is expected that the export prices

[9] The estimated export demand function is as follows:

$$\text{Ln REXPT} = \underset{(2.81)***}{2.18} + \underset{(5.69)***}{0.50}\ \text{Ln REXPT}\{-1\} - \underset{(-3.78)***}{0.72}\ \text{Ln DEXPRICE} + \underset{(2.87)***}{0.49}\ \text{Ln WEXPRICE} + \underset{(3.64)***}{0.77}\ \text{Ln WGDP} + \underset{(3.17)***}{0.15}\ \text{DUM94}$$

$\bar{R}^2 = 0.99$ h = 1.47 SEE = 0.06

where REXPT = Export volume (exports in rupee terms deflated by export prices)
DEXPRICE = Domestic export price (index of unit value of exports deflated by a nominal exchange rate index)
WGDP = World GDP
WEXPRICE = World export price (unit value index in US dollar terms)
DUM94 = Dummy for policy changes since 1993-94

[10] $\text{Ln REXPT}^s = \text{Ln } a_0 + a_1 \text{ Ln (EXPRICE / WPI)}$

where REXPT^s = Quantity of exports supplied (same as REXPT)
EXPRICE = Supply price of exports (unit value index in rupee terms)
WPI = Domestic wholesale price equation

The figures in bracket indicate t-values. *, **, *** indicates statistical significance of the variable at 10 per cent, 5 per cent and 1 per cent level of significance, respectively.

[11] $\text{Ln EXPRICE} = \text{Ln } b_0 + b_1 \text{ Ln REXPT}^s + b_2 \text{ Ln WPI}$

where $b_0 = - a_0 / a_1$, $b_1 = 1 / a_1$, $b_2 = - 1$.

should have a positive relationship with all the independent variables. In the estimated equation, the signs of the variables were as expected and all the coefficients were significant.[12] The elasticities of export prices to changes in domestic prices turns out to be about 0.9.

Import Demand

4.83 The import demand function is specified in a traditional form. The volume of imports is determined by domestic activity variable and relative import prices. The price variable reflects domestic demand responses to changes in import prices as well as the degree of substitutability between domestic production and imports. In a broad sense, just as the activity variable represents internal influences, the price variable reflects the gamut of external factors that account for variation in import demand (Ranjan and Patra, 1992). In the estimated import demand function, the volume of imports appears to respond favourably with the growth in GDP.[13] The elasticity of demand for imports with respect to domestic activity variable is 1.45 while the price elasticity of import demand is 0.74.

Import Prices

4.84 Given the assumption of small economy and the fact that the prices at which the imports take place in India are largely determined abroad, import prices are hypothesised to depend on world export prices and global output to a large extent. In the estimated equation, it is seen that the growth in world GDP has a significant impact on Indian import prices with elasticity at 2.49. The results also support the hypothesis that the price of Indian imports depend on world export prices.[14]

Exchange Rate Pass-Through

4.85 The empirical estimates of the elasticities relating to demand for and supply of exports and imports can be used to arrive at the degree of pass-through of export and import prices as a result of exchange rate changes. The size of the pass-through coefficients throws light on the responsiveness of exports and imports to exchange rate changes. For instance, depreciation of exchange rate opens up two possibilities to the exporter - either to fully absorb the benefit thereof in terms of profits or to pass on the same to the rest of the world by way of lowering export prices in foreign currency for gaining competitive advantage. The degree of pass-through of exchange rate movements on prices of exports and imports depends on the extent to which the exchange rate movement is transmitted to export prices denominated in foreign currency and import prices denominated in the domestic currency. The degree of pass-through is said to be complete when export prices and import prices rise or fall to the full extent of exchange rate changes. The more the export prices in foreign currency fall as a result of depreciation in exchange rate, the higher is the degree of export pass-through making exports more competitive in the international

[12] Ln EXPRICE = -3.30 + 0.30 Ln REXPT + 0.90 Ln WPI
(-3.93)*** (2.25)** (7.93)***

$\bar{R}^2$ = 0.99 DW = 1.27 SEE = 0.10

[13] Ln RIMP = - 6.19 - 0.74 Ln RPM + 1.45 Ln GDPFC + 0.15 Ln OILPRICE + 0.21 DUM94
(-6.44)*** (-6.73)*** (21.71)*** (4.86)*** (3.62)***

$\bar{R}^2$ = 0.99 DW = 1.80 SEE = 0.08

where, RIMP = Real imports (imports in rupees deflated by unit value index of import prices)
RPM = Relative import prices (ratio of import prices (IMPRICE) to domestic wholesale prices (WPI)
GDPFC = Gross domestic product at factor cost
OILPRICE = Crude Oil Prices (US $ per barrel)

[14] Ln IMPRICE = -5.87 - 0.49 Ln RIMP + 0.56 Ln WEXPRICE + 2.49 Ln WGDP - 0.18 DUM73 + 0.31 DUM92
(-8.12)*** (-3.69)*** (5.54)*** (5.68)*** (-2.49)** (4.81)***

$\bar{R}^2$ = 0.99 DW = 1.28 SEE = 0.09

where, IMPRICE = Import Prices (Unit value index of imports)
WEXPRICE = World export prices
WGDP = World GDP; DUM73: Dummy variables to capture first oil price shock;
DUM92 = Dummy variable to capture rise in crude oil price during gulf war.

market. Similarly, the higher the import prices in domestic currency as a result of a depreciation in exchange rates, the higher is the degree of import pass-through, rendering imports costlier. In such a situation, exports with relatively higher import content would suffer a loss in competitiveness. The degree of exchange rate pass-through[15] with respect to exports was found to be 0.82. A depreciation of 10 per cent in exchange rate of the rupee is expected to cause the dollar price of total export to fall by 8.2 per cent, while export prices in rupee terms will rise by 1.8 per cent. Similar studies for earlier periods suggest the degree of exchange rate pass-through in the range of 0.40 to 0.65. The sign of import pass-through was perverse (negative) as in similar empirical estimates (Thirlwall 1984, Patra and Pattanaik, 1994).

4.86 Given the estimated size of pass-through, it is apparent that sharp movements in exchange rate may have effects on trade. In the fiercely competitive trading environment where countries seek to expand market shares aggressively by paring down margins, even a small change in exchange rates can develop into significant and persistent real effects (Mohan, 2003). The impact of greater exchange rate volatility has been significantly different for reserve currency countries and for developing countries. For the former, mature and well-developed financial markets have absorbed the risks associated with large exchange rate fluctuations with negligible spillover on to real activity. Consequently, the central bank does not have to take care of these risks through its monetary policy operations. On the other hand, for the majority of developing counties, which are labour-intensive exporters, exchange rate volatility has had significant employment, output and distributional consequences, which can be large and persistent. All this has made the operation of monetary policy more difficult and complicated.

Pass-Through of Import Prices to Domestic Inflation

4.87 In the context of an economy which is getting progressively more open to trade, the movements in exchange rates and import prices are important factors influencing domestic inflation. Hence, the speed and size of pass-through coefficients of exchange rates and import prices to domestic inflation are of great relevance. In the context of India, data for the period 1971-2002 were examined[16] to determine the degree of pass-through from import prices to domestic inflation (all variables taken as log differences). The coefficient for the unit value index was highly significant for both wholesale price index and GDP deflator while the coefficient of the exchange rate turned out to be insignificant in varying degrees. The coefficients indicate that a unit change in the unit value index of imports leads to 0.22 unit of change in WPI and 0.12 unit of change in the GDP deflator.

Terms of Trade

4.88 As discussed earlier, in the emerging open economy framework, the changes in relative prices of exportables *vis-à-vis* importables of an economy (commonly referred to as the terms of trade) have been a subject of constant attention. In the Indian context, a number of studies have been undertaken to analyse the movements of terms of trade. An exercise for the period 1970-71 to 2001-02 shows that there has been a secular upward movement in terms of trade (in all the three measures: gross, net and income) during this period. The terms of trade "pessimism" has, therefore, not been validated in the Indian context. There has also been some apprehension regarding higher volatility of terms of trade following the opening up of the Indian economy. An analysis of India's terms of trade during the 1990s reveals that its volatility has come down significantly since 1992-93 as compared to the period between 1970-71 to 1989-90 (a period when the economy was relatively inward looking) (Table 4.44).

Table 4.44: India's Terms of Trade

(1978-79=100)

Period		Gross	Net	Income
1	2	3	4	5
1970-71 to 1989-90	Mean	126.9	111.1	114.6
	CV	19.6	17.3	34.9
1990-91 to 2001-02	Mean	134.6	134.7	510.9
	CV	10.1	9.6	33.3

Note : CV: Co-efficient of Variation

Source : Economic Survey, Government of India, 2002-03.

[15] The degree of export pass through is measured as: $k = 1 / (1 - e_d/e_s)$, where e_d and e_s are price elasticities of demand and supply of exports, respectively. Value of k varies between zero and unity. Exchange rate pass-through of imports, on the other hand, is calculated as $n=1/(1-m_s/m_d)$, where m_s and m_d are price elasticities of supply and demand of imports, respectively.

[16] A simple linear model was estimated by ordinary least square regression with the wholesale price index (WPI) and GDP deflator (GDPD) as the dependent variables. The explanatory variables were the unit value index of imports in foreign currency and the exchange rate expressed as rupees per US dollar.

Table 4.45: Export Intensity of Foreign Investment Companies during the 1990s

(Per cent)

Items	Average			2001-02
	1990-91 to 2001-02	1990-91 to 1996-97	1997-98 to 2001-02	
1	2	3	4	5
Engineering	7.5	7.5	7.8	NA
Chemicals/Chemical Products	8.7	7.6	10.4	11.4
Tea Plantations	19.1	19.5	18.4	21.6
Trading/Whole Sale and Retail Trade	11.4	12.8	9.4	13.1
All Textiles	35.1	33.8	44.4	NA
Rubber/Plastic Products	8.7	8.4	9.1	10.7
Food Products and Beverages	12.4	NA	12.4	11.6
Machinery and Machine Tools	11.5	NA	11.5	13.7
Electrical Machinery and Apparatus	6.8	NA	6.8	10.3
Motor Vehicles and Other Transport Equipments	7.7	NA	7.7	7.6
Computer and Related Activities	14.3	NA	14.3	12.2
Total	8.9	8.2	10.0	11.2

NA: Not Available.

Note : Exports referred to in this table pertain to foreign currency earnings through exports only.

Source : "Finances of Foreign Direct Investment Companies", RBI Bulletin, Various Issues.

Foreign Investment and Trade

4.89 The liberalisation in trade and foreign direct investments (FDI) have brought to the fore their relationship in general and their contribution to growth in particular. FDI could be export promoting, import substituting or import enhancing depending upon various demand and supply factors in the global economy. In order to judge this impact, it may be important not just to look at the direct magnitude of trade orientation of FDI but also factor in various indirect effects such as technological advancement, dynamic effects (such as skill up-gradation), linkages (both forward and backward with local firms) and spillover and other related externalities (wherein foreign firms cannot capture all the productivity and efficiency benefit they bring to a host country) and reorientation of demand pattern. In the Indian context, although the export intensity (*i.e.,* exports as a percentage of the value of total production) of foreign investment companies has shown a marginal increase during the 1990s, the average intensity during the period 1990-91 to 2001-02 has been low. Among the industries, 'textiles', 'tea plantations' and 'computers and related activities' had the highest share of exports earnings in foreign currency to the value of total production during the 1990s (Table 4.45).

4.90 Import intensity of these foreign investment companies during the 1990s has been, on an average, marginally higher than their export intensity. The average import intensity of these companies, however, remained almost the same since 1990-91. Foreign investment in industries relating to engineering (especially 'electrical machinery and apparatus' and 'machinery and machine tools') and trading (wholesale and retail) have the highest net import intensity (*i.e.* after netting export intensity from import intensity) (Table 4.46).

4.91 In India, FDI has been, therefore, much less important in driving India's export growth, except in information technology. As noted in the Medium Term Export Strategy 2002-2007, there is, however, immense scope for trade linked FDI in India particularly in services sector. The technological advances that have increased tradability have also opened up possibilities for export-oriented FDI in some services particularly in respect of functions undertaken typically in-house (*e.g.*, data processing, accounting).

Table 4.46: Import Intensity of Foreign Investment Companies during the 1990s

(Per cent)

Items	Average			2001-02
	1990-91 to 2001-02	1990-91 to 1996-97	1997-98 to 2001-02	
1	2	3	4	5
Engineering	11.5	11.4	11.9	NA
Chemicals / chemical products	11.0	10.2	12.1	9.5
Tea plantations	0.7	0.7	0.7	0.5
Trading / whole sale and retail trade	11.6	5.9	19.7	22.8
All textiles	13.6	13.6	13.7	NA
Rubber/plastic products	10.8	9.9	12.1	12.7
Food products and Beverages	3.4	NA	3.4	4.0
Machinery and Machine tools	13.1	NA	13.1	12.0
Electrical machinery and apparatus	11.6	NA	11.6	12.4
Motor vehicles & other transport equipments	10.4	NA	10.4	10.6
Computer and related activities	3.6	NA	3.6	2.6
Total	10.7	10.6	10.7	9.7

NA: Not Available.

Note : Imports referred to in this table pertain to foreign currency payments through imports only.
Source : "Finances of Foreign Direct Investment Companies", RBI Bulletin, Various Issues.

India's Trade With East Asia and China

4.92 As part of India's overall trade strategy, trade with East Asian countries was specifically focused to cater to the rising demand from this region. As a result, during the 1990s, the average growth of India's trade with East Asia far exceeded its overall trade growth. East Asia's share in India's trade has increased sharply during this period. The share of India in East Asia's trade, however, continues to remain very low (Table 4.47).

Table 4.47: Pattern of Trade in India and East Asia

		1971-80	1981-90	1991-96	1997-2002
1	2	3	4	5	6
		Average Growth Rate (US $ terms)			
India's Total Trade*	Exports	14.5	9.7	10.8	7.7
	Imports	21.7	7.2	8.6	10.1
India's Trade with East Asia	Exports	23.1	20.0	25.5	11.6
	Imports	83.7	11.9	22.4	19.5
East Asia's Total Trade	Exports	27.1	9.9	16.5	4.0
	Imports	31.1	11.5	16.1	7.1
World Trade	Exports	21.4	6.4	8.0	3.2
	Imports	21.2	6.4	7.7	3.8
		Average Share (Per cent)			
East Asia in India's Trade	Exports	3.9	5.5	8.8	10.4
	Imports	3.0	8.7	9.2	18.1
India in East Asia's Trade	Exports	0.5	1.2	0.6	1.6
	Imports	0.6	0.4	0.4	0.5
East Asia in World Trade	Exports	4.1	6.2	9.8	9.9
	Imports	3.9	6.6	11.1	13.8
India in World Trade	Exports	0.6	0.5	0.6	0.7
	Imports	0.6	0.8	0.6	0.8

* Figures in this table may not tally with those provided in earlier tables as(i) they are compiled from different sources and (ii) pertain to calendar year.

Note : East Asian countries referred to in this table include Singapore, Malaysia , Korea, Thailand, Indonesia and China.
Source : Direction of Trade Statistics, IMF, Various Issues.

Table 4.48: India's Trade with Select Asian Countries

(US $ million)

Country	1997-98		1998-99		1999-00		2000-01		2001-02		2002-03	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
1	2	3	4	5	6	7	8	9	10	11	12	13
China	718.0	1,119.3	427.2	1,096.7	539.0	1,287.8	831.3	1,502.2	952.0	2,036.4	1,961.1	2,782.5
Indonesia	437.3	731.6	185.3	829.1	325.6	958.8	399.8	910.2	533.7	1,036.8	825.9	1,380.5
Korea	467.6	1,001.8	307.9	1,394.4	476.6	1,273.3	450.8	893.8	471.4	1,141.4	644.7	1,523.8
Malaysia	489.9	1,178.9	321.7	1,608.4	447.1	2,024.0	608.2	1,176.8	773.7	1,133.5	746.8	1,465.0
Singapore	779.7	1,197.9	517.5	1,384.2	672.7	1,534.4	877.1	1,463.9	972.3	1,304.1	1,422.6	1,433.5
Thailand	344.0	233.3	321.0	273.1	449.6	327.8	530.1	337.9	633.1	423.1	710.8	378.6
Total	3,236.5	5,462.8	2,080.6	6,585.9	2,910.6	7,406.1	3,697.3	6,284.8	4,336.2	7,075.3	6,311.9	8,963.9

Source: Directorate General of Commercial Intelligence and Statistics, Government of India.

4.93 The most notable source of expansion in India's trade in the last few years was with respect to China and Singapore (Table 4.48). The surge in India's trade to East Asian countries has mainly emanated from product specialisation and natural comparative advantage of the respective countries. While the major items of exports from India to East Asia have been 'engineering goods', 'chemicals and related products', 'petroleum, crude and products', 'gems and jewellery' and 'iron ore', import items from these countries were mainly 'electronic goods' and 'edible oil' (Table 4.49).

Table 4.49: Share of India's Exports/Imports of Major Commodities to/from East Asian Countries

(Per cent)

Commodity	1994-95	1996-97	1998-99	2000-01	2002-03P
1	2	3	4	5	6
Exports					
Engineering goods	23.1	22.2	19.3	24.4	23.4
Chemicals & related products	15.3	11.8	18.0	19.2	14.6
Petroleum, crude & products	0.0	0.0	0.0	0.2	8.6
Gems & jewellery	10.3	7.9	9.0	8.8	8.1
Iron ore	4.7	3.8	4.9	4.1	7.2
Cotton yarn, fabrics, madeups *etc.*	7.4	7.1	9.3	8.4	5.1
Marine products	4.4	3.8	5.0	5.2	3.1
Other ores & minerals	2.4	2.6	2.9	2.7	2.5
Rice	0.3	0.1	1.2	0.3	2.4
Manmade yarn, fabrics, madeups	2.5	1.5	1.2	1.6	1.8
Share of Exports to East Asian Countries in India's Total Exports	**8.8**	**11.0**	**6.3**	**8.3**	**12.1**
Imports					
Electronic goods	8.4	10.0	12.5	23.7	25.3
Vegetable oils (edible)	4.6	14.2	17.7	14.1	13.7
Chemicals, organic & inorganic	10.5	11.7	8.1	8.6	8.5
Textile yarn, fabrics, madeup articles	4.3	3.6	3.0	4.2	5.4
Machinery excl. electric & electronic	4.9	5.9	4.4	5.7	5.3
Transport equipments	3.1	3.0	2.5	1.0	3.8
Coal, coke & briquittes *etc.*	2.2	2.9	2.8	5.5	3.2
Electric machinery excl. electronic	1.1	1.3	1.5	2.5	2.2
Artificial resins, plastic material *etc.*	5.7	4.9	3.5	2.3	2.1
Metalliferrous ores & metal scrap	2.4	1.5	2.2	1.4	2.0
Share of Imports from East Asian Countries in India's Total Imports	**11.4**	**11.6**	**15.5**	**12.4**	**14.6**

P : Provisional

Note : East Asian countries referred to in this table include Singapore, Malaysia , Korea, Thailand, Indonesia and China.

Source : Directorate General of Commercial Intelligence and Statistics, Government of India.

VI. WORLD TRADE ORGANISATION: RECENT DEVELOPMENTS

4.94 In the aftermath of the Fifth Ministerial Conference of the World Trade Organisation (WTO) held in Cancun, the issues relating to multilateral co-operation especially among the developing countries have assumed greater significance. Established in 1995, the WTO, with 148 members including India, is an international organisation dealing with the global rules of trade between nations. The overall agenda of the WTO could be broadly categorised under eleven heads *viz*., (i) agriculture, (ii) services, (iii) market access for non-agricultural products (or industrial tariff negotiations), (iv) intellectual property (TRIPS), (v) "Singapore issues"[17], (vi) trade rules, (vii) dispute settlement, (viii) trade and environment, (ix) trade, debt and finance, (x) trade and technology transfer and (xi) electronic commerce. The major issues of discussion on various aspects of the agenda in recent period along with India's views on each of them is outlined in Annex IV.1.

4.95 On the eve of the Conference, agreement was reached on some aspects of TRIPS and public health issue. However, a number of deadlines were missed including modalities for agriculture and non-agricultural market access negotiations, reform of the Dispute Settlement understanding and recommendations on special and differential treatment. The Ministerial Conference was unable to reach consensus on some of the outstanding issues, including reduction of agricultural subsidies and "Singapore issues". There was a clear divergence of views on both the above issues mainly led by a new block of developing countries- G22[18], on the one hand, and the developed country group mainly consisting of EU, US and Japan, on the other. No consensus could be reached on the phasing out of subsidies on agriculture by developed countries. The decision of both the USA and the EU to continue agricultural subsidies also cast doubts on their commitments to effectively address the subsidy issue relating to agriculture. The US-EU framework of freeing farm trade presented in August 2003 involved some reform. The plan, being less ambitious than the Doha Declaration, was, however, unacceptable to the G-22 member governments. Moreover, with the developing countries remaining united in their opposition to the inclusion of "Singapore issues", no major breakthrough could be undertaken in this regard. The negotiation process has, however, not been officially abandoned. The diplomats pledged to continue the process with a renewed sense of urgency in Geneva.

4.96 Reflecting on the latest developments, although some commentators posed questions on the very structure of the WTO and its process of negotiations after Cancun, it may be noted that all the previous trade rounds took far longer to finish than planned (*e.g.* the Uruguay round took eight years to complete rather than the originally mandated three years). The Cancun Ministerial was mainly of stocktaking nature and therefore, its failure should technically result only in the lengthening of the negotiating period rather than abandonment of the whole mechanism.

Regional Trading Agreements

4.97 The global trading system has seen a sharp increase in regional trade agreements (RTAs) over the past decade or so (Box IV.5). As on May 2003, over 265 RTAs had been notified to the WTO.[19] About 90 per cent of the RTAs are in the form of free trade arrangements (FTAs) and only 10 per cent are customs unions. While the rapid growth of RTAs began in the 1990s, these arrangements acquired momentum since the 1980s mainly driven by the Western European countries and the United States. More recently, Asian countries including Japan, have also departed from exclusive reliance on MFN-based trade. The collapse of the COMECON[20] (the preferential arrangement involving the old Soviet Union and European Union) further spurred the formation of RTAs in the 1990s. According to the WTO, the share of world merchandise trade that operates under RTA is likely to go up further in the near term (Table 4.50).

[17] Singapore issues relate to: (i) Trade and Investment; (ii) Trade and Competition Policy; (iii) Transparency in Government Procurement; and (iv) Trade Facilitation.

[18] Argentina, Bolivia, Brazil, Chile, China, Colombia, Costa Rica, Cuba, Ecuador, Egypt, Guatemala, India, Indonesia, Mexico, Nigeria, Pakistan, Paraguay, Peru, Philippines, South Africa, Thailand and Venezuela.

[19] The WTO has allowed member countries to conclude custom unions and free-trade areas, as an exception to the fundamental principle of non-discrimination set out in the MFN Clause of GATT's Article 1.

[20] COMECON : The Council for Mutual Economic Co-operation.

Table 4.50: Preferential Trade Share of Intra RTAs Trade in Merchandise Imports of Major Regions

(Per cent)

Economy	2000	2005
1	2	3
Western Europe	64.7	67.0
Transition Economies	61.6	61.6
North America (incl. Mexico)	41.4	51.6
Africa	37.2	43.6
Middle East	19.2	38.1
Latin America (excl. Mexico)	18.3	63.6
Asia	5.6	16.2
World	**43.2**	**51.2**

Note : Estimates are calculated on the basis of the 113 agreements covering trade in goods notified to the WTO and in force as of July 2000, using trade data for 1999.

Source : World Trade Report, WTO, 2003.

VII. MEDIUM TERM TRADE STRATEGY

4.98 The Tenth Five Year Plan (2002-03 to 2006-07) recognises that higher growth cannot take place without tapping the opportunities offered by the global economy in terms of markets, investment and technologies along with improvement in efficiency and absorbing excess capacity available in the economy. An important pre-condition for establishing a more open economy is to create an expanding production base of tradable goods and services, which will not only withstand external competition, but also provide the surplus necessary to ensure sufficient export earnings for meeting the import needs of the country. Another pre-condition is to create an environment under which the export market becomes increasingly more attractive, so that there is both a shift from selling in the domestic market to exports and developing capacities to specifically target such export opportunities. Re-orientation of the incentive structure towards investment in tradable goods and services and away from non-tradables combined with improvement in relative profitability of exports *vis-à-vis* domestic sales would lead to higher production for exports.

4.99 The Tenth Five Year Plan projects a growth rate of 12.4 per cent in India's exports. The road map for the achievement of this export growth in the medium term is delineated in the Medium Term Export Strategy (MTES). It aims at augmenting the country's share in world trade to one per cent by 2006-07 from the current share of 0.7 per cent which implies doubling exports from the present level. The MTES incorporates product and market identification for exports as well as focus on sector-wise micro and macro strategies for identifying potential sectors based on the assessment of the changing global trade scenario and real and revealed comparative advantages. The strategy makes an opportunity assessment after examining the import basket of major importing economies of the world and identifying potential items of exports in which India is competitive *vis-à-vis* some of the major exporting countries of these products at present. Concurrently, the Export-Import (EXIM) Policy for 2002-07 has emphasised export market diversification with special focus on unexploited regions like sub-Saharan Africa

Box IV.5

Regional Trade Agreements (RTAs)

There are broadly two types of Regional Trading Arrangements (RTAs): Free Trading Arrangements (FTAs) and Customs Unions. The WTO defines FTAs as "agreements among two or more parties in which reciprocal preferences (whether or not reaching complete free trade) are exchanged to cover a large spectrum of the parties' trade in goods". Customs Unions, on the other hand, are RTAs "with a common external tariff in addition to the exchange of trade preferences".

Until the early 1950s the general opinion was that formation of a RTA was necessarily trade liberalising that would lead to freer trade and greater economic efficiency. This was challenged by Viner (1950) and Meade (1955). They pointed out that a RTA had two kinds of effects: 'trade creation' and 'trade diversion'. While trade creation took place when a country's domestic production was replaced by lower cost imports from a partner country, trade diversion occurred when low cost imports from the rest of the world (outside the RTA) were replaced by higher cost imports from partner countries because of tariff preferences. Thus, RTAs would be welfare-enhancing only when its trade creation effects outweighed its trade diversion effects. The conditions under which this would occur depend on several factors *e.g.,* the divergence of factor endowments and economic structures among the trading partners, product lists, phasing and rules of origin.

At present, India is a member of SAARC Preferential Trading Agreement (SAPTA), Indian Ocean Rim Association for Regional Co-operation and the BIMST-EC (Bangladesh, India, Myanmar, Sri Lanka, Thailand Economic Co-operation). Moreover, it is a signatory to a number of bilateral trading agreements, the latest being that with Thailand in October 2003. A Framework Agreement for comprehensive economic cooperation was also signed between India and ASEAN during October 2003. It is recognised that since ASEAN countries are much more open than India, there is merit in India's joining such groups. At the same time, India's attempt to be a part of more RTAs should not be at the expense of its endeavour of multilateral trade liberalisation under WTO auspices.

and the CIS. It also stressed on a farm-to-port approach for exports of agricultural products, special thrust on cottage sectors and handicrafts and beefed up Assistance to States for Infrastructural Development for Exports (ASIDE).

4.100 As regards imports, while proposing an indicative target of 8 per cent GDP growth for the period 2002-07 and an investment rate of 32.3 per cent by the year 2006-07, the Tenth Five Year Plan document states that the behaviour of aggregate import demand in the country is expected to be strongly driven by domestic growth rates. For improving the imports, the projection is made on the basis of two possible scenarios. The first scenario is with the average total tariff rate assumed at the East Asian level of 15 per cent in the terminal year of the Plan while the second scenario is with the indicative target, as announced by the Government, which yields an average duty rate of 18 per cent in the terminal year. In the first scenario, annual import growth during the Plan period works out to 18.0 per cent with an elasticity of 2.3 resulting in a negative trade balance equivalent to 6.0 per cent of GDP. As regards the second scenario, the growth of imports is lower at 16.3 per cent annually during the Plan period with an elasticity of 2.0, thereby resulting in a trade deficit of 5.2 per cent of GDP.

4.101 The Report of the Task Force on Indirect Taxes, 2002 (Chairman: Vijay Kelkar) has laid down a broad approach to customs tariff reforms in India. It envisages a zero duty for essential items, 10 per cent duty for raw materials, inputs and intermediate goods and 20 per cent for final goods by 2004-05. Following introduction of States' Value Added Tax (VAT), these duties are proposed to be further reduced to 5 per cent for basic raw materials, 8 per cent for intermediate goods, 10 per cent for finished goods and 20 per cent for consumer durables by 2006-07. However, in order to reap efficiency gains from further opening up of the economy, systemic changes in customs procedures and trade facilitation based on modern best practices which rely on self compliance, risk analysis and management and supported by periodic post audit of records may be necessary.

VIII. CONCLUDING OBSERVATIONS

4.102 The economic reform process introduced in the beginning of the 1990s with the focus on liberalisation has enabled increased integration of the Indian economy with the rest of the world. The growth rate of India's trade is increasingly dependent on exogenous factors such as world trade growth (especially those of the trading partners), international price changes and developments in the competitor countries. Cross currency exchange rates as well as dollar-rupee exchange rate movements also get reflected in the performance of India's trade. Although the level and dispersion of India's tariff have considerably come down since the early 1990s, it remains among the highest as compared to emerging market economies. It is increasingly being realised that the desirable structure of tariff rates should comply with the basic principles of simplicity, transparency, stability and international best practices. As noted in the Tenth Plan document, the most effective means of encouraging outward orientation is to lower tariffs on imports so that the anti-export bias, both in policies and mind-sets get corrected. Further, it may be noted that as the duty rates fall, the need for refunds *etc.*, will commensurately decline thereby bringing down the transaction cost.

4.103 It has been observed that in contrast to the structural and compositional shifts in world trade towards higher technology intensive products, the commodity structure of India's exports remained largely unchanged until the mid-1990s. Although, of late, India's exports have shown a steady trend towards higher technology content, India's specialisation in exports lies in manufactures based on labour and natural resources essentially involving low technology. Given the exports structure of India, the potential for further growth of manufactured goods, especially to the developed markets remains high. However, given the general trend of movement of terms of trade towards higher technology intensive products, it may be imperative for India to move up the technology ladder.

4.104 As reflected in international experience, rising shares of investment and manufacturing value-added in an economy's total output are associated with a rising share of manufacturing exports in total exports and GDP. In more open economies, manufacturing value-added exports have outpaced manufacturing value-added by a large margin. In India, the investment rate and manufacturing sector share in GDP have shown a somewhat similar trend. Although there has been an occasional spurt, in general, there has been a decline in both the investment rate as also the manufacturing sector share in GDP in the recent period. As a result, the gap between the relative share of manufacturing in India's GDP and merchandise exports has shown a marked divergence since 1997-98. However, there are signs of pick-up in manufacturing exports since 2002-03. Higher overall investment rate may help in augmenting these exports further. At the same time, the policy of reservation for SSIs has denied successful

small scale units to expand and achieve economies of scale and upgrade technology. This in turn has affected export growth, manufacturing production and employment generation.

4.105 The labour cost of producing a unit of manufacturing exports in India is one of the lowest among the developing countries. Moreover, labour productivity in the 1990s has grown faster than that in the 1980s. While the preliminary evidence on total factor productivity growth at the macro-level remains somewhat inconclusive, at the sectoral level, there is growing evidence of improved productivity for the exporting sectors *vis-à-vis* the non-exporting ones. The linkages between trade and foreign investment in India indicate that FDI has been much less important in driving India's export growth, except in information technology. FDI in Indian manufacturing has been and still remains largely domestic market-seeking.

4.106 A noteworthy fact is that despite significant liberalisation of imports during the 1990s, the overall balance of payments has been in surplus for most of the years with the country's foreign exchange reserves crossing US $ 100 billion mark. Thus, in contrast to fears expressed at the time of the opening up of the economy, import liberalisation policies, in conjunction with other external sector and overall structural reforms have, in fact, strengthened the country's external sector since 1990-91. The implication is that continued reduction in import tariffs will help in inducing greater efficiency and competitiveness in the economy, while reducing avoidable transaction costs in trade. Looking ahead, the singular challenge facing the Indian economy is to enhance its productivity and competitiveness in an increasingly integrated global environment which would be crucial in assuring sustained growth in exports of goods and services.

Annex IV.1: Main Issues in WTO

Agenda for Discussion	Main Issues	India's Position
1. Agriculture		
a. Export Subsidies	• Reductions of, with a view to phasing out, all forms of export subsidies.	• Removal of all forms of direct and indirect export subsidies, by developed countries, in a time-bound manner. • For developing countries, retention of Article 9.4 of the Agreement on Agriculture, thereby enabling grant of marketing and transportation subsidies on exports listed in Article 9.1 (d) and (e).
b. Market Access	• Substantial improvements in market access for agricultural products of developing countries, while allowing them to retain the necessary flexibility.	• Any reduction in tariffs by developing countries should be based on an approach that secures an overall average reduction in bound rates for them which is significantly lower than that by developed countries. • To provide the flexibility of minimal tariff cuts or exemption from tariff cuts by developing countries in respect of Special Products towards food and livelihood security and rural development, based on self-declaration. • To establish for developing countries a new Special Safeguard Mechanism (SSM) applicable to all agricultural products, based on price and volume triggers, to safeguard against import surge and price volatility. • To achieve substantial reductions in tariff peaks and tariff escalation, and to improve disciplines on Tariff Rate Quota administration, in products of export interest to developing countries.
c. Domestic Support	• Substantial reductions in trade-distorting domestic support.	• Towards meeting the Doha mandate for substantial reductions in trade-distorting domestic support, the Amber Box support reduction should permit steeper reductions by developed country Members providing higher levels of support. The *de minimis* for developed countries should be reduced from the existing level of 5 per cent of the value of agricultural production. Blue Box support should be capped and brought under reduction disciplines, and disciplines on direct payments under the Green Box should be strengthened. To prevent circumvention of reduction commitments through the shifting of support between one box and another, trade-distorting Amber Box, Blue Box, and the *de minimis* should be brought under an overall reduction discipline. • Retain and enhance the provisions of Article 6.2 for low-income and resource poor farmers for developing countries towards addressing food and livelihood security and rural development concerns.

Agenda for Discussion	Main Issues	India's Position
	• Special and Differential Treatment for developing countries	• The negotiated mandate agreed at Doha is for extending undifferentiated special and differential treatment to developing countries as an integral part of all aspects of negotiations. Developing countries can be expected to reciprocate in market access, subject to their economic and social conditions, development needs, food and livelihood security and rural development, only if they get adequate concessions and commitments by developed countries in all the three pillars of Agreement on Agriculture, namely, domestic support, export subsidies and market access.
2. GATS		
• Professional Services • Computer Related Services • Audio Visual Services • Distribution Services • Education and Training Services • Environment Services • Financial Services • Telecommunication Services • Tourism Services • Transport Services • Postal Services • Recreational, Cultural and Sporting Services	• Under GATS, India has taken commitments in the areas of its economic interests, which include services like financial, telecommunication, health, business, construction, tourism and travel-related. India's commitments are based on its domestic policy and has been taken mainly in Mode 3 (i.e. commercial presence), which are in consonance with the policy on FDI.	• Liberalisation of certain sectors is essential to accelerate growth in developing countries. However, there are certain sensitive sectors that needs to be treaded with caution. • For the developing countries including India, the balance of benefit in the negotiations will accrue to the extent to which their service providers are allowed to supply services in important overseas markets either from remote locations or through temporary movement of natural persons. • In case the resistance among developed countries for agreeing to the request of developing countries for enhanced market access under Modes 1 and 4 continues, this would substantially erode India's flexibility to make commitments in sectors of interest to developed countries.
3. Market Access for Non-Agricultural Products		
a. Finalisation of modalities for the actual tariff negotiations, *i.e.*, the tariff reduction	• A formula to be applied to all tariff lines of all Members coupled with a mandatory sectoral tariff elimination proposal on seven sectors of export interest to developing countries.	• The formula proposed by the Chairman of the Negotiating Group have merits as it incorporates adequate special and differential provisions by incorporating an element of tariff average in the formula. It thus recognises the principle of less than full reciprocity in the core modality of reduction commitments.

Agenda for Discussion	Main Issues	India's Position
method and the extent of tariff reduction to be offered by different countries.	• The formula requires all members to reduce their tariffs on all industrial products.	• Amending any aspect of the formula or the formula itself would negate the entire work done so far. The suggestion for mandatory tariff harmonisation and elimination would be most iniquitous to developing countries. There is no mandate for harmonisation of tariffs under the Doha Ministerial Declaration. For developing countries, the initiative for sectoral tariff elimination should be voluntary rather than mandatory and should also incorporate the principle of less than full reciprocity. • Being at different stages of development, developing countries may not have the capacity to undertake binding obligations on all the proposed sectors. • Some of the highest tariffs are found in developed countries in these sectors, namely, in textiles and clothing; leather and footwear; marine products; and gems and jewellery.
b. How to deal with non-tariff barriers	• The main issue is to clearly identify what is the measure, who is imposing it, how it affects trade and an estimation of the trade restricting impact of the measure.	• Several WTO members including India have notified existing NTBs faced by their goods during exports to various markets. Discussions are going on as to how to address these NTBs.
c. Special treatment, if any, of environmental goods in these negotiations.	• Members are not clear as to what constitutes an 'environmental good' and thereafter what should be the special treatment.	• In the list of environmental goods, goods of export interest for developing countries should also be included.
4. TRIPS		
a. TRIPS and Public Health	• How to ensure patent protection for pharmaceutical products does not prevent people in poor countries from having access to medicines while at the same time maintaining the patent system's role in providing incentives for R&D into new medicines.	• TRIPS Agreement under Article 31 provides for compulsory licensing procedure to make available patented medicines and drugs at affordable prices. Doha Declaration on TRIPS and Public Health adopted in November 2001 provides that the TRIPS Agreement does not and should not prevent Member countries from taking measures to protect public health and that each Member has the right to grant compulsory licenses and the freedom to determine the grounds upon which such licenses are granted as well as the right to determine what constitutes a national emergency or other circumstances of extreme urgency referred to under Article 31. Further, General Council has taken a decision on August 30, 2003 to waive obligations under Article 31(f) and 31(h) of TRIPS Agreement, with certain conditions. This decision would ease the problem being faced by the developing countries and Least Developed Countries having little or no manufacturing capacities in the pharmaceutical sector, in using the flexibility of compulsory license. This decision would enable

Agenda for Discussion	Main Issues	India's Position
		manufacture and export of pharmaceutical products under compulsory license to countries with limited or no manufacturing capacities in the pharmaceutical sector. This would further improve accessibility of patented medicines at reasonable prices in poor countries. India has not taken any decision on all of these issues.
b. Geographical indications	• Geographical indications are place names used to identify origin and quality, reputation or other characteristics of products. • Whether to extend the 'higher level of protection' beyond 'wines and spirits' to a wide range of other products, including food and handicrafts.	• India has proposed that the proposed multilateral register should be extended for products other than wines and spirits. From India's point of view, the most important issue is the legal obligations of the Register on non-participating Members. Consensus among the Members could not be reached so far on this issue. • India has been demanding extension of protection available under Article 23 of TRIPS Agreement to products of geographical indications other than wines and spirits.
c. Bio-diversity and traditional knowledge	• How to deal with patentability or non-patentability of plant and animal inventions and the protection of plant varieties. • Whether discussions on these subjects have developed far enough to be handled immediately in the WTO or whether they should wait for technical discussions.	• Draft Cancun Ministerial Text (Second Revision) under para 13 regarding implementation issues, while reaffirming the mandates given under para 12 of Doha Ministerial Declaration and Decision on Implementation-Related Issues and Concerns, instructed the TNC and other negotiating bodies to redouble the efforts to find appropriate solutions as a priority and requested the Director General to continue the consultations undertaken by him on issues including extension of the protection of geographical indications provided for in Article 23 of the TRIPS Agreement to products other than wines and spirits. However, since there was no consensus among the Member countries on the draft Cancun Ministerial Text, the above draft language could not be agreed to.
d. Non-violation complaints	• The purpose of allowing 'non-violation' cases is to preserve the balance of benefits struck during multilateral negotiations. The issue is to decide whether 'non-violation complaints' should be allowed in intellectual property and if so, to what extent and how (scope and modalities) they could be brought to the WTO's Dispute Settlement procedures.	• However, the draft language as suggested by India and other like-minded countries on implementation issues was different. India alongwith other like-minded Member countries such as Cuba, Egypt, Indonesia, Jamaica, Kenya, Malaysia, Pakistan, Sri Lanka, Tanzania, Uganda and Zimbabwe, reaffirmed that negotiations on outstanding implementation issues shall be an integral part of the Doha Work Programme.
5. Singapore Issues		
a. Trade and Investment b. Trade and Competition Policy c. Trade Facilitation	• Whether there is 'an explicit' consensus on modalities that would allow negotiations to go ahead, leading to new WTO rules on these four issues.	• WTO is not the right forum and that the traditional WTO principles of non-discrimination particularly national treatment are not appropriate for a development policy-related issues like investment. • There are significant and deep differences in views of Members on many elements of these issues. India is not entirely convinced of

Agenda for Discussion	Main Issues	India's Position
d. Transparency in Government Procurement	• Members also take position that, negotiation will commence after the Fifth Ministerial and results of negotiations would be part of 'single undertaking' to be concluded by March 31, 2005.	the appropriateness of taking a decision on modalities as it does not give any idea of the substance and direction of obligations that agreements in this area may require the country to undertake. • Negotiations on these issues may commence only after 'explicit consensus' on modalities among all members of the WTO and that each of the four Singapore issues should be considered separately and not covered under a single set of modalities. • The need for a multilateral agreement on investment itself is not clear. Although it can neither promise additional investment flows nor reduce transaction costs for investors significantly, such agreement will certainly curtail the policy space of developing countries. • There exists a wide divergence in views on various elements of 'investment' including scope and definition, transparency, dispute settlement, performance requirement, etc. • Further work needs to be done on understanding elements in 'competition' such as core principles, cooperation mechanisms and the coverage and prohibition of hardcore cartels through appropriate mechanisms before India can start comprehending the implications of any multilateral discipline. • Multilateral rules, binding in nature, in respect of trade facilitation and transparency in government procurement would entail high costs for developing countries.
6. Trade Rules		
a. Anti-Dumping b. Subsidies c. Regional Trade Agreements	• Improve and clarify the anti-dumping Agreement. • Improve and clarify disciplines in the Subsidies Agreement. • How to interpret the phrase 'substantially all the trade' ; regulations that could restrict trade such as rules of origin under preferential schemes; how regional agreements relate to development and the primacy of the multilateral trading system and the negative effect regional agreements can have on other countries.	• India has made three submissions to the negotiating group on Rules. The first submission has sought Special and Differential treatment for developing countries during anti-dumping and countervailing duty investigations. The second submissions has identified specific provisions of the anti-dumping agreement which require amendments. The third submission highlights provisions that require amendments to the Subsidies Agreement.
7. Dispute Settlement	• Clarify and improve provisions of the Dispute Settlement Understanding (DSU). The Doha Declaration stated that these negotiations will not be part of the single undertaking. i.e. that they will not be tied to the success or failure of	• A comprehensive set of proposals was tabled by India alongwith certain other countries in the special session of Dispute Settlement Body (DSB).

Agenda for Discussion	Main Issues	India's Position
	the other negotiations mandated by the declaration. All members, however, expressed a readiness to continue work beyond May 31, 2003 towards an agreement.	
8. Trade and Environment	• The need to clarify the relationship between existing WTO rules and specific trade obligations set out in multilateral environmental agreements (MEAs); exchange of information between the WTO and MEA secretariats; criteria for granting observer status to other international organisations and liberalisation of trade in environmental goods and services.	• India has submitted a paper on "the effect of environmental measures on market access" to the Committee on Trade and Environment (CTE). (WT/CTE/W/207 dated 21/5/2002) and another paper on "Relationship between Specific Trade Obligations set out in MEA and WTO Rules" (TN/TE/W/23 dated 20/2/2003).
9. Trade, Debt and Finance	• Durable solution to the problem of external indebtness of developing countries and to strengthen the coherence of international trade and financial policies with a view to safeguarding the Multilateral Trading System (MTS) from the effects of financial and monetary instability.	• It is necessary to make significant progress in the areas of great importance to developing countries.
10. Trade and Technology Transfer	• Recommend on steps to be taken within the mandate of WTO to increase flows of technology to developing countries.	• Need to move to the stage of identification of elements of a possible agreement and agree on start of negotiations.
11. Electronic Commerce	• The main issues are (i) classification of the contents of certain electronic transmissions, (ii) development-related issues, (iii) fiscal implications of e-commerce, (iv) relationship (and possible substitution effects) between e-commerce and traditional forms of commerce, (v) imposition of customs duties on electronic transmissions, (vi) competition, and (vii) jurisdiction and applicable law/ other legal issues	—

V CURRENT ACCOUNT DYNAMICS IN AN OPEN ECONOMY

Introduction

5.1 Large and persistent current account deficits across developed and developing countries alike posed considerable challenges for macroeconomic stability and growth during the 1980s and the 1990s. The two decades, however, present interesting contrasts in the underlying dynamics of the current account outturn. In most developing countries during the 1980s, large and unsustainable fiscal deficits were the key causal factor, spilling over into large current account deficits which were predominantly financed by debt flows. When the current account deficits turned unsustainable, they triggered off debt crises, impaired debt servicing and led to loss of growth. The painful debt reorganisation that followed had pervasive and lasting effects in the form of financial instability. During the 1990s, however, excessive current account deficits were mainly driven by large private sector saving-investment gaps which exploded into contagious currency crises that entailed substantial output and welfare losses, wrecked domestic financial systems and posed the most serious threat to global financial stability in recent decades. These diverse experiences have necessitated a reappraisal of the determinants of the behaviour of the current account and issues relating to its sustainability.

5.2 The Indian experience reveals significant differences from the international developments, especially in the 1990s. In the late 1980s, the unrelenting expansion of the fiscal deficit was reflected in rising external current account deficits, culminating in the balance of payments crisis of 1991, a haemorrhage of international reserves and a situation perilously close to debt default. Nevertheless, a combination of prudent and unorthodox policies for stabilisation and structural change ensured that the crisis did not translate into generalised financial instability. In the 1990s, the lessons drawn from managing the crisis led to external sector policies that emphasised the competitiveness of exports of both goods and services, a realistic and market-based exchange rate regime, external debt consolidation and a policy preference for non-debt creating capital flows. These policies ensured that the current account deficit remained around one per cent of gross domestic product (GDP) and was comfortably financed even as the degree of openness of the economy rose significantly relative to preceding decades and capital flows began to dominate the balance of payments. In retrospect, the policy choice for non-debt flows turned out to be eminently successful in terms of ensuring a sustainable current account and a reduction of external debt ratio to 'least indebted' levels. In contrast to the general developing country experience, there were subtle shifts in external competitiveness which underpinned the low current account deficit in India during the 1990s. Although merchandise exports did not grow as fast as those of other emerging market economies (EMEs) in terms of pace and technological content, a rapid expansion of software and IT exports as well as a prolonged surge in workers' remittances kept the current account deficit comfortably low, eventually turning it into a surplus in 2001-02 and 2002-03. Furthermore, although fiscal deficits remained inflexible downwards, they did not spill over into the external sector in India during the 1990s, in contrast to several other developing countries. Fiscal deficits were almost entirely financed by domestic saving. There was also a shift in the composition of the fiscal deficit between the late 1980s and the 1990s. In the 1980s, over 70 per cent of Government sector borrowings were undertaken to finance capital expenditures. On the other hand, it was large revenue deficits which dominated the fiscal accounts in the 1990s, constituting more than 54 per cent of the GFD whereas the share of capital expenditure in the GFD declined from around 55 per cent in the early 1990s to around 34 per cent in the late 1990s. The resulting stagnation in public investment, accompanied by the downturn in private investment in the second half of the 1990s dampened the demand for imports and contributed to the favourable current account outcome. Thus, in many significant ways, the underlying dynamics of the current account gap in India provide interesting divergences from the conventional wisdom and the cross-country experience.

5.3 Several key issues emerge from the foregoing with direct relevance for understanding and evaluating the behaviour of the current account in the context of the evolving macroeconomic scenario in India, particularly in the context of a growing degree of outward orientation of the economy. First, do current account deficits matter and if so, what level of current account deficit is sustainable? Second, do higher budget deficits cause current account imbalances, *i.e.,* are they twins or only distant cousins? If the fiscal

accounts are in balance, should a current account deficit caused by a widening private sector saving-investment gap be a matter of policy concern, revisiting the Lawson's doctrine (1987). Third, are rising shares of services in GDP reflected in international competitiveness? And fourth, what pulls in workers' remittances - the largest source of foreign exchange after goods and service exports and a stable source of external financing *vis-à-vis* private capital flows? These questions are addressed in this Chapter by reviewing the available cross-country experience, surveying the literature and conducting empirical tests in the Indian situation. Section I provides analytical underpinnings of the current account in an open economy framework with particular emphasis on current account sustainability under Indian conditions. Section II sets out the static as well as dynamic benefits for current account sustainability arising from trade in services. In view of the preponderant role of workers' remittances in India's balance of payments, this Section also undertakes an in-depth examination of these flows, including issues relating to sources, determinants and stability. Section III deals with India-specific issues in the ongoing debate under the General Agreement of Trade in Services (GATS). The Chapter ends with some concluding observations.

5.4 The main conclusion that emerges is consistent with the received wisdom in that excessive current account deficits tend to enhance vulnerability to external shocks and financial instability. In the current international context, movements in national current account balances are increasingly being recognised as manifestations of the global imbalances. The empirical evidence indicates that even current account deficits which appear optimising from an inter-temporal perspective or are on account of private sector imbalances run the risk of sharp reversals. This stresses, therefore, the need to keep current account deficits within sustainable limits – an approach followed by India in its external sector management since the early 1990s. On the other hand, the modest levels of current account deficits in India during the 1990s could be a reflection of stagnation in investment demand in the economy. The negative public sector saving-investment gap in India seems to have been adjusted within the economy without spilling over to the external sector. Reasonably strong evidence on the presence of 'J-curve' effects suggests the need for an integrated application of monetary, fiscal and exchange rate policies while targeting the appropriate current account balance for policy purposes. This has significant implications for invisible exports which have played an important role in offsetting structural trade deficits in India. The high labour-intensity of the principal components - workers' remittances, software and IT services - indicates that the service intensity of India's exports is likely to be determined by the orientation of domestic output and employment in favour of these categories of services as well as a higher income elasticity of external demand for services exports *vis-à-vis* domestic demand for services imports. In the years ahead, these factors need to be explicitly recognised in formulating India's position in the ongoing debate on the GATS.

I. CURRENT ACCOUNT BALANCE AND SUSTAINABILITY

Stylised Facts from Cross-Country Experience

5.5 Large current account deficits began to characterise the balance of payments of developing countries during the second half of the 1970s under the impact of oil price shocks. The debt crisis of the early 1980s interrupted this trend. Between 1983 and 1989, current account deficits in developing countries shrank in response to structural adjustment policies as well as a generalised risk aversion to developing country debt which dominated international financial markets. In general, the period from the mid-1980s to mid-1990s was characterised by removal of official restrictions on current transactions as part of the wider market-oriented reforms undertaken in these countries. Investor confidence returned to the developing world in the aftermath of the Brady Plan and net capital flows surged to pre-1914 levels by 1996. Sizeable current account deficits began to reappear for a few developing countries in the 1990s. In the 1990s, however, countries running large current account deficits received severe shocks – Mexico in 1994, East Asia in 1997, Brazil in 1998 and Argentina in 2001. Net capital flows to developing countries declined almost continuously after 1997 and it is only in 2003 that a hesitant recovery set in. The adjustment to the severe financial crises produced a dramatic turnaround and current account surpluses were recorded under the impact of import compression and dynamic export efforts, particularly in the crisis-affected economies (Table 5.1).

5.6 An important aspect of the current account dynamics is the degree of trade openness. During the last two decades, the trend towards greater openness of economies is reflected in significant reduction in the mean tariff rates as well as in improvements in the openness indicator, measured as the ratio of exports *plus* imports to GDP (Table 5.2). Reflecting the global trends, the weighted mean tariff rate for India declined

Table 5.1: Cross-Country Comparison of Current Account and Fiscal Balances

(Per cent to GDP)

Country		1976-80	1981-85	1986-90	1991-95	1996-00	2001	2002
1		2	3	4	5	6	7	8
Argentina	CAD	..	-2.1	-1.3	-2.5	-3.8	-1.7	9.4
	GFD	-5.0	-5.3	-1.5	-0.5	-2.0	-3.3	-1.1
Brazil	CAD	..	..	-0.3	-0.4	-4.0	-4.6	-1.7
	GFD	-1.2	-5.1	-13.0	-4.9	-7.5	..	2.4
Chile	CAD	-4.5	-9.8	-3.1	-2.5	-2.9	-1.8	-0.8
	GFD	-0.1	-1.3	0.9	1.9	0.6	..	..
China	CAD	..	0.0	-0.2	0.9	2.5	1.5	2.9
	GFD	-3.5	-0.4	-0.8	-2.4	-1.9	-4.4	-3.0
India	**CAD**	**0.6**	**-1.4**	**-2.2**	**-1.2**	**-1.1**	**-0.2**	**1.0**
	GFD	**-5.0**	**-6.8**	**-8.1**	**-5.7**	**-5.1**	**-6.1**	**-5.9**
Indonesia	CAD	..	-3.6	-2.5	-2.3	1.6	4.7	..
	GFD	-2.9	-1.7	-1.7	0.7	-0.7	-1.2	..
Korea	CAD	-3.6	-2.8	4.3	-1.3	3.1	1.9	1.3
	GFD	-1.7	-1.9	0.3	-0.2	-0.6	..	..
Malaysia	CAD	2.6	-8.3	2.4	-6.5	5.6	8.3	..
	GFD	-6.0	-10.8	-5.6	0.1	-0.4	..	..
Mexico	CAD	-4.7	-0.6	-1.0	-5.2	-2.5	-2.9	-2.2
	GFD	-3.0	-8.3	-8.9	2.5	-1.1	-0.7	-1.8
Philippines	CAD	-4.8	-5.4	-1.7	-3.4	2.8	1.8	5.4
	GFD	-1.3	-2.9	-3.2	-0.6	-1.2	-4.0	-5.2
Thailand	CAD	-5.4	-5.3	-3.0	-6.4	4.1	5.4	6.0
	GFD	-3.3	-3.4	1.4	2.9	-1.5	-2.4	-1.4
Turkey	CAD	..	..	-0.01	-0.7	-1.5	2.3	-1.0
	GFD	..	..	-3.2	-4.9	-9.9	-19.6	..
UK	CAD	0.2	1.3	-3.1	-1.6	-1.2	-1.3	-0.9
	GFD	-4.9	-3.7	-1.2	-4.7	-1.0	0.9	-1.3
USA	CAD	-0.2	-1.4	-2.4	-1.0	-2.5	-3.9	-4.6
	GFD	-2.2	-4.5	-3.6	-3.5	0.7	0.9	-2.2

(+) : Surplus (-) : Deficit .. Not Available.

Note : CAD : Current Account Balance to GDP ratio. GFD : Gross Fiscal Balance to GDP ratio.

Source : International Financial Statistics, IMF.

from 79.0 per cent in 1990 to 30.9 per cent in 2001 while trade openness improved from 14.9 per cent to 19.7 per cent between 1992 and 2001. Cross-country evidence suggests that higher trade openness is generally associated with export-oriented economies (See Chapter IV). The East Asian experience is an archetypal case in point. As the events of the late 1990s unfolded, it also became clear, however, that a high degree of trade openness implies that external developments are quickly transmitted to the domestic economy and *vice versa.*

Table 5.2: Indicators of Trade Openness of Select Countries

(Per cent)

	Mean Tariff Rates		Trade/GDP	
Country	1992	2001	1992	2001
1	2	3	4	5
Argentina	12.2	11.6	11.4	17.4
Brazil	42.2	12.9	19.6	27.8
Chile	11.0	8.0	43.4	53.1
China	41.2	15.3	28.5	43.3
India	**79.0 ***	**30.9**	**14.9**	**19.7**
Indonesia	22.0 #	8.4	43.5	61.8
Japan	6.0 +	5.1	14.2	18.0
Mexico	13.4	16.2	32.3	53.6
Philippines	28.0 +	7.0	45.9	94.5
Sri Lanka	28.3 *	9.8	54.8	73.0
Thailand	38.5 #	17.0	61.3	105.5
USA	5.6 #	4.0	15.5	18.2

* Refers to 1990 # Refers to 1989 + Refers to 1988

Source: International Financial Statistics, IMF and World Development Indicators, World Bank.

Exchange Rates and the Current Account

5.7 The exchange rate is widely accepted as a key determinant of the current account balance. Belonging to the rich tradition of the elasticities approach in the theory of balance of payments, movements in the exchange rate impact on relative prices and 'switch' resources/consumption

expenditures between the production and consumption of tradables (exports/imports of goods and services) and non-tradables. Thus, when the exchange rate is adjusted downwards, prices of exports of goods and services fall in foreign currency terms and induce an increase in foreign demand. Imports become costlier in domestic currency terms and this dampens domestic demand. These effects, in turn, bring about changes in the current account balance. From a policy perspective, the desired effects of exchange rate changes on the current account depend upon the Marshall-Lerner axiom – the sum of the price elasticities of foreign demand for exports and the domestic demand for imports should exceed one. The salutary effects of a change in the exchange rate on the current account depends critically on the extent to which the exchange rate adjustment is transmitted to foreign currency export prices and import prices in domestic currency, *i.e.*, the degree of pass-through (a useful survey of studies on exchange rate pass-through as well as empirical estimates for India are given in Patra and Pattanaik, 1994; Ranjan, 1995; see also Chapter IV). Moreover, the impact of exchange rates on the current account is lagged, formalised in the literature as the J-curve effect (Box V.1). An exchange rate depreciation initially worsens the current account but improvement sets in over time. On the other hand, if there is a currency appreciation, there may be an inverted J-curve. The period of transmission could be characterised by compensating variations in domestic prices which may nullify the desired effect of the exchange rate change. Indeed, empirical evidence points to a succession of J-curves such that the losses of the initial exchange rate action are never recouped.

5.8 In the Indian context, studies have found that the trade balance of India is sensitive to exchange rate changes (Patra and Pattanaik, 1994; Singh, 2002), indicating a significant role for monetary and fiscal policies in conjunction with the exchange rate in influencing the behaviour of the current account. An empirical exercise undertaken for India within the framework of a bi-variate vector auto-regression model indicates bi-directional causality between the current account deficit and the exchange rate.[1]

Box V.1

J- and S- Curve Effect: Theory and Evidence

The J-curve hypothesis generated a series of empirical research that investigated the existence of J-curve both in the US and other countries data. The evidence on J-curve is mixed. Earlier studies like Krugman and Baldwin (1987) found evidence of a J-curve in the US data. However, Rose and Yellen (1989) and Rose (1990 and 1991) not only reject the J-curve hypothesis but also argue that there is no significant effect of the real exchange rate on the trade balance for both the developing and the developed countries, including the US. A more recent study on US data by Bahmani-Oskoee and Brooks (1999) found that in the short run there is no effect of real exchange rate on the trade balance, but in the long-run the real depreciation of the US dollar is found to have a favourable effect. Kulkarni and Bhatia (2002) empirically show the existence of the J-curve phenomena in six countries including the inverted J-curve in the case of Japan with an appreciating yen.

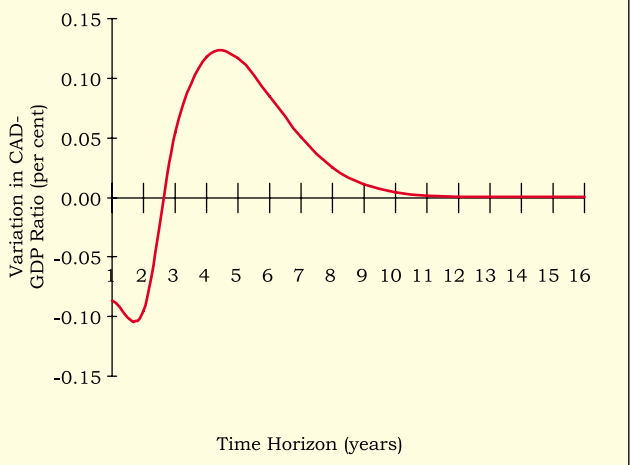
Recent research using dynamic general equilibrium models has found that the trade balance is negatively correlated with current and future movements in the terms of trade (measured by the real exchange rate), but positively correlated with past movements (Backus *et al.*, 1994). This is called the S-curve because of the asymmetric shape of the cross-correlation function for the trade balance and the real exchange rate. Backus *et al.* (1994) developed an international real business cycle model and found that the trade balance is counter-cyclical and the cross-correlation function of the trade balance and the terms of trade displays an S-shape. Marwah and Klein (1996) while estimating trade balance equations for the US and Canada found that, after a depreciation, there is a tendency for trade balances to worsen first and then to improve. After several quarters, there appears to be a tendency to worsen again, which produces an S-pattern that was suggested by Backus *et al.* (1994).

[1] **Granger Causality between Exchange Rate and Current Account Deficit in India : 1951-2002**

Null Hypothesis	LR Test: Chi - square statistic (level of significance)	Result
1	2	3
Changes in nominal exchange rate (DEXCHRATE) do not Granger cause the CAD/GDP ratio	6.41 (0.04)	Reject Null
CAD/GDP ratio does not Granger cause the changes in nominal exchange rate (DEXCHRATE)	8.02(0.02)	Reject Null
Changes in real exchange rate do not Granger cause the CAD/GDP ratio	3.98 (0.05)	Reject Null
CAD/GDP ratio does not Granger cause the changes in real exchange rate	7.75(0.005)	Reject Null

LR : Likelihood Ratio

Chart V.1 : Impulse Response of the Current Account-GDP Ratio to One Standard Deviation Shock to Change in the Nominal Exchange Rate



5.9 The impulse response of the current account deficit-GDP ratio to a nominal exchange rate shock shows the expected 'J' curve response over a short to medium term time horizon, *i.e.*, up to five years. Thereafter, the response function shows a downward slope, characteristic of the 'S' curve effect. This suggests that demand effects resulting from the nominal exchange rate change are transitory and cannot persist over a long period (Chart V.1).

Fiscal Deficits and the Current Account

5.10 Over the 1980s and 1990s, the role of fiscal deficits in the evolution of the current account has dominated the policy debate on sustainability. Indeed, unviable fiscal deficits have been the usual suspects in IMF programs for developing countries seeking recourse to it under balance of payments difficulties, whether in the standard absorption approach type demand management programs or the supply-side approach of the 1980s. In this tradition, it is axiomatic under the national accounting identity that if the private sector is in balance, the government deficit will be fully reflected in the current account deficit.[2] The concomitant increase in debt creating flows has implications for future debt servicing and solvency. A contrarian view in the face of this orthodoxy takes the form of the new classical resurrection of the Ricardian equivalence hypothesis. Movements in the fiscal deficit lead to offsetting changes in households' saving behaviour. Future taxes to cover present-day fiscal deficits are fully anticipated through an equivalent increase in private saving and, therefore, there is no spillover of the fiscal deficit into the current account of the balance of payments. Empirical evidence in support of the Ricardian equivalence is weak and in the real world, therefore, the fiscal roots of the current account are widely recognised. Relatively stronger links between the current account and the fiscal balance are observed in underdeveloped financial systems where liquidity constraints are likely to be more binding (Milesi-Ferretti and Razin, 1996), and where macroeconomic policies rely predominantly on fiscal deficits for the acceleration of capital accumulation and growth.

5.11 Stylised evidence on the relationship between the fiscal deficit and the current account deficit in EMEs and industrial countries is somewhat ambiguous. For example, widening fiscal deficits in Brazil (7.5 per cent of GDP in the latter half of the 1990s) were associated with significantly high current account deficits (averaging 4.0 per cent of GDP). In the US, large fiscal deficits were accompanied by high current account deficits during the 1980s (Table 5.1). Similar co-movement was recorded in Malaysia and Thailand in the early 1980s. On the other hand, the deterioration in the current account deficit and consequent crises in UK (late 1980s) and in East Asia (1997) were not associated with widening fiscal imbalances.

5.12 The mixed cross-country experience is borne out by tests of Granger causality between fiscal deficit to GDP ratio and current account deficit to GDP ratio undertaken for a sample of 14 developing and industrial countries (Table 5.3). For most developing countries such as China, India, Indonesia, Malaysia, Mexico and Thailand, fiscal deficits Granger cause current account deficits. On the other hand, the results for countries such as Korea, UK and USA reveal causality running from current account deficits to fiscal deficits. In the case of Argentina and Chile, a significant bi-directional causality is observed, suggesting a self-reinforcing vicious circle.

5.13 As noted earlier, the deterioration of the fiscal deficit-GDP ratio in India was reflected in widening of the current account deficit during the 1980s (Chart V.2). In 1990-91, the current account deficit at 3.1 per cent of GDP turned unsustainable, leading to an unprecedented external payments crisis. In retrospect, it was the swift and massive macroeconomic stabilisation programme which prevented the balance of payments crisis from turning into financial instability.

[2] The link between fiscal deficits and current account balance can be derived from a financial balance identity: X-M (or CAB) = Y- (C+I+G) = (T-G) + (Sp-Ip) or Current Account Deficit = Fiscal Deficit + Private Sector Saving-Investment Balance.

Table 5.3: Causality Between Current Account Balance and Fiscal Deficit: Cross-Country Evidence
Sample: 1971-2001

Country	Null Hypothesis	F-Statistic	Probability	Lag
1	2	3	4	5
Argentina	A	3.31027	0.08761	1
	B	7.03976	0.01735	
Chile	A	13.0573	0.00154	1
	B	13.7626	0.00122	
China	A	4.11967	0.05834	1
	B	2.42527	0.13781	
Germany	A	1.26028	0.30416	2
	B	3.12585	0.06481	
India	**A**	**12.5321**	**0.00153**	**1**
	B	**0.00224**	**0.96259**	
Indonesia	A	11.1951	0.0018	2
	B	0.42945	0.66049	
Korea	A	1.98268	0.17615	1
	B	7.23427	0.01498	
Malaysia	A	4.11831	0.05747	1
	B	0.83301	0.37347	
Mexico	A	7.48098	0.01315	1
	B	0.20264	0.65769	
Philippines	A	0.25602	0.6179	1
	B	1.86254	0.18613	
Thailand	A	7.45608	0.01166	1
	B	2.47309	0.1289	
Turkey	A	2.26422	0.14729	1
	B	4.15526	0.05429	
UK	A	2.04733	0.14131	3
	B	4.00364	0.02293	
USA	A	0.14993	0.86153	2
	B	4.44409	0.02232	

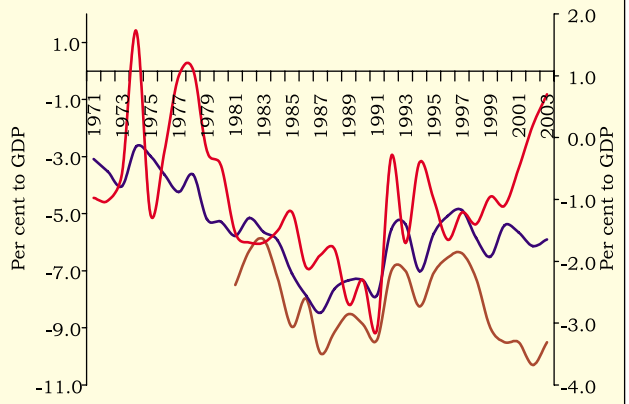
Note : A = GFD does not Granger Cause CAD
B = CAD does not Granger Cause GFD

5.14 Since the mid-1990s, the relationship between the fiscal deficit and the current account in India seems to have blurred. Higher fiscal deficits have been accompanied by a narrowing of the current account deficit, implying that a major part of the fiscal deficit has been absorbed by a surplus in domestic saving of the private sector. A significant decline in the correlation coefficient during 1990-91 to 2002-03 corroborates this weakening co-movement (Table 5.4).

Table 5.4: Correlation Between Fiscal Deficit and Current Account Deficit in India

Period	Correlation Coefficient
1	2
1970-71 to 1980-81	0.10
1980-81 to 1989-90	0.43
1990-91 to 2002-03	0.24
1970-71 to 2002-03	0.60

Chart V.2 : Temporal Behaviour of Twin Deficits in India



5.15 The weakening of the link between fiscal and current account deficits during the second half of 1990s could be attributed to the changing composition of the fiscal deficit. In the 1980s, the high fiscal deficits were mainly due to high investment spending while in the 1990s fiscal deficits mainly reflected the expansion in revenue deficits (Table 5.5). Lower public investment could have had a dampening effect on private investment, thereby constraining the overall investment demand in the economy. This explains the absence of twin deficits during the 1990s.

Table 5.5: Composition of Gross Fiscal Deficit of Central and State Governments in India
(Per cent)

Fiscal Year	Gross Fiscal Deficit-GDP	Composition of Fiscal Deficit (Percentage Share)	
		Revenue Deficit	Capital Expenditure
1	2	3	4
1980-81	7.5	5.1	94.9
1985-86	8.0	23.6	76.4
1990-91	9.4	44.6	55.4
1995-96	6.5	48.8	51.2
1999-00	9.5	65.7	34.3
2002-03	10.1	66.7	33.3

Current Account and the Saving-Investment Balance

5.16 By the standard national accounting identity, current account is the mirror image of the domestic saving-investment balance. Accordingly, developing countries strive to finance the predominant portion of domestic investment with domestic saving in order to economise on the reliance on foreign saving and

thereby ensure current account sustainability. The massive cross-border movements of capital since the 1970s and widespread liberalisation in many developing economies in order to harness foreign capital for growth have subjected this identity to closer scrutiny. In a period of perfect capital mobility, it is argued that investment need not be constrained by availability of domestic savings, and that domestic savings and investment could have a low correlation (Box V.2). Correlation between domestic saving and investment may indicate the prevalent degree of capital mobility (Feldstein and Horioka, 1980).

5.17 Further analytical insights into the saving-investment and current account balance relationship in India can be obtained from components of saving and investment. First, a negative but low saving-investment gap during the period 1995-96 to 2001-02 was due to stagnation in the rate of investment (Table 5.6). Second, in the public sector, investment has remained above saving leading to a negative and stable saving-investment gap since the 1980s. While there was a sharp decline in the public saving rate, the investment rate also shrank with adverse implications for the overall rate of investment in the economy. This also reflects the rising share of current consumption and consequent crowding out of investment outlays of the Government. Third, the private investment rate has remained relatively stagnant since the second half of the 1990s, whereas the private saving rate improved significantly. The rise in private saving has sustained the overall saving rate in the economy, compensating for the decline in public sector saving and the deterioration in the efficiency of capital use. The spillover of the private sector saving investment surplus is being reflected in the modest surplus in the current account in the recent period.

5.18 A high saving rate, given a current account deficit, is an indicator of inter-temporal solvency of a country because it implies higher investment and debt servicing capacity. A key issue regarding the level of

Box V.2

The Feldstein-Horioka Puzzle

Testing the Feldstein-Horioka (FH) hypothesis involves finding correlation between savings and investment as an indicator to measure the degree of capital mobility. The long-term relationship between savings and investment provides a reflection of the future sustainability of the current account deficit. Empirical estimates show that in Argentina, Chile, Honduras, Venezuela, Guatemala, Peru, Algeria, China, Indonesia, Thailand and Turkey, high saving-investment correlations were associated with a stationary current account (Schneider, 1999). On the other hand, a low saving-investment correlation and current account non-stationarity were observed in Mexico, India, South Korea, Brazil, Egypt, Uganda, Madagascar, Cote de Ivory, Mauritania, Haiti and Trinidad and Tobago. A low saving-investment correlation with a non-stationary current account indicates a greater degree of capital mobility.

Several studies found that inclusion of developing countries in the cross-section analysis reduced the strength of saving-investment correlation (Dooley *et al.*, 1986; Summers, 1988). Developing countries recorded lower saving-investment coefficients as compared with the industrialised countries (Wong, 1990; Montiel, 1993; Schneider, 1999). It is further estimated that the long run current account deficit of a developing country is expected to be 0.22 per cent higher than the average if its long run savings rate is one per cent higher than the average (Ventura, 2002).

In the Indian context, studies have provided conflicting results, *i.e.*, very high saving-investment correlation coefficients indicating capital immobility on the one hand, and a low saving-investment correlation in 1970-97 as also a non-stationary current account, on the other. Unit root tests for the current account balances for India for the period 1950-51 to 2001-02 indicate that the current account deficits are stationary. Stationarity of the current account is further reinforced by high correlation (r = 0.82) between savings and investment. In the recent period, this co-movement has further strengthened. The long run current account deficit is estimated to be higher by 0.16 per cent in response to one per cent change in long run saving rate. This implies that changes in domestic savings induce a more or less equivalent change in investment. The coordinates of savings and investment for the period 1950-51 to 2001-02 also reveal that these two variables have moved in close tandem during the entire period (Chart). Thus, the lower current account deficits during the 1990s are perhaps a reflection of high correlation between changes in saving and investment rates.

Relationship between Domestic Saving and Investment Rate in India (1951 to 2002)

Table 5.6: Saving-Investment Gap of Private and Public Sectors in India

(Per cent to GDP)

Period	Private Sector			Public Sector			Overall		
	S	I	S-I	S	I	S-I	S	I*	S-I
1	2	3	4	5	6	7	8	9	10
1970-71 to 74-75	12.4	9.7	2.7	3.0	7.1	-4.1	15.4	16.2	-0.8
1975-76 to 79-80	15.2	10.5	4.7	4.5	9.3	-4.8	19.6	19.1	0.5
1980-81 to 84-85	14.7	10.9	3.8	3.7	9.9	-6.2	18.4	19.8	-1.4
1985-86 to 89-90	18.0	13.2	4.8	2.4	10.1	-7.7	20.4	22.7	-2.3
1990-91 to 94-95	21.5	14.2	7.3	1.4	8.7	-7.3	22.9	24.3	-1.5
1995-96 to 99-00	22.8	16.2	6.6	0.6	7.0	-6.4	23.4	24.8	-1.3
2000-01 to 01-02	26.1	16.1	9.9	-2.4	6.3	-8.7	23.7	23.9	-0.2

S = Gross Domestic Saving, I = Gross Capital Formation, S-I = Saving-Investment Gap. * : Relates to Gross Domestic Capital Formation.
Source : Central Statistical Organisation.

current account deficit to be incurred by a growing economy is the absorptive capacity of the economy. Moreover, a necessary condition for sustained capital inflows is that the rate of return on investment must be greater than the cost of external borrowings. Infrastructure and human capital formation raise the absorptive capacity of a country to sustain higher current account deficits and the resultant capital inflows (World Bank, 2001). In India, CADs have generally been modest except in the mid-1950s, the 1960s and the 1980s (Table 5.7). The decline in the CAD/GDP ratio during the 1990s is seen as reflective of the limited absorptive capacity and infrastructural and other bottlenecks in the economy that hamper higher levels of investment. It needs to be noted that although the investment rate did improve in the 1990s indicating an expansion in absorptive capacity, a rise in the domestic saving rate appears to have economised on the reliance on foreign saving.

Inter-Temporal Approach to the Current Account

5.19 The current account deficits/surpluses being mirror images of saving and investment decisions of public and private sectors, the analysis of saving-investment relationship over time provides insights into the behaviour of the current account. In an open economy framework, the inter-temporal approach to the current account provides a valuable framework to assess the appropriate (*i.e.*, threshold) level of the current account balance for a particular country. According to this approach, current account balances (surplus/deficit) reflect consumption smoothing, emanating from the forward-looking saving and investment decisions of economic agents (Box V.3).

5.20 The crises of the 1980s and the 1990s suggest that some important policy implications of the inter-temporal approach to the current account are flawed (Edwards, 2001). The recent experience indicates that

Table 5.7: Savings and Investment Rates and Current Account Deficits in India

(Per cent to GDP)

Period	Domestic Savings Rate	Investment Rate	ICOR*	Current Account Deficit
1	2	3	4	5
1950-51 to 54-55	8.8	9.0	2.2	0.0
1955-56 to 59-60	11.2	13.3	-4.5	-1.8
1960-61 to 64-65	12.0	14.3	-9.7	-1.8
1965-66 to 69-70	13.3	15.1	-12.7	-1.7
1970-71 to 74-75	15.4	16.2	-2.9	-0.4
1975-76 to 79-80	19.6	19.1	3.4	0.2
1980-81 to 84-85	18.4	19.8	4.5	-1.5
1985-86 to 89-90	20.4	22.7	5.5	-2.2
1990-91 to 94-95	22.9	24.3	6.2	-1.3
1995-96 to 2001-02	23.5	24.5	5.0	-0.9

***** Incremental Capital-Output Ratio (ICOR) denotes the underlying trend derived using the Hodrick-Prescott Filter.
Source : Central Statistical Organisation.

Box V.3

Inter-Temporal Consumption Optimisation Approach to Current Account

The inter-temporal approach to the current account is based on the familiar permanent income hypothesis, which predicts that when current income falls below the permanent income level, the level of saving would fall in order to maintain the level of consumption and *vice versa*. This hypothesis when extended to an open economy translates into borrowing and lending from the international markets to smoothen out consumption in the event of fluctuation in current income. Accordingly, in an open economy, inter-temporal consumption optimisation could be used to predict the level of desired capital flows. A country would run into current account deficit if the national cash flow, defined as output less investment and government spending, is expected to rise over time and *vice versa*. If the saving and investment decisions of the private sector are optimal, the current account is also optimal, irrespective of whether it is in deficit, surplus or balance. Imperfections in international capital markets could, however, result in unsustainable current accounts even if it is the outcome of economic agents optimising their inter-temporal consumption paths.

A number of studies have provided evidence validating the inter-temporal model in several countries (Ghosh and Ostry, 1995; Agenor *et al*., 1999; Kim *et al*., 2002). An inter-temporal model for the period 1951 to 2002 is estimated for India using the saving-investment gap as a proxy for the current account in view of limitations in the data on private consumption. The results indicate that the simple inter-temporal consumption optimisation model is able to explain the direction and turning point of the consumption-smoothing component of the current account balance fairly well. The correlation coefficient between the optimal and actual current account balance is close to one. Thus, fluctuations in the current account balance in India are the outcome of residents trying to smoothen their consumption paths when the national cash flow fluctuates. The result is noteworthy, given the restrictions on capital flows and the intermittent external shocks experienced.

current account deficits need not be regarded as benign even if generated by the private sector. This raises question about the celebrated Lawson's Doctrine which holds that if the fiscal accounts are in balance, a high current account deficit driven by a private sector imbalance is not an issue of policy concern. The more recent period has seen a sharp turnaround in EMEs current account balances from large deficits to surpluses. In the Asian region, current account surpluses and high official foreign exchange reserves are recognised as manifestations of the global imbalance, especially the US twin deficits. As stronger recovery takes root across the globe, these countries would have to confront again with the challenge of the early 1990s, *i.e.,* whether global savings are adequate to meet the investment demand of emerging markets and what order of imbalance could be considered as appropriate from the stand point of ensuring global monetary and financial stability (Mohan, 2003). Ultimately, sustainability of the current account deficit depends upon foreign investors' confidence in the domestic economy. As the recent crises showed, investors' assessment can change suddenly and capital flows can dry up due to herd behaviour.

Operational Issues in Current Account Sustainability

5.21 In an open economy framework, where dynamic linkages of domestic financial and real sectors with the external sector become more vivid, the issue of maintaining the current account deficit at sustainable levels becomes crucial. There are various approaches to assess the sustainability of current account position in terms of its size, composition and financing (Box V.4).

Box V.4

Operational Concepts of Current Account Sustainability

Determination of sustainability of the current account is not amenable to simple rules. Nevertheless, a number of criteria have emerged to assess sustainability. A current account deficit can be sustained as long as the growth rate of national income exceeds the rate of interest on the nation's liabilities even if the debt-GDP ratio rises over time. It is argued, however, that a non-increasing foreign debt-GDP ratio is a practical sufficient condition for sustainability. From an operational point of view, the current account deficit can be assumed to be sustainable as long as no exchange rate or external debt crises occur. Three situations can be visualised under which the current account is likely to be unsustainable: (i) current account imbalance is large relative to GDP; (ii) the imbalance is caused by a reduction in the domestic saving rate rather than a rise in the investment rate; and (iii) domestic saving rates are low.

The concept of sustainability is somewhat difficult to operationalise and is therefore gauged, in practice, by examining a set of indicators that reflects the soundness of the external sector of the country and the perception of risks. These indicators can be excessive fiscal deficits, credit growth and various reserve adequacy measures.

Does Size of the Current Account Matter?

5.22 The level of the current account deficits is typically focussed upon in the context of assessing sustainability. Large current account deficits are likely to be unsustainable irrespective of origin, whether in the public sector or private sector (Loser and Williams, 1997). The Chilean crisis in the early 1980s was associated with a CAD/GDP ratio exceeding 14 per cent. The Mexican crisis of 1994 and the East Asian crisis of 1997 have reinforced the view that the size of the current account deficits does matter. While it is argued that a CAD/GDP ratio above 5 per cent is a cause of alarm (Summers, 1996), there is also the view that this is a cause for concern if the deficit is financed by short-term debt (Milesi-Ferreti and Razin, 1996). A large CAD emanating from high investment growth may not be particularly inimical to growth (Bruno, 1995); another view, however, is that any CAD above a threshold level is an early warning of impending crisis. It is also argued that the current account deficit alone is neither a necessary nor a sufficient condition to define solvency. The solvency ratio for a country depends, *inter alia*, on the stability and outlook for current receipts (Reddy, 1999). In an inter-temporal framework, short-run sustainable CADs for most developing countries are estimated at 3 to 5 per cent of GDP (Goldman Sachs, 1997). For most countries, the steady state (long-run) sustainable CAD/GDP ratio is estimated at below 4 per cent of GDP. The actual outturn during 2001 reveals that out of 25 sample developing countries, most countries recorded CAD-GDP within the long run sustainable levels (Table 5.8).

5.23 The record of the current account deficit of India, when benchmarked against these findings, shows that it remained well below the critical limit during the period 1970-71 to 2002-03, ranging from a surplus of 0.2 per cent in the period 1976-80 to a deficit of 2.2 per cent in the period 1986-90. Operational indicators of current account sustainability for India indicate a steady improvement since the 1990s except for the ratio of fiscal deficit to GDP (Table 5.9).

Does Composition Matter for Current Account Sustainability?

5.24 Beyond the size, the composition of the current account and its financing can be an important criterion in determining its sustainability. Capital flows with higher foreign direct investment (FDI) content can ensure sustainability even if the CAD/GDP ratio is relatively high. For instance, Singapore, on an average, sustained a CAD of 12 per cent of GDP during the period 1970-1982, with nearly one half of the capital inflows comprising FDI. Real GDP grew at about 8-9 per cent and subsequently the domestic savings rate accelerated to about 40 per cent in 1982. It is argued that higher FDI inflows created positive externalities by augmenting the production function of the host country (Borensztein, *et al.*, 1995). Furthermore, it is also contended that while FDI raises the domestic investment rate, the positive direct and indirect effects of FDI on domestic savings in reality lead to an improvement in the CAD in the long-run. Australia and New Zealand are more recent examples in this genre.

Table 5.8: Sustainable Current Account Deficit: Cross-Country Evidence

(Per cent of GDP)

Country	Actual Current Account Deficit		Short-run Sustainable Current Account Deficit	Steady State (Long-run) Sustainable Current Account Deficit
	1997	2001		
1	2	3	4	5
Argentina	-4.2	-1.7	-3.9	-2.9
Brazil	-3.8	-4.6	-2.9	-1.9
Bulgaria	4.1	-6.2	-0.4	-2.4
Chile	-4.4	-1.8	-4.2	-2.9
China	4.1	1.5	-12.9	-11.1
Colombia	-5.4	-1.5	-2.6	-1.9
Czech Republic	-6.8	-4.6	-2.1	-1.3
Ecuador	-2.3	-4.7	0.5	-1.3
Hungary	-2.1	-2.1	-0.8	-1.3
India	**-0.7**	**0.2**	**-3.8**	**-2.8**
Indonesia	-2.3	4.7	-4.0	-3.4
Korea	-1.7	1.9	-4.9	-3.6
Malaysia	-5.9	8.3	-4.9	-3.4
Mexico	-1.9	-2.9	-2.1	-1.9
Morocco	-0.5	4.7	-0.3	-1.3
Panama	-5.3	-4.5	-0.8	-1.9
Peru	-5.8	-2.0	-3.3	-2.9
Philippines	-5.3	1.8	-4.5	-3.8
Poland	-4.0	-2.9	-4.7	-3.6
Romania	-6.1	-5.5	-2.3	-1.9
Russia	0.0	11.3	-2.5	-1.9
South Africa	-1.5	-0.3	-3.0	-1.9
Thailand	-2.0	5.4	-6.0	-4.5
Turkey	-1.4	2.3	-2.1	-1.9
Venezuela	3.9	3.1	-2.2	-1.9

Source: Goldman Sachs, 1997; International Financial Statistics, IMF.

Table 5.9: Indicators of Current Account Sustainability for India

(Per cent)

Indicator	1971-75	1976-80	1981-85	1986-90	1991-95	1996-00	2001-03
1	2	3	4	5	6	7	8
Trade Deficit/ Gross Domestic Product	-0.9	-1.4	-2.5	-2.1	-1.2	-2.5	-2.2
Current Account Deficit/Gross Domestic Product	-0.4	0.2	-1.5	-2.2	-1.3	-1.3	0.2
Gross Fiscal Deficit/Gross Domestic Product	-3.3	-5.0	-6.8	-8.1	-5.7	-5.1	-5.9
Private Sector: SI Gap	2.7	4.7	3.8	4.8	7.3	6.6	9.9
External Debt/Gross Domestic Product	15.3*	12.8*	13.2*	15.8*	33.9	24.3	21.2
Short-term Debt/Total Debt	..	..	..	10.0	6.7	5.3	3.6
Non-Debt Capital Flows/Total Capital Flows	..	..	..	6.0	27.1	49.3	94.8
Debt Servicing	..	..	..	30.2	28.9	19.7	15.3
Changes in Real Effective Exchange Rate	..	-2.1	0.8	-4.9	-2.9	-0.8	4.8
Import Cover (Months)	4.3	7.4	4.2	3.3	5.9	7.2	11.2

* Comprising of external assistance, commercial borrowings and IMF loans only. Thus, the external debt-GDP ratio for these periods is not comparable with the subsequent period.
SI Gap : Saving Investment Gap .. Not Available
Source : Reserve Bank of India.

5.25 A current account imbalance caused by widening trade deficits is deemed to be less sustainable and may indicate structural competitiveness problems (Roubine and Wachtel, 1997). These structural constraints may be reflected in lower exports-GDP ratios and higher imports as domestically produced goods may not be able to compete with imported goods within the domestic market. Among a sample of 15 countries, it is found that countries such as Argentina, Chile, Indonesia and Malaysia generally witnessed significant trade surpluses during the last two decades mainly due to an export led growth strategy (Table 5.10). On the other hand, India and US recorded trade account deficits consistently.

5.26 From the viewpoint of assessing current account sustainability in India, examination of the sources of current account deficits/surpluses assumes significance. The history of the current account in India follows distinct phases: (i) late 1950s to early 1960s when the current account deficit simply mirrored the deficits in merchandise trade; (ii) mid-1970s till early 1980s when the trade deficit was moderated to a significant extent by surpluses in the invisible account; (iii) second half of the 1980s when a distinct decline in support from invisible surpluses turned out to be a key factor in precipitating the crisis of 1990-91; and (iv) the post 1990-91 period when resumption of growth in net invisible earnings underpinned the favourable movements in India's current account balance (Chart V.3).

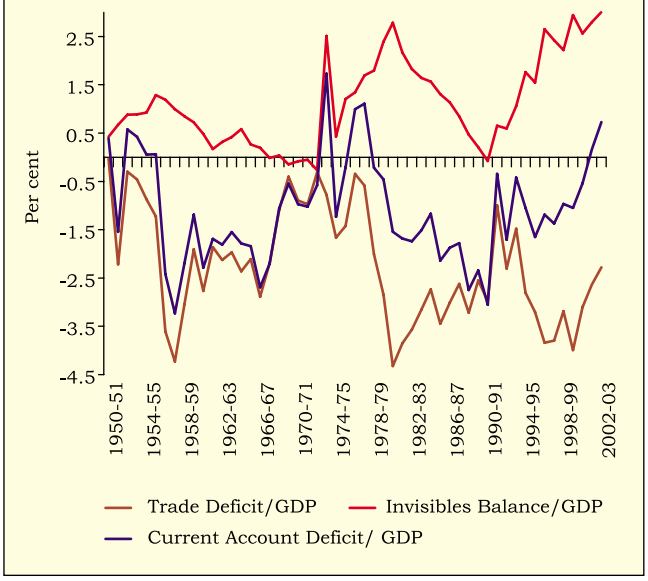
Table 5.10: Cross-Country Comparison of Trade Balance

(Per cent to GDP)

Country	1980s (Average)	1990-94 (Average)	1995	1996	1997	1998	1999	2000	2001	2002
1	2	3	4	5	6	7	8	9	10	11
Argentina	1.2	1.0	0.9	0.6	-0.7	-1.0	-0.3	0.9	2.7	16.9
Chile	3.0	1.8	1.9	-1.4	-1.7	-2.6	3.3	2.8	3.0	3.8
China Mainland	-0.6	1.0	2.6	2.4	5.1	4.9	3.6	3.2	2.9	3.6
Germany	4.3	2.3	2.6	2.9	3.3	3.6	1.7	1.6	2.5	3.1
India	**-2.4**	**-1.1**	**-1.8**	**-2.6**	**-2.4**	**-2.5**	**-1.9**	**-3.1**	**-2.6**	**-2.2**
Indonesia	4.6	4.6	3.2	2.6	4.7	19.3	14.7	16.4	15.6	..
Japan	2.7	2.9	2.5	1.8	2.4	3.1	2.7	2.4	1.7	2.4
Korea	-0.2	-0.8	-0.9	-2..9	-0.7	13.1	7.0	3.7	3.2	3.0
Malaysia	8.2	3.7	-0.1	3.8	3.5	24.2	28.6	23.1	20.9	19.1
Mexico	3.2	-3.1	2.5	2.0	0.2	-1.9	-1.2	-1.4	-1.6	-1.2
Philippines	-4.8	-9.7	-12.1	-13.7	-13.5	0.0	6.5	5.0	-1.0	0.5
Thailand	-4.0	-4.8	-4.7	-5.2	1.0	14.5	11.4	9.5	7.4	7.7
Turkey	..	-4.9	-7.8	-5.8	-8.1	-7.1	-5.7	-11.2	-3.1	-4.6
UK	-1.7	-2.2	-1.7	-1.8	-1.5	-2.5	-3.0	-3.2	-3.4	-3.4
USA	-2.2	-1.8	-2.3	-2.4	-2.4	-2.8	-3.7	-4.6	-4.2	-4.6

.. Not Available
Source: International Financial Statistics, IMF.

Chart V.3 : Current Account Deficit in India



5.27 In the wake of the 1991 crisis, the issue of a sustainable current account deficit assumed crucial significance from an operational point of view. The path of the CAD in India during the period 1952-53 to 1998-99 is observed to be consistent with inter-temporal solvency, as it did not violate the inter-temporal budget constraint (Callen and Cashin, 1999). Their estimates of long-run sustainability suggest that a current account deficit in the range of 1.5 to 2.5 per cent of GDP could be consistent with the stabilisation of India's net external liabilities to GDP ratio. The High Level Committee on Balance of Payments (Chairman: C. Rangarajan) recommended a CAD-GDP ratio of 1.6 per cent. The Tenth Five Year Plan (TFYP) projects a current account deficit consistent with macro parameters on domestic saving, investment and incremental capital-output ratio to achieve a growth rate of 8 per cent over the Plan period (*i.e.,* 2002-03 to 2006-07). Domestic saving would be supplemented by a modest expansion in the inflow of external savings (CAD) from 0.9 per cent of GDP in the Ninth Plan to 1.6 per cent of GDP in the Tenth Plan period (Table 5.11). Given the experience of the 1990s and the macroeconomic targets set for the Tenth Plan, it is important that durable policies be put in place to increase the economy's absorptive capacity commensurately (RBI, 2003).

5.28 To sum up, there is a growing consensus that high current account deficits have been at the core of external payments crises worldwide. The available literature suggests that a CAD-GDP ratio of about 5 per cent should be a cause for concern from the viewpoint of sustainability. In the Indian case, however,

Table 5.11: Current Account Balances in India: Planned and Actual

(Per cent to GDP)

Year	Gross Domestic Savings	Gross Domestic Investment	Planned Current Account Deficits	Actual Current Account Deficits
1	2	3	4	5
1991-92	22.0	22.6	-1.6	-0.3
1992-93	21.8	23.6	-1.6	-1.7
1993-94	22.5	23.1	-1.6	-0.4
1994-95	24.8	26.0	-1.6	-1.0
1995-96	25.1	26.9	-1.6	-1.7
1996-97	23.2	24.5	-1.6	-1.2
1997-98	23.1	24.6	-2.1	-1.4
1998-99	21.5	22.6	-2.1	-1.0
1999-00	24.1	25.2	-2.1	-1.1
2000-01	23.4	24.0	-2.1	-0.8
2001-02	24.0	23.7	-2.1	0.2
Tenth Plan (2002-03 to 2006-07)	28.4	26.8	-1.6	..

.. Not Available

Source : CSO, Planning Commission, Government of India and Reserve Bank of India.

a current account deficit of a little above 3 per cent of GDP triggered off a payments crisis. This underscores the need to take a country-specific view of current account sustainability. J-curve and S-curve effects of nominal exchange rate changes on the current account are found to be significant in India, suggesting that demand effects generated by nominal exchange rate adjustments are transitory in nature. This implies a limited role for wielding the exchange rate as a policy instrument to influence the behaviour of the current account in the medium term. Second, it is observed that saving-investment correlations are smaller in developing countries as compared with the developed countries, implying financing of domestic investment through higher capital mobility. The Indian experience, however, turns out to be different from the developing country experience with high saving-investment correlation and low capital mobility. Furthermore, in India, a high positive saving-investment gap of the private sector is a reflection of stagnation in investment demand during the greater part of the 1990s. Thus, the negative public sector saving-investment gap in India seems to have been adjusted within the economy without spilling over to the external sector. Finally, in case of developing countries, unidirectional causality from fiscal deficits to current account deficits is detected. In India, even as fiscal deficits have remained downwardly inflexible, the current account deficit has remained insulated by buoyant private saving. Apart from the size, the composition of the financing of current account also matters for sustainability.

II. INVISIBLES: ANCHORING CURRENT ACCOUNT SUSTAINABILITY

5.29 The experience of the 1990s has brought about a subtle shift in the reigning paradigm underlying the management of the current account. Increasingly, the concept of sustainability has focussed on the role of exports in modulating the size of the current account. In the second half of the 1990s, an operational rule has taken shape which suggests that the CAD/GDP ratio could be altered in consonance with the rate of growth of current receipts. Thus, higher the ratio of current receipts to GDP, the higher is the CAD/GDP ratio that can be sustained, given a desired level of the debt service ratio. *Per contra*, a lower current receipts to GDP ratio should be consistent with a lower CAD in terms of GDP (RBI, 1997). The impetus for formulating this dynamic operational rule for current account sustainability has emerged out of a resurgence of invisible exports in the 1990s from a depressed performance in the preceding decade. The renewed buoyancy in invisible exports has, to a great extent, dispelled the gloom associated with the inability to expand India's share in world merchandise exports even to the 1950s level of one per cent. The rapid rise in the share of services in the structure of the domestic economy has also contributed to this new optimism. In the context of the future prospects of invisible earnings, key issues that arise are: the degree of association and direction of causality between service orientation of the output structure and the share of services in international trade; and the competitiveness of India's exports of invisibles with a special focus on workers' remittances where India has emerged as the world leader.

The International Evidence

5.30 The services sector accounts for over 50 per cent of output in EMEs and over 60 per cent in industrial countries. While the evidence from industrial countries is mixed, most EMEs record deficits in the invisibles account, indicative of the high income elasticity of demand for imports of services in intermediate stages of development. As production and consumption of services is normally simultaneous, services trade usually entails a significant transfer of technology and know-how. The notable exceptions are India, Philippines and Turkey, all of which share a common historical record of being large recipients of workers' remittances (Table 5.12).

5.31 Exports of services have been rising in importance globally, and particularly so for developing countries. They consist of transportation, travel, communication, construction, insurance, finance, computer and information services, royalties and license fees, other business services, personal and cultural services. Global exports of services have risen at a pace faster than merchandise exports between 1990 and 2002. World export of commercial services almost doubled between 1990 and 2001, accompanied by a marked shift from traditional elements such as travel and transportation to modern business services (Table 5.13). In the high-income countries, these new economy services dominate exports. In contrast, travel exports generally account for a major share of services exports of low and middle-income countries. South Asia is an interesting exception, largely on account of India's software export surge since the mid-1990s.

Table 5.12: Net Invisibles Receipts: Cross-Country Comparison

(Per cent to GDP)

Country	1980s (Average)	1990-94 (Average)	1995	1996	1997	1998	1999	2000	2001	2002
1	2	3	4	5	6	7	8	9	10	11
Argentina	-0.9	-2.5	-2.9	-3.2	-3.5	-3.8	-3.9	-4.0	-4.2	-7.5
Chile	-9.9	-4.3	-3.8	-2.7	-2.7	-2.4	-3.2	-3.8	-4.8	-4.6
China Mainland	0.4	0.4	-2.3	-1.5	-1.0	-1.6	-1.5	-1.3	-1.4	-0.7
Germany	-2.4	-2.6	-3.7	-3.5	-3.7	-4.2	-2.3	-2.3	-2.4	-1.9
India	**0.8**	**0.8**	**1.8**	**1.6**	**2.7**	**2.4**	**2.9**	**2.3**	**2.8**	**3.0**
Indonesia	-7.3	-6.8	-6.4	-6.0	-6.9	-15.0	-10.6	-11.2	-10.9	..
Japan	-0.7	-0.5	-0.4	-0.4	-0.1	-0.1	-0.2	0.1	0.4	0.5
Malaysia	-11.3	-8.6	-9.6	-8.3	-9.4	-11.0	-12.7	-13.7	-12.6	..
Mexico	-4.4	-2.6	-3.0	-2.7	-2.1	-1.9	-1.8	-1.8	-1.3	-1.0
Philippines	0.8	5.7	9.4	8.9	8.2	2.4	3.0	3.2	2.9	4.9
Thailand	-0.3	-1.8	-3.3	-2.9	-3.0	-1.8	-1.3	-1.9	-2.0	-1.7
Turkey	4.3	4.7	6.4	4.5	6.7	8.1	4.9	6.3	5.4	3.7
UK	1.2	0.0	0.4	0.7	1.3	2.0	0.9	1.2	2.1	2.5
USA	0.4	0.8	0.9	0.9	0.8	0.5	0.6	0.4	0.3	0.0

.. Not Available
Source: International Financial Statistics, IMF.

Table 5.13: Composition of World Exports of Commercial Services, 2001

	Total Exports	Percentage Share		
	(US $ billion)	Transport	Travel	Other Commercial Services*
1	2	3	4	5
Low Income	**39.0**	**18.8**	**32.6**	**48.6**
Middle Income	**209.6**	**20.6**	**48.0**	**31.4**
Low & Middle Income	**248.6**	**20.4**	**46.1**	**33.4**
of which:				
East Asia & Pacific	72.7	14.8	54.1	31.0
Europe & Central Asia	71.5	26.5	40.7	32.8
Latin America & Caribbean	48.3	20.2	49.9	29.9
South Asia	23.9	11.0	19.0	70.0
High Income	**1,203.8**	**23.7**	**29.5**	**46.8**
of which:				
EMU	484.5	22.5	33.7	43.8
World	**1,452.4**	**23.2**	**32.1**	**44.7**

* Include such activities as insurance and financial services, international telecommunications, postal and courier services, computer data, news related services, construction services, royalties and license fees, miscellaneous business, professional and technical services, and personal, cultural and recreational services.

Source: World Development Indicators, World Bank, 2003.

5.32 The regional distribution of services exports shows that the top 10 countries which have maintained their position in services trade are the industrialised economies. A number of EMEs have improved their ranking in services exports since 1990. India occupied the 27th rank in services exports in 1990, which improved to 19th in 2001, accounting for 1.4 per cent of the global exports of services (Table 5.14). Among

Table 5.14: Comparative Position of India in World Services Exports

	1990			2001	
Country	Amount (US $ billion)	Share in World Services Exports (per cent)	Country	Amount (US $ billion)	Share in World Services Exports (per cent)
USA	147.4	17.1	USA	276.3	18.5
France	76.5	8.9	UK	110.6	7.4
Germany	66.6	7.7	Germany	87.5	5.9
UK	56.2	6.5	France	80.4	5.4
Italy	48.8	5.7	Japan	64.5	4.3
Japan	43.3	5.0	Spain	57.8	3.9
Netherlands	30.9	3.6	Italy	57.5	3.9
Belgium-Luxembourg	28.4	3.3	Netherlands	52.9	3.5
Spain	27.9	3.2	Belgium-Luxembourg	44.5	3.0
Austria	23.3	2.7	Hong Kong	41.4	2.8
Switzerland	18.9	2.2	Canada	36.6	2.4
Canada	16.3	1.9	China	33.3	2.2
Sweden	13.7	1.6	Austria	32.9	2.2
Denmark	12.8	1.5	Korea	29.6	2.0
Singapore	12.8	1.5	Switzerland	27.7	1.9
Norway	12.8	1.5	Denmark	26.9	1.8
Korea	11.2	1.3	Singapore	26.2	1.8
Australia	10.4	1.2	Sweden	22.0	1.5
Mexico	8.1	0.9	**India**	**20.9**	**1.4**
Turkey	8.0	0.9	Ireland	20.2	1.4
Greece	6.6	0.8	Greece	19.5	1.3
Thailand	6.4	0.7	Norway	18.0	1.2
Egypt	6.0	0.7	Australia	16.2	1.1
China	5.8	0.7	Turkey	16.1	1.1
Portugal	5.1	0.6	Malaysia	14.5	1.0
Finland	4.7	0.5	Thailand	13.0	0.9
India	**4.6**	**0.5**	Mexico	12.7	0.9
Israel	4.6	0.5	Israel	12.0	0.8
Malaysia	3.9	0.4	Russia	10.9	0.7
Brazil	3.8	0.4	Poland	9.8	0.7

Source : Balance of Payments Statistics Year Book, IMF.

Table 5.15: Current Transfers/GDP: Cross-Country Comparison

(Per cent)

Country	1990-94	1995	1996	1997	1998	1999	2000	2001
1	2	3	4	5	6	7	8	9
Argentina	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2
Chile	1.1	0.7	0.9	1.0	1.0	1.1	1.1	1.2
China Mainland	0.2	0.3	0.3	0.6	0.5	0.5	0.6	0.8
Germany	0.7	0.7	0.7	0.8	0.7	0.4	0.4	0.4
India	**1.6**	**2.3**	**2.9**	**3.3**	**2.5**	**2.7**	**2.9**	**2.7**
Indonesia	0.3	0.5	0.4	0.5	1.4	1.4	1.2	1.0
Japan	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1
Malaysia	0.6	0.8	0.8	0.9	1.0	1.0	0.8	..
Mexico	1.1	1.4	1.4	1.3	1.4	1.3	1.2	1.5
Philippines	1.6	1.5	1.4	2.0	1.2	0.8	0.7	0.7
Thailand	0.8	0.7	0.9	0.9	0.7	0.7	0.8	0.9
Turkey	2.7	2.7	2.5	2.6	2.9	2.9	2.7	2.7
UK	1.0	1.7	2.5	1.6	1.4	1.6	1.3	1.6
USA	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1

.. Not Available

Source : Balance of Payments Statistics Yearbook, IMF, various issues.

developing economies, only China had larger exports of services than India in 2001.

5.33 Among invisibles, the most important element for India turns out to be workers' remittances. These earnings from the export of labour are recorded as private transfers by convention. In India, workers' remittances take the form of receipts for family maintenance either out of current incomes or savings, bullion and local disbursements out of non-resident deposits (Table 5.15).

5.34 Under the WTO characterisation, trade in services can be classified in to four modes: (i) cross-border supply (delivered by telecommunication, mail, embodied in goods or by a physical medium such as a computer diskette or drawings); (ii) consumption abroad (tourism, medical and educational services *etc.*, in which case the consumer moves to the country of production); (iii) commercial presence (banking, FDI related services); and (iv) movement of natural persons. Barriers to trade are essentially applied to the mode of delivery.

5.35 Progress towards a multilateral system of trade in services under the aegis of the WTO is significantly influenced by country-specific assessments of the costs and benefits of liberalisation of domestic barriers to trade in services (Box V.5).

Box V.5

Static and Dynamic Benefits of Liberalising Trade in Services

Static Effects

Analytically, the case for liberalising services inputs is no different from that relating to goods inputs. Liberalisation of trade in goods in the absence of services trade liberalisation could well result in negative effective protection for goods, since many services are key inputs in production processes. This highlights the need for liberalisation of trade in services to keep pace with that of goods. It has been argued that there are particularly large gains from eliminating barriers to trade in services like transport that facilitate trade (Deardoff, 2001). It is further argued that in addition to the reduced dead-weight loss in the services sector on account of liberalisation of trade, there are also efficiency gains resulting from lower trading costs for the user sectors.

Dynamic Benefits

The benefits of liberalising trade in services are increasingly being assessed in the context of growth. Spillovers of technology or skills embodied in service flows increase productivity of national factors of production and hence increase GNP. On the other hand, although scale of domestic activity (involving the sum of foreign and domestic factors) is likely to expand, employment of national factors of production need not. The impact on GNP growth will then comprise a factor effect which could be negative, and a productivity-enhancing effect, which will be positive.

Mattoo *et al.* (2001) analysed static and dynamic effects of liberalising services trade on economic growth and found some econometric evidence - relatively strong for the financial sector and less strong but nevertheless statistically significant, for the telecommunications sector - that openness in services trade influences long run growth performance. Countries with fully open telecom and financial services sectors grow up to 1.5 percentage points faster than other countries.

Table 5.16: Growth of India's Trade in Services

(Per cent)

Period	Services Receipts	Services Payments
1	2	3
1950s	6.1	3.1
1960s	0.8	4.8
1970s	21.8	18.5
1980s	8.9	11.4
1990s	14.6	13.8
1950-2003	10.9	10.7

Source : Reserve Bank of India.

India's Services Exports : Structural Aspects

5.36 Services exports from India comprise services such as travel, transportation, insurance, communication, construction, financial services, software, agency services, royalties, copyright and license fees and management services. Services exports from India emerged from a state of stagnation during the 1950s and the 1960s to post a strong growth in the 1970s, contributed mainly by travel services and other business services. The momentum of growth, however, could not be sustained and a general deceleration set in during the 1980s. The rejuvenation in the 1990s is mainly on account of exports of software and other IT-enabled services (Table 5.16 and Chart V.4).

Chart V.4 : Composition of India's Exports

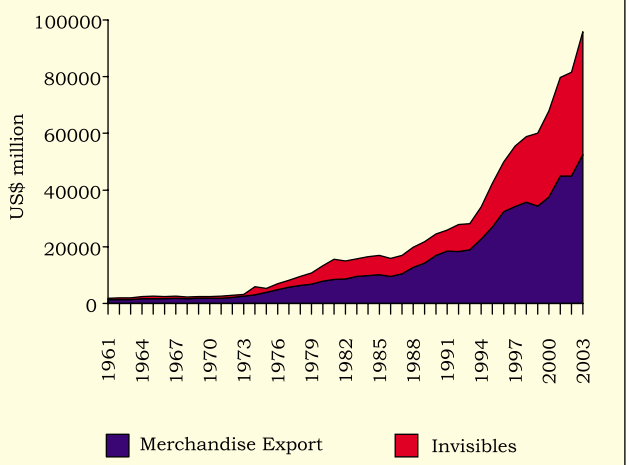


Table 5.17: Changing Structure of Services Exports from India

(Per cent to Total Services Exports)

Year	Travel	Transpor-tation	Insurance	G.N.I.E.	Miscella neous*
1	2	3	4	5	6
1981	43.5	16.3	2.3	4.0	33.9
1986	29.3	14.9	1.9	2.9	50.8
1991	32.0	21.6	2.4	0.3	43.7
1996	36.9	27.4	2.4	0.2	33.1
2001	16.8	10.1	1.4	3.5	68.2
2003	12.1	10.1	1.5	1.2	75.1

Note : G.N.I.E: Government Not Included Elsewhere

* Include services such as communication, construction, finance, software, news agency, royalties, copyright, license fees, management, advertising, office maintenance and exhibitions.

Source : Reserve Bank of India.

5.37 The emergence of the new avenues of services exports has brought about perceptible structural shifts. The traditional services have displayed sluggishness while services in the modern segments are rising in importance in the 1990s (Table 5.17).

Services in the Domestic Economy and Exports

5.38 The relationship between the share of services in output and exports has drawn considerable attention in the literature. Mixed correlations are observed for a cross-section of developed and developing countries. India's services intensity of exports compares exceedingly well with the high service oriented countries (Table 5.18). India improved its rank in terms of services intensity of exports from 10 to 2 between 1990 and 2001. This is indicative of India's dynamic comparative advantage in the high-skilled labour force.

5.39 Ordinal ranks in world trade obtained from the foregoing analysis are tested in a framework of pooled regression covering 23 emerging market economies and industrial countries for the period 1998 to 2001. The results of a balanced panel fixed effects model indicate that services intensity of exports is significantly determined by the output structure of a country.[3] The fixed effects are high for countries such as India, Spain, Ireland, Austria, UK, US, Belgium and Australia, which also have high services intensity of exports *vis-à-vis* other countries.

[3] The results of balanced panel fixed effect model are set out below:

$Xser_{ij} = 0.16\ Yser_{ij} + 0.79\ AR(1)$

(9.43)*** (26.20)*** $\bar{R}^2 = 0.99$ DW = 2.09

*** Indicates significant at 1 per cent.

$Xser_{ij}$ = indicator of services intensity of exports of country i for year j measured as services exports/total exports;

$Yser_{ij}$ = indicator of output orientation of country i for year j measured as services GDP/total GDP.

Table 5.18: Service Orientation and Export Intensity

(Per cent)

Services Orientation (Share of Services in GDP)				Export Intensity (Services Exports/Total Exports)			
Country	1990	Country	2001	Country	1990	Country	2001
1	2	3	4	5	6	7	8
USA	70	USA	73	Austria	35.5	Spain	34.4
Australia	67	UK	72	Spain	33.2	**India**	**31.9**
France	66	France	72	Philippines	26.3	Austria	31.6
Netherlands	65	Belgium-Luxembourg	71	France	25.7	UK	28.3
Belgium-Luxembourg	65	Netherlands	70	USA	25.2	USA	26.2
Mexico	64	Australia	70	UK	22.5	New Zealand	23.8
UK	63	Mexico	69	Italy	22.2	Belgium-Luxembourg	20.5
Italy	63	Argentina	69	Thailand	21.4	Australia	20.0
Austria	62	Italy	68	New Zealand	20.5	France	19.9
Germany	60	Germany	68	**India**	**20.4**	Ireland	19.5
Spain	59	Japan	67	Australia	19.8	Italy	19.1
Japan	58	Spain	66	Belgium-Luxembourg	18.5	Netherlands	18.5
Ireland	56	South Africa	66	Netherlands	17.8	Chile	17.6
Argentina	56	Austria	65	Chile	17.6	Thailand	16.6
South Africa	55	Chile	57	Argentina	15.5	Korea	16.4
Brazil	53	Brazil	57	Mexico	15.1	Japan	13.6
Thailand	50	Russia	56	Japan	12.6	Argentina	13.5
Chile	50	Ireland	55	Canada	12.6	South Africa	13.4
Korea	48	Philippines	54	Korea	12.3	Germany	12.7
Philippines	44	Korea	54	South Africa	12.3	Canada	12.1
India	**41**	Thailand	49	Ireland	12.2	Philippines	8.8
Russia	35	**India**	**48**	Germany	10.9	Mexico	7.3

Source : Computed on the basis of data from World Development Indicators, World Bank.

5.40 The demand for tradable services depends on the level of domestic income, relative prices, demand for goods and the overall importance of domestic services in the economy. Preliminary econometric estimates for India validate the Krugman hypothesis - the income elasticity of services exports with regard to world income is greater than unity, while it is less than unity in case of services imports. This implies a strong potential for expansion of services exports from India as world output growth rises. At the same time, it also implies that India's services exports are sensitive to global output shocks.

Competitiveness of India's Exports of Services

5.41 The relative competitiveness of a country can be evaluated by computing an index of relative comparative advantage (RCA). An exercise was undertaken to compute RCA for different categories of services. RCA is measured as an economy's share in total world exports in a given sector divided by the economy's average export share in all sectors (Table 5.19).[4]

5.42 In the case of transportation services, the relatively lower comparative advantage of India's exports is attributable to the slowdown in merchandise

Table 5.19: India: Indices of Relative Comparative Advantage (RCA)

Year	Transportation	Passenger	Freight	Travel	Other Services*
1	2	3	4	5	6
1989-90	0.79	0.01	1.49	1.11	1.22
1990-91	0.82	0.02	1.53	1.06	1.23
1991-92	0.73	0.02	1.35	1.29	1.09
1992-93	0.87	0.01	1.66	1.39	0.85
1993-94	1.16	0.02	1.91	1.32	0.75
1994-95	1.12	0.02	1.76	1.21	0.86
1995-96	1.12	0.44	1.90	1.16	0.90
1996-97	1.12	0.18	1.99	1.20	0.85
1997-98	0.84	0.63	1.38	0.99	1.11
1998-99	0.65	0.41	0.95	0.73	1.35
1999-00	0.48	0.24	0.83	0.61	1.53
2000-01	0.44	0.18	0.79	0.54	1.60
2001-02	0.42	0.17	0.75	0.46	1.71

* Include mainly the business services.

[4] RCA >1 for a particular service implies that the country has relative comparative advantage in exports of that service. Patra (1999) has estimated RCA for a number of services exports of India.

Table 5.20: Travel Services Receipts: Cross-Country Comparison

(Per cent to GDP)

Country	1990-94 (Average)	1995	1996	1997	1998	1999	2000	2001
1	2	3	4	5	6	7	8	9
Argentina	0.5	0.9	1.0	0.9	1.0	1.0	1.0	1.0
Chile	1.7	1.3	1.2	1.3	1.4	1.2	1.1	1.3
China Mainland	0.8	1.2	1.2	1.3	1.3	1.4	1.5	1.5
Germany	0.8	0.7	0.7	0.8	0.9	0.4	0.5	0.5
India	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.6**
Indonesia	2.2	2.6	2.7	3.1	4.5	3.1	3.3	3.6
Japan	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Malaysia	3.7	4.5	4.4	3.7	3.3	4.5	5.2	..
Mexico	1.8	2.2	2.0	1.8	1.8	1.5	1.4	1.3
Philippines	1.6	1.5	1.9	2.8	2.2	3.4	2.8	2.4
Thailand	4.6	4.8	5.0	5.1	5.5	5.7	6.1	6.1
Turkey	2.3	2.9	3.1	3.7	3.6	2.8	3.8	5.6
United Kingdom	1.4	1.8	1.8	1.7	1.7	1.6	1.5	1.3
United States of America	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.9

.. Not Available

Source: Computed from Balance of Payments Statistics Yearbook, IMF, 2002.

exports under the impact of the synchronised global downturn. The deterioration in comparative advantage of travel exports is a matter of concern, given that travel services accounted for a significant share of India's invisible exports till the 1990s. Travel receipts in India, as a proportion to GDP, have stagnated during the 1990s (Table 5.20). India, however, appears to have a distinct advantage in other services, which comprise business and professional services. The RCA for such services improved steadily between 1990-91 and 2001-02 (Table 5.21).

5.43 The rising prominence of business services reflects the high skill intensity of the Indian workforce. This is largely on account of exports of software services which have overwhelmed other exports in this category – communication, construction, financial, news agency, royalties, copyright, license fees, management, advertising and office maintenance – since the mid-1990s. The distinct competitive advantage in software services is mirrored in the trebling of the RCA between 1993-94 and 2001-02. Given the availability of large pool of skilled workers in India, it is necessary that comprehensive and strategic labour export policies should be fashioned to maximise gains from the export of these services by targeting categories of labour demand as well as markets (Patra, 1999). The RCA is also high (RCA > 1.0) in communication, construction and other business services but indicates a comparative disadvantage in exports of financial services (Table 5.21).

5.44 Exports of software and IT-enabled services grew at an average rate of 46 per cent since the mid-1990s. Within this sector, IT enabled services (ITES) and the Business Process Outsourcing (BPO) segment have emerged as the main drivers of growth.[5] With the

Table 5.21: Index of Relative Comparative Advantage of Indian Exports of Business Services

Year	Comm-unication	Const-ruction	Finan-cial	Royal-ties	Software	Other Business Services*
1	2	3	4	5	6	7
1989-90	–	–	–	0.004	–	2.03
1990-91	–	–	–	0.002	–	3.25
1991-92	–	–	–	0.002	–	2.90
1992-93	–	–	–	0.002	–	2.04
1993-94	–	–	–	0.000	6.77	1.52
1994-95	–	–	–	0.001	6.81	1.49
1995-96	–	–	–	0.002	9.10	1.54
1996-97	–	–	–	0.007	12.55	1.11
1997-98	1.11	0.78	0.78	0.017	13.66	1.10
1998-99	2.04	0.76	0.49	0.010	14.01	1.74
1999-00	3.84	1.15	0.46	0.026	14.52	1.65
2000-01	3.95	4.52	0.65	0.024	19.86	1.19
2001-02	2.44	0.86	0.69	0.029	18.66	1.42

* Include services such as management, agency services, advertising and office maintenance.

[5] ITES-BPO involves outsourcing of such processes that can be enabled with information technology involving transfer of ownership and management of the processes from the customer to the service provider. The key segments in the Indian ITES-BPO industry are customer care (database marketing, web sales/ marketing), back-office finance (billing services, accounting transactions, financial analysis), human resource hiring, payment services and other administrative services.

global IT market focussing on maximisation of return on investment and reduction of costs, there has been an increasing trend towards outsourcing to low cost offshore centres. India has remained an attractive venue because of low cost of operations, high quality of product and services and readily available skilled manpower. This has enabled the Indian software industry to continuously increase its market shares in global IT spending from around 1.5 per cent in 2000-01 to an estimated 2.8 per cent in 2002-03, despite a slowdown in world IT spending.

5.45 The rapid growth of the ITES-BPO segment has led to a sharp rise in its share in total revenues of India's software and services exports (Table 5.22). Various IT service companies have expanded their offerings to include ITES-BPO by creating their own capacities or by acquiring ITES-BPO players *via* mergers and acquisitions. Within ITES service lines, customer care and finance have been the two fastest growing segments, with growth rates of 100 per cent and 70 per cent, respectively, during 2002-03.

5.46 An interesting development in this area has been offshoring by both existing and new customers (ITES-BPO services are predominantly delivered offshore) driven by drastic cost-cutting measures undertaken by the corporates in the industrial countries, mainly the US (NASSCOM, 2003). The onsite-offsite ratio of Indian software and services exports is currently at 43:57 as compared with a ratio of 80:20 a few years ago.

5.47 India has emerged over the last decade as the most preferred destination for outsourcing of IT services by clients in the US and the UK, with the US alone accounting for around 67 per cent of India's total software exports during 2002-03. Proficiency in the English language provides the cutting edge to India's exports *vis-à-vis* China and Mexico. Ireland, which was the biggest hub of ITES, has been surpassed by India mainly on account of the latter's large supply of IT professionals. Following the slowdown in the US economy and a reduction in IT spending by US corporations since 2001, Indian software companies are increasingly diversifying into markets in Europe, Asia (Japan and Singapore) and Australia. To preserve and build on its lead in IT services and BPO, it is essential for India to expand the domestic market by expediting deregulation and privatisation in key sectors such as telecom, financial services and retail, and by tapping emerging growth areas in the field of technology such as product data management, content management, business intelligence and wireless applications and verticals such as utilities, retail and healthcare (NASSCOM, 2003). Besides, India needs to diversify into exports of computer hardware and achieve vertical integration, thereby providing a fillip to software exports.

Table 5.22: Indian Services and Software Market

(US $ million)

Year	Domestic Market	Software and Services Exports	Total	Exports of ITES-BPO Services
1	2	3	4 = (2+3)	5
1994-95	298	489	787	–
1995-96	499	754	1,253	–
1996-97	730	1,100	1,830	–
1997-98	1,220	1,750	2,979	–
1998-99	1,560	2,600	4,160	–
1999-00	1,680	3,962	5,642	565
2000-01	2,160	6,217	8,377	930
2001-02	2,420	7,680	10,100	1,495
2002-03	2,500	9,500	12,000	2,335

Source: Strategic Review, NASSCOM, various issues.

5.48 The growing tradability of services has provided opportunities to many developing countries to expand export potential in services such as travel, information technology and other professional services. The cross-country evidence suggests that the service orientation of countries has also been reflected in greater tradability of services. A higher income elasticity of demand for services exports *vis-à-vis* services imports in India implies that there is considerable potential for expansion of exports in tandem with global demand. A strong comparative advantage has emerged in business services, especially software and other IT-enabled services.

Workers' Remittances: Lending Enduring Stability

5.49 Workers' remittances are linked to labour migration and in more recent times, to the economy's ability to locate labour overseas as a trade strategy. The "Migrant Syndrome" (Reichart, 1981) or the "Dutch Disease" considers migration as depleting the labour and capital resources of the source countries. Per capita income in the migration source areas can, in fact, fall and the inward remittances resulting from migration can only partially compensate for the loss of human capital. A contrasting perspective is provided by the New Economics of Labour Migration (NELM) (Stark and Bloom, 1985), which considers migration as an integral part of the household's objective to enhance income levels, investment capacity and acquire insurance against risk. It is argued that remittances can ease production and investment

constraints. In a life cycle perspective, remittance inflows can be negative during the initial period of migration of workers to defray the initial cost of migration to be borne by the source household. This phase is followed by increasing flow of remittances as the migrant worker starts generating income. Subsequently, the decision of migrant worker to settle down in the destination country can reduce the flow of remittances.

5.50 Workers' remittances, placed in a macroeconomic context, are closely linked to export of a number of professional and business services such as software, which entail natural movement of persons to render such services abroad. The surge in workers' remittances to India during the decades of the 1970s through the 1990s has resulted in India becoming the highest remittance receiving country in the world.[6] Workers' remittances financed almost the entire trade deficits of Bangladesh, India, Morocco, Pakistan and Sri Lanka in 2001 (Table 5.23).

5.51 There has been a structural shift in the regional sources of remittance flow to India during the 1990s, responding to the changing pattern of demand from predominantly unskilled/semi-skilled to highly skilled labour. As the oil boom in the Middle East countries slowed down, the contribution of the region attracting unskilled/semi-skilled labour has significantly come down between 1997-98 and 2002-03 (Table 5.24). However, the slowdown in such remittance flows has not impacted on aggregate remittance inflows to India, which are sustained by higher inflows from America and Europe.

Table 5.23: Workers' Remittances for Select Labour Exporting Countries

Country	Remittance/trade deficit (Per cent)	
	1991	2001
1	2	3
Bangladesh	55.5	102.2
Egypt	71.5	42.0
India	**109.5**	**95.4**
Jordan	38.2	90.2
Mexico	33.2	89.4
Morocco	112.8	107.9
Pakistan	67.8	240.3
Philippines	10.2	–
Sri Lanka	54.9	203.3
Turkey	38.4	61.4

Source: International Financial Statistics and Balance of Payments Yearbook, IMF.

Table 5.24: Source Regions of Workers' Remittances to India

(Per cent to total)

Year	Africa	America	Asia	Europe	International Institutions	Total (US $ Million)
1	2	3	4	5	6	7
1997-98	2.3	37.1	31.3	26.0	3.3	11,875
1998-99	1.7	36.7	37.1	23.6	0.9	10,341
1999-00	1.0	45.5	31.9	20.6	1.0	12,290
2000-01	1.3	44.9	34.3	19.0	0.5	12,873
2001-02	4.5	48.2	23.0	23.2	1.1	12,192
2002-03	0.6	51.1	22.0	25.8	0.5	15,174

5.52 The distribution of Indians residing abroad is highly skewed in favour of developing countries, particularly Asia and Middle-East. In Asia, the concentration of Indian population is more in Myanmar, Malaysia, Fiji and Singapore. In the Middle-East, the largest proportion of Indians is concentrated in Saudi Arabia followed by United Arab Emirates, Oman, Kuwait, Bahrain, Yemen and Qatar. South Africa and Mauritius comprise the bulk of Indian emigrants to Africa (Table 5.25).

5.53 Workers' remittances are recognised as a relatively reliable source of external finance as compared with capital inflows. In India, the volatility of workers' remittances, measured in terms of the coefficient of variation (CV), marginally increased in the recent period (1991-92 to 2002-03) as compared with the earlier period from 1975-76 to 1989-90 (Table 5.26). Among the components, local withdrawals from NRI deposits showed relative stability (Jadhav, 2003). This

Table 5.25: Estimated Size of Overseas Indian Community: Country-Wise

(Numbers in Million)

	Region/Country	Overseas Indian
I.	Industrial Countries	4.5
	United States	1.7
	Euro Area	0.5
	United Kingdom	1.2
	Others	1.1
II.	Developing Countries	12.1
	Africa	2.0
	Asia	5.5
	Middle East	3.5
	Latin America	1.1

Source: Report of the High Level Committee on the Indian Diaspora, December, 2001.

[6] A comparison of the Indian and Chinese experience provides an interesting contrast. India receives significantly higher workers' remittances whereas the FDI flows are comparatively low. On the other hand, in the case of China, workers' remittances are relatively lower but FDI flows are significantly higher (see Chapter VI).

Table 5.26: Volatility of Various Types of External Flows to India

Item	1975-76 to 1989-90		1991-92 to 2002-03	
	CV (per cent)	Mean (US $ billion)	CV (per cent)	Mean (US $ billion)
1	2	3	4	5
Private Transfers	34.2	2.1	38.7	9.8
Workers' Remittances (Including Local Withdrawal from NRI Deposits)	43.9	1.5	54.7	7.6
Current Account Flows				
Services	41.2	2.7	60.2	11.6
Income	42.6	0.5	66.1	1.5
Capital Flows				
NRI Deposits	100.5	0.8	62.6	1.6
Foreign Investment	–	–	59.2	3.7

Note : CV : Coefficient of Variation

phenomenon is related to the overall policy approach of switching the composition of non-resident deposits in favour of rupee denominated schemes and realignment of maturity and interest rates. It needs to be emphasised that workers' remittances have witnessed the lowest volatility among all components of current receipts, after merchandise exports, as well as in comparison with capital flows such as non-resident deposits and foreign investment during the period 1991-92 to 2002-03.

5.54 The level of workers' remittances is determined by the migrants' educational level, incomes and motivation to transfer the accumulated capital for investment in the home country (Brown, 1997). The implicit loan by family to the migrant worker, the implicit rate of interest and the expected payback period are also recognised as the determinants of the remittance flows. In sharp contrast to capital flows, remittance flows are neither affected by the variations in the exchange rate nor the real rate of return on investment (Straubhaar, 1986). This underpins the relatively stable behaviour of remittances *vis-à-vis* other capital flows.

5.55 A significant share of workers' remittances to India continues to be contributed by inflows from the oil exporting countries of Middle East. Thus, the behaviour of remittances to India is likely to be influenced by growth patterns in these countries, best represented in the form of oil price behaviour. Another important source of remittance inflows to India is the US. It is expected that cyclical fluctuations in US GDP, particularly the GDP originating from services will impact on remittance flows to India. As regards sensitivity to interest rate movements, the Indian experience merits special attention. A major part of funds remitted by expatriate workers is channelised through inflows to non-resident deposits in the form of local withdrawals. The available body of literature on interest rate differential (also the exchange rate) impacting on remittance flows is, however, inconclusive.[7]

5.56 Exploring these conceptual issues in identifying the determinants of workers' remittances in the Indian context, Jadhav (2003) finds that the remittance inflows to India are determined by the level of economic activity in the host country. While the exchange rate elasticity is found to be significant, interest rate differentials, unlike in the case of private capital flows, do not have a significant impact on remittance inflows. This also strengthens the argument that private remittances are a stable source of developmental finance.

5.57 In sum, workers remittances are found to be counter-cyclical and as such they have provided some element of stability to the current account balance of recipient countries. India's overwhelming comparative advantage reflects the vast pool of skilled and semi-skilled labour and technical manpower in the country and the ability to successfully locate labour overseas. Workers' remittances are almost three per cent of India's GDP and have provided considerable support to India's balance of payments. They have offset India's merchandise trade deficit to a large extent, thereby keeping current account deficits modest through the 1990s and posting modest surpluses in 2001-02 and 2002-03. Moreover, workers remittances have exhibited the lowest volatility among all categories of current receipts, after merchandise exports. Unlike the capital flows, interest rate differentials are not found to be significant in determining workers remittances, underlining the stable nature of these flows.

III. GENERAL AGREEMENT ON TRADE IN SERVICES AND INDIA

5.58 The General Agreement on Trade in Services (GATS) is the first set of international rules for trade in services. India has been a signatory since its inception in 1995. The mandated negotiations under the

[7] Swamy (1981) found that the interest rate differentials between the host and the destination countries and exchange rates were not significant variables in affecting remittance flows. Straubhaar (1986) also provides empirical support to such observations.

framework of GATS aim to liberalise all services sectors and all modes of supply under multilateral rules for trade in services, while allowing each member to choose the sectors and modes in which it would offer trading commitments. Under the Uruguay Round, India has scheduled commitments in a few sectors, namely, Engineering, Computer, Telecom, R&D, Audio Visual, Financial, Hospital and Tourism Services. A 'bottom-up' and 'positive listing' approach has been followed in the trade negotiations. Under this approach, members have the choice regarding the services for which they can make binding commitments for trade liberalisation. Negotiations proceed on the basis of requests and offers.

5.59 India has already submitted requests to its trading partners in accounting, computer related services, architecture services, health services, audio visual services, construction services, tourism services, maritime services, financial services as well as in movement of natural persons. In response, India received requests from 27 countries in respect of services such as legal services, health and social services, consulting services, placement and supply services, packaging services and printing and publishing and computer related services, audio visual services, education and training services, distribution, environment, energy, insurance, banking and telecommunications, tourism, transport, postal, recreational, cultural and sporting services. In response to these requests, India is to make an initial offer in services, which could be discussed bilaterally before the commitments taken finally are multilateralised.

5.60 The mode of supply of particular interest to India and other developing countries is Mode 4, *i.e.*, the movement of natural persons. India already has a significant presence of natural persons abroad and this is reflected in sustained buoyancy in private remittances flowing into the country. This, in turn, is due to a large pool of well qualified professionals in service sectors like computer and related services, education services, audio-visual services, accountancy services, architectural services, construction services, engineering services and health and consultancy services. At present, immigration policies in developed countries are so complex that making a direct investment in a developing country is often less cumbersome than movement of labour to developed countries (Mattoo, 2003; Faini, 2002). Greater openness in trade in services under Mode 4 can significantly enhance global remittance flows. Little progress on this issue in GATS framework and the unfavourable approach of the developed countries on natural movement of persons does not presage any significant gains from trade in the near term.

5.61 As such, coalition building amongst developing countries is essential. Furthermore, India has a fairly large comparative advantage over other Member countries with regard to cross border supply of services (Mode 1), given her strengths in Information Technology (IT). This is another area of focus in India's negotiation.

5.62 India has sought freer trade in services through movement of natural persons on the basis of the following broad principles: (i) rules should be transparent; (ii) each contracting party should publish and make freely available procedures applicable for movement of personnel and the entry procedures; (iii) there should not be any discriminatory tariff/tax or other regulatory restrictions on the nationals of foreign countries *vis-à-vis* its own nationals; (iv) there should not be any quantitative limitations (*i.e.,* number of visas) on temporary movement of professionals, just as there are to be no quantitative limitations on trade in goods; and (v) fees and charges applicable to residents and/or citizens with a view to providing social security nets or retirement benefits should not apply as there is only temporary movement of professionals rather than permanent residence or citizenship.

5.63 In a policy paper submitted by the Government of India to the World Trade Organisation (WTO) in 1999, it was indicated that the movement of personnel is linked to commercial presence but only a few developing countries are in a position to benefit because of high capital requirements for establishment in developed countries. Concern was also raised that the categories of professionals do not prominently figure in the commitments and liberalisation in Mode 4. The commitments in this regard have been left out in the scheduling exercise by many countries whereas in actual practice, there is considerable global trade in these labour services. There is a need for greater freedom of movement of personnel, particularly professionals. Developing countries like India which have distinct comparative advantage in delivery of such services owing to their large stock of intellectual capital should be free to exploit their comparative advantage. India, together with like-minded developing countries, is working on a formula approach to achieve broader commitments by a larger number of WTO members in Mode 4. A joint negotiating proposal was submitted to the WTO in July 2003.

5.64 During the recently held WTO Ministerial Conference at Cancun in September 2003, India renewed its commitment to intensify efforts to

conclude negotiations on specific commitments. India also emphasised due attention to quality of offers, particularly in sectors and modes of supply in which developing countries have export interests. The need for a review of progress was proposed for the Special Session of the Council of Trade in Services by March 2004. Negotiations should aim at progressively higher levels of liberalisation with no *a priori* exclusion of any service sector or mode of supply.

IV. CONCLUDING OBSERVATIONS

5.65 The assessment of the current account in the preceding sections, based on the stylised evidence drawing from country experiences and empirical verification of the key analytical issues, suggests that the size, composition as well as financing of the current account is critical in determining the future sustainability of external sector. The country evidence on current account deficits reveals that their persistence at high levels can pose serious problems to the external stability. Furthermore, as the EMEs relax barriers to capital mobility, excessive current account deficits can enhance vulnerability of these economies to external shocks thereby entailing risks for financial stability. As such, these challenges pose dilemmas before the policy makers on deciding a sustainable level of the current account deficits while striving to overcome the domestic resource constraint. Current account deficits above 5 per cent of GDP pose a threat to external sector stability, even if they are on account of private sector imbalances. In the ultimate analysis, the sustainable level of the current account deficit is a country-specific question and has to be estimated for each country separately. At the same time, financing of current account deficits also matters. The Indian experience of the 1990s bears out the hypothesis that high correlation between domestic savings and investments is reflected in relatively moderate levels of current account deficits. Unidirectional causality running from fiscal deficits to current account deficits for most developing economies underlines the importance of fiscal consolidation for external sector stability.

5.66 The current account dynamics have been significantly influenced by the increasing tradability and competitiveness of services in India in contrast to many emerging economies. Estimates of a fixed effect model indicate that the service content of exports is significantly determined by the output structure. Estimates of income elasticity of demand for India's services exports point to a strong potential for expanding services exports in the coming years. An analysis of relative comparative advantage in services exports brings out a significant improvement in trade competitiveness in software and other related business services and an erosion of competitiveness in services such as transportation and travel. This remains an area of policy concern. In this regard, recent liberalisation of air travel services in India can be considered as an important policy initiative for augmenting tourism and transportation earnings.

5.67 Another important development in the current account has been the emergence of workers' remittances as an important source of external finance, offsetting high trade account deficits and volatility in the capital account. India has emerged as the highest remittance receiving country in the world reflecting its comparative advantage in skilled and semi-skilled labour exports. Empirical analysis suggests that economic activity in the host country and exchange rate movements significantly impact inflows of workers' remittances. Furthermore, these inflows are found to be insensitive to interest rate differentials, indicative of the relative stability of remittances *vis-à-vis* capital flows. These findings need to be reflected in India's negotiating position under the GATS under various modes of supply. Greater openness in exports of services under Mode 4 of delivery can contribute significantly to an enduring current account sustainability.

VI MANAGEMENT OF CAPITAL FLOWS

Introduction

6.1 One of the most significant developments in the world economy in the 1990s has been the spectacular surge in international capital flows. These flows emanated from a greater financial liberalisation, improvement in information technology, emergence and proliferation of institutional investors such as mutual and pension funds, and a spate of financial innovations. There was increasing recognition that gains from international portfolio diversification, *albeit* less than that accrued from international trade, could still be significant. A number of studies have confirmed that financial globalisation can contribute significantly to promoting growth in developing countries by augmenting domestic savings, reducing cost of capital, transferring technology, developing domestic financial sector and fostering human capital formation (Prasad, *et al.*, 2003). At the same time, however, it has been recognised that sudden and large surges in capital flows cause several concerns. Large capital flows could push up monetary aggregates, engender inflationary pressures, destabilise exchange rates, exacerbate the current account position, adversely affect the domestic financial sector, and disrupt domestic growth trajectories if and when such flows get reversed or drastically reduced (Reddy, 1998; Hoggarth and Stern, 1999; Rangarajan, 2000; Mohan, 2003). Volatility of capital flows, particularly portfolio flows and their consequent impact on the emerging market economies has been well documented. Indeed, the experience of living with capital flows since the 1970s has fundamentally altered the context of development finance (Mohan, 2003). It has also brought about a drastic revision in the manner in which monetary policy is conducted.

6.2 With the increase in capital flows and participation of foreign investors and institutions in the financial markets of developing countries, the capital account has been the focus of attention since the late 1980s and especially so in the 1990s. It is noteworthy that the expansion of capital flows has been much larger than that of international trade flows. The process has been reinforced by the ongoing abolition of impediments and capital controls and the widespread liberalisation of financial markets in developing countries during the 1990s. Not surprisingly, there is ample evidence of high and increasing degree of international capital mobility among the major industrial and developing countries (Montiel, 1993). A striking feature of the enlarged capital flows to developing countries in the recent period is that private (debt and equity) flows, as opposed to official flows, have become a dominant source of financing large current account imbalances. Another noteworthy feature has been a shift away from debt flows and towards equity flows, especially direct investment. Private capital flows appear, however, to be concentrated in a few key emerging market economies (EMEs).

6.3 India's experience with private capital flows has been somewhat recent. Traditionally, external aid was the major component of the capital account of India's balance of payments. In recent years, however, the dependence on aid has been nearly eliminated. The capital account has been dominated by flows in the form of foreign direct investment (FDI), portfolio investments including ADR/GDR issues, external commercial borrowings, non-resident deposits and special deposit schemes such as India Development Bonds (IDBs), Resurgent India Bonds (RIBs) and India Millennium Deposits (IMDs). Indeed, the change in the size and composition of the capital account has played a significant role in the growing strength of the external sector of the Indian economy.

6.4 Against the background of the global financial developments in the 1990s, this Chapter highlights the trends and compositional shifts in capital flows in respect of the Indian economy and traces their major determinants as well as their implications for growth and monetary management. The Chapter begins with a discussion on the trends in global capital flows and its macroeconomics. This is followed in Section II by a discussion of the trends in capital flows to India, in the context of the broad policy objectives in respect of capital flows. The following five sections (*i.e.*, Section III to Section VII) focus on specific components of capital flows: foreign direct investment (Section III), portfolio investment (Section IV), external commercial borrowings (Section V), non-resident deposits (Section VI) and external aid (Section VII). Theoretical underpinnings as well as the cross-country experiences have been provided in each section. Section VIII then

discusses India's transactions with the IMF highlighting India's participation in IMF's Financial Transaction Plan thereby emerging as a creditor country. The next Section then brings together the Indian experience with monetary management in the context of capital flows. Emerging issues relating to capital flows and demography are discussed in Section X that follows. The next section deals with capital flows and growth. Concluding observations are provided in the last section.

I. TRENDS IN GLOBAL CAPITAL FLOWS

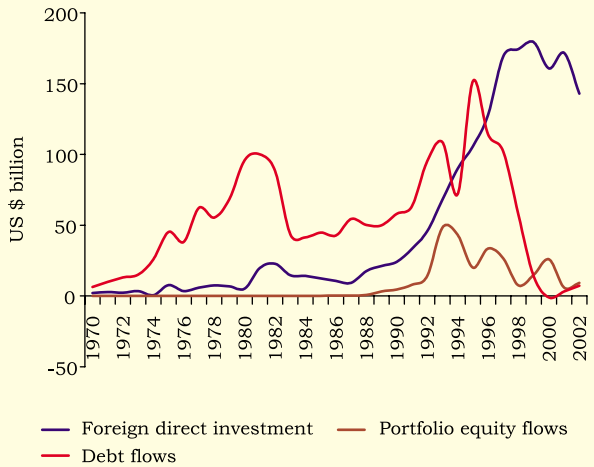
6.5 Gross capital flows at global level have increased substantially since the late 1980s (see Chapters VIII and IX). Net capital flows to developing countries increased sharply during early 1990s and after reaching a peak at US $ 298 billion in 1997 declined to US $ 160 billion by 2002. Against this backdrop, this section examines the trends in capital flows with a focus on their upsurge and compositional shifts during the 1990s. The section also elucidates the volatility associated with large capital flows, analyses their determinants and highlights the high degree of concentration in capital flows to a few emerging markets.

Trends in External Capital Inflows towards Developing Countries

6.6 In the post-World War II period up to the 1970s, international capital flows were primarily confined among industrial economies. Net capital inflows towards developing countries started picking up in the early 1970s in the aftermath of the first oil price shock. Such flows were mainly debt flows in the form of syndicated bank lending. This phase continued unabated until the early 1980s. As a result of increased bank lending, the debt of the developing countries increased significantly – at a compound annual rate of 24 per cent – until the Latin American debt crisis of 1982 burst the bubble (World Bank, 2003b). This led to a considerable slowdown in capital flows particularly in respect of commercial bank lending to developing countries. Between 1983 and 1989, capital flows declined to less than a third of their level in 1977-82.

6.7 With receding commercial bank lending, foreign direct investment (FDI) inflows to developing countries started picking up in the early 1980s. The quantum of FDI, however, continued to remain lower than debt flows. By the end of the 1980s, direct investment inflows to developing countries were only one-eighth of the flows to developed countries, while portfolio flows to developing countries were virtually non-existent. Net FDI inflows towards developing countries, however, increased at a sustained and high pace between 1987 and 1997. In 1994, these flows surpassed net debt flows for the first time. Net external debt flows as well as inflows in the form of portfolio capital also gathered momentum in the early 1990s (Chart VI.1).

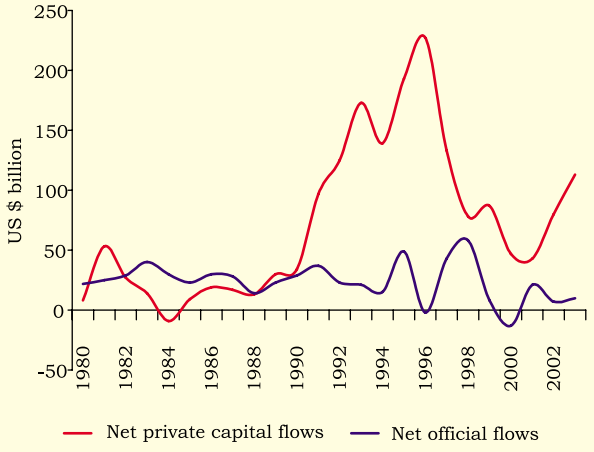
Chart VI.1 : Net Capital Flows to Developing Countries



Source: Global Development Finance, World Bank.

6.8 As a result of an increase in all forms of capital inflows, net capital flows surged to pre-1914 levels by 1996, notwithstanding an ephemeral slowdown in the context of the ERM crisis of 1992. The impact of the Mexican crisis of 1994 was contained by the large mobilisation of official financing which acted as a buffer (Mohan, 2003) (Chart VI.2).

Chart VI.2 : Net Capital Flows to EMEs

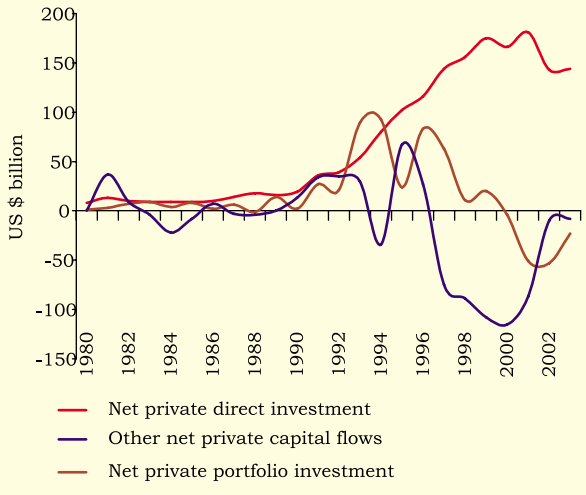


Source: World Economic Outlook, IMF.

6.9 The composition of flows in respect of emerging market economies also altered significantly, with private flows exceeding official flows by the end of the 1980s. Furthermore, while bank lending was the major component of capital flows to emerging markets in the 1970s, equity and bond investors became dominant starting in the early 1990s. Portfolio investment exceeded bank lending in eight years of the last decade. The range of investors purchasing emerging market securities broadened. Specialised investors such as hedge funds and mutual funds accounted for the bulk of portfolio inflows up to mid-1990s. In the subsequent years, pension funds, insurance companies and other institutional investors increased their presence in emerging markets. Although portfolio flows became important, it was FDI which accounted for the bulk of private capital flows to emerging market economies - witnessing a six-fold jump between 1990 and 1997. International bank lending to developing countries also increased sharply during this period, and was most pronounced in Asia, followed by Eastern Europe and Latin America. Much of the increase in bank lending was in the form of short-term claims, particularly on Asia.

6.10 The volatility and the possibility of reversals associated with capital flows were brought out quite strikingly by the East Asian and the subsequent financial crises. In the late 1990s, capital flows to developing countries received severe shocks – first from the Asian crisis of 1997-98, then by the turmoil in global fixed income markets, more recently by the collapse of the Argentine currency board peg in 2001 and the spate of corporate failures and accounting irregularities in the US in 2002. Net flows to developing countries declined in the immediate aftermath of East Asian financial crisis. The fall was particularly sharp in the form of bank lending and bonds, reflecting uncertainty and risk aversion. On the other hand, FDI inflows to EMEs were relatively stable over the period 1997-2002 (Chart VI.3). This highlights the stabilising feature of FDI inflows *vis-à-vis* other private capital flows (both debt and equity). In 2000, there was, in fact, a net outflow from developing countries on account of debt flows. In 2002, net capital flows fell again, remaining far below the 1997 peak due to the global economic slowdown and a series of accounting and corporate failures which severely undermined investor confidence. Flows to Latin America were particularly affected, reaching their lowest level in a decade. Flows to Asia began a hesitant recovery in 2002 with new bank lending exceeding repayments for the first time in five years. Global FDI inflows into developing countries, fell by 41 per cent in 2001,

Chart VI.3 : Private Capital Flows to EMEs: Component-wise



Source: World Economic Outlook, IMF.

followed by a decline of another 21 per cent in 2002, attributable to weak economic growth, large sell-offs in equity markets, lower corporate profits, slowdown in corporate restructuring and a plunge in cross-border mergers and acquisitions. The USA and the UK accounted for more than half of the decline. Flows to Asia were held up by China (Table 6.1). Some positive aspects of the 1990s were a steady consolidation of external debt by developing countries cushioned by the resilience of FDI, and the growth of local-currency bond markets as an innovation to manage credit risk.

6.11 Despite the global uncertainties, conditions for capital flows have improved in 2003 (IMF, 2003). Sell-offs in international bond markets in June and July 2003 reflected upward revisions in investors' expectations about growth prospects. Spillovers to credit and equity markets were limited, accompanied by a narrowing of spreads on international bonds of EMEs in the secondary market which reflected lower risk premia. Emerging markets, in general, outperformed the mature markets. Net capital flows are currently limping back from the severe retrenchment imposed by the Asian financial crisis.

Determinants of Capital Flows: Push and Pull Factors

6.12 The pace, magnitude, direction and composition of international capital flows have crucial implications for the recipient countries. The surge in private capital inflows to developing economies in the 1990s coincided with a period of low international interest rates in the advanced economies and

Table 6.1: Net External Capital Inflows to Developing Countries

(US $ billion)

Region	1970	1980	1985	1990	1995	2000	2002
1	2	3	4	5	6	7	8
All Developing Countries							
FDI	2.2	5.3	12.4	24.1	105.4	160.6	143.0
Portfolio	..	..	..	4.5	20.2	26.0	9.4
Debt	6.4	96.0	44.8	58.0	151.7	-1.0	7.2
East Asia & Pacific							
FDI	0.2	1.3	2.9	10.3	51.3	44.0	57.0
Portfolio	..	..	..	1.6	9.1	19.3	5.4
Debt	1.0	11.9	9.6	19.0	54.2	-18.0	-8.3
Europe & Central Asia							
FDI	0.1	..	0.1	1.2	17.0	29.2	29.0
Portfolio	..	..	..	0.3	1.7	1.2	1.4
Debt	0.5	13.5	5.6	2.3	23.4	22.0	11.2
Latin America & Caribbean							
FDI	1.2	6.4	6.0	8.2	30.5	75.8	42.0
Portfolio	..	..	..	2.5	4.8	-0.4	1.0
Debt	2.8	46.1	5.8	20.4	61.3	-1.1	3.5
Middle East & North Africa							
FDI	0.3	-2.8	2.1	2.8	-0.6	2.5	3.0
Portfolio	..	..	..	..	0.1	0.2	..
Debt	0.5	8.7	12.8	0.8	2.7	-6.5	-0.3
South Asia							
FDI	0.1	0.2	0.3	0.5	2.9	3.1	5.0
Portfolio	..	..	..	0.1	1.6	1.7	0.8
Debt	0.8	5.8	5.7	8.4	2.5	3.4	0.9
Sub-Saharan Africa							
FDI	0.4	0.1	1.0	1.0	4.3	6.1	7.0
Portfolio	..	..	..	..	2.9	4.0	0.7
Debt	0.9	10.1	5.3	7.1	7.6	-0.9	0.2
Memo:							
Middle income							
FDI	1.9	4.8	10.5	21.5	91.4	154.9	–
Portfolio	..	..	..	4.0	17.1	25.6	–
Debt	4.1	76.6	31.1	34.1	132.5	-2.5	–

.. : Nil / Negligible. — : Not Available.

Source : Global Development Finance, World Bank, 2003.

domestic policy reform in the developing world. There has been a debate in the literature whether the surge is driven primarily by domestic or by external factors. The literature on determinants of cross-country capital flows has identified various factors which, *inter alia,* include the overall macroeconomic scenario, political risk perception, regulatory regime, fiscal concessions and business strategy of the entity from which the capital flow originates. The literature usually distinguishes between two broad sets of factors affecting capital movements, *viz.*, (i) country-specific "pull" factors reflecting domestic opportunity and risk, and (ii) global or "push" factors such as the stimulus provided by the decline of US interest rates that has taken place in recent years.

6.13 A survey of the accumulated formal evidence on this issue highlights that pull or domestic factors operating at project and country levels, reflect essentially the improved policies that increase the long-run expected return or reduce the perceived risk on real domestic investment. These include measures that increase the openness of the domestic financial market to foreign investors; liberalisation of FDI; credible structural or macro-economic policies; sustainable debt and debt service reduction ensuring timely repayments; stabilisation policies that affect the aggregate efficiency of resource allocation; policies that affect the level of domestic absorption relative to income; and the ability of the economy to absorb shocks from

changes in international terms of trade (Fernandez-Arias and Montiel, 1996). FDI may be attracted by the opportunity to use local raw materials or employ a local labour force that are relatively cheap. The push or exogenous factors include lower foreign interest rates, recession abroad and herd mentality in international capital markets.

6.14 Views differ on the relative importance of the push and pull factors. It is often argued that the new wave of private capital inflows is being "pushed" by external factors and is, therefore, beyond the control of policymakers in developing countries (Calvo *et al.*, 1993 and Fernandez-Arias and Montiel, 1995). On the other hand, Chuhan *et al.* (1993) find, using panel data for 1988-92, that portfolio flows to a sample of Latin American and Asian countries are equally sensitive to push and pull factors. They also find that equity flows, relative to bond flows, are more responsive to global factors; bond flows, however, are more responsive to a country's credit rating and to the secondary market price of debt. An assessment of the empirical evidence suggests a role for both push and pull factors. While the push factors can explain the timing and magnitudes of capital inflows, the pull factors determine the geographic distribution of the flows amongst the recipient economies (Montiel and Reinhart, 1999).

6.15 It is noteworthy that an overwhelming proportion of international capital flows towards developing countries is directed towards middle-income countries. Notwithstanding fluctuations over the years, this concentration has increased, especially with regard to FDI and portfolio flows. In particular, share of East Asia and Pacific region in portfolio investment has increased. Inflow of debt-creating capital towards developing countries declined sharply in the wake of the East Asian crisis. In 2002, East Asia and Pacific turned into net exporters of debt-creating capital flows (Table 6.2).

Table 6.2: Region-wise Share of FDI, Portfolio and Debt Flows to Developing Countries

(Per cent)

Region	1970	1980	1985	1990	1995	2000	2002
1	2	3	4	5	6	7	8
East Asia & Pacific							
FDI	9.1	24.8	23.6	42.9	48.6	27.4	39.9
Portfolio	..	..	..	36.1	45.2	74.1	57.6
Debt	15.1	12.4	21.5	32.7	35.7	..	-115.0
Europe & Central Asia							
FDI	2.6	0.5	1.0	5.1	16.1	18.2	20.3
Portfolio	..	..	..	5.9	8.4	4.6	14.9
Debt	7.8	14.1	12.5	4.0	15.4	..	155.1
Latin America & Caribbean							
FDI	53.7	120.7	48.2	33.9	28.9	47.2	29.4
Portfolio	..	..	..	56.6	23.6	-1.5	10.6
Debt	44.1	48.0	12.9	35.3	40.4	..	48.7
Middle East & North Africa							
FDI	11.7	-52.8	17.1	11.7	-0.5	1.5	2.1
Portfolio	..	..	..	0.1	0.3	0.9	0.3
Debt	7.5	9.1	28.5	1.3	1.8	..	-4.2
South Asia							
FDI	3.1	3.7	2.1	2.2	2.8	1.9	3.5
Portfolio	..	..	..	2.3	7.8	6.4	8.5
Debt	12.4	6.0	12.8	14.5	1.7	..	11.9
Sub-Saharan Africa							
FDI	20.1	2.3	7.9	4.2	4.1	3.8	4.9
Portfolio	..	..	5.7	..	14.6	15.5	7.7
Debt	13.4	10.5	11.7	12.2	5.0	..	3.4

Note : Figures against FDI under a particular region in this table are per cent to total FDI flows to developing countries. Similarly, figures for portfolio and debt flows are per cent to total portfolio flows and total debt flows to developing countries, respectively.

.. : Nil / Negligible.

Source : Global Development Finance, World Bank, 2003.

6.16 A new feature emerging in the context of capital flows to developing countries is the recycling of such flows, particularly from EMEs of Asia, mainly to the US. The US has accumulated twin deficits - current account deficit (CAD) of five per cent of GDP and fiscal deficit of six per cent (a sharp turnaround from a surplus of 1.2 per cent in 2000). Ironically, it is the developing countries of Asia who are funding the CAD of the US and exhibiting current account surpluses. In contrast to the earlier situation when the fiscal deficits in the US were largely financed by the domestic private sector, now the central banks of Asia are financing the bulk of the US fiscal deficits as well. While the growing imbalance of the US economy is increasingly recognised as being unsustainable, there are no short-cut solutions since the problems are deep, structural and inter-dependent. These cannot be solved through independent or unilateral action. Hence, relatively coordinated medium-term action is called for among the major economies of the world (Mohan, 2003).

Capital Flows: The Balance Sheet Approach

6.17 Weaknesses in certain sectoral balance sheets like the government sector, financial sector including banks and financial institutions, non-financial private sector including corporates and households could lead to a country-wide balance of payments crisis. Yet they may not be visible in a country's aggregate balance sheet as evident from traditional macroeconomic aggregates. The balance sheet approach pays particular attention to the balance sheets of key sectors of the economy and explores how weaknesses in one sector can cascade and ultimately generate a broader crisis.

6.18 The balance sheet approach is focussed on identifying financial inter-linkages, imbalances, vulnerabilities and risks in the economy. It focuses on four types of balance sheet mismatches which help to determine a country's ability to service debt in face of shocks: (i) maturity mismatches; (ii) currency mismatches; (iii) capital structure problems - heavy reliance on debt rather than equity financing; and (iv) solvency problems - the present value of the future revenue streams being insufficient to cover liabilities including contingent liabilities. These mismatches can lead to solvency risk, but solvency risk can also arise from simply borrowing too much or from investing in low yielding assets (Allen *et al.*, 2002).

6.19 The composition and size of the liabilities and assets of the financial balance sheet are crucial as they can be an important source of vulnerability in EMEs with large private capital flows. Large capital inflows are often associated with an increase in asset prices, inflationary pressures, appreciation of the real exchange rate, and deterioration in current account of the balance of payments. This happens not only when the inflows themselves lead to an appreciation of the real exchange rate that, in turn, leads to the so-called Dutch disease, but also when the inflows result in large accumulated external debt which the recipient country may find difficult to service. There is also a danger, as was evident in the recent East-Asian crisis, that capital inflows could lead to speculative investment aided by a rampant surge in domestic lending and asset prices. Increased financing of unsustainable consumption, especially as reflected by the widening current account deficit also engenders a similar risk. Such developments, in turn, induce further capital inflows leading to real appreciation of the exchange rate. If real appreciation takes place, it could lead to larger inflows unless domestic interest rates are brought down commensurately. Such softening of interest rates could, however, lead to a rise in bank liquidity and credit creation directed towards riskier areas. Subsequently, the post-inflow equilibrium is established when the increase in the inflows is matched by a deterioration in the current account and/or by a rise in the foreign exchange reserves.

6.20 Large capital inflows could lead to a situation where long-term capital flows get supplemented by short-term flows which are inherently volatile and unpredictable. In this context, an open capital account and integrated financial system exacerbate concerns about asset quality - which can provoke creditors to shift towards foreign assets leading to capital outflows - and thus, reinforce the importance of the balance sheet approach. This approach is seen to be better suited to understand the vulnerabilities associated with an open capital account and the dynamics of capital account crises. Models of exchange rate crisis - both Krugman's first generation and Obstfeld's second generation models - provided rich analytical lessons for conducting macroeconomic policies in open economies. The 'second generation' crisis models developed after the ERM crisis in 1992 and the Mexican crisis in 1994-95 can be seen to have first formally recognised the role of multiple equilibria where good equilibria can suddenly change to bad equilibria, because of sudden shift in sentiments of market participants. Following the experience of the East Asian crisis of 1997-98, where private sector vulnerabilities rather than fiscal imbalances played a key role in precipitating the crisis, 'third generation' models have been explicitly based on this analysis. The third generation models have explicitly brought to the fore the role of balance sheet mismatches in causing financial crises.

II. CAPITAL FLOWS TO INDIA

6.21 Following liberalisation and structural adjustment since 1991, India has embarked on a policy of encouraging capital flows in a cautious manner. The strategy has been to encourage long-term capital inflows and discourage short-term and volatile flows. Broadly speaking, India's approach towards external capital flows could be divided into three main phases. In the first-phase, starting at the time of Independence and spanning up to the early 1980s, India's reliance on external flows was mainly restricted to multilateral and bilateral concessional finance. Subsequently, however, in the context of the widening of the current account deficit during the 1980s, India supplemented the traditional external sources of financing with recourse to commercial loans including short-term borrowings and deposits from non-resident Indians (NRIs). As a result, the proportion of short-term debt in India's total external debt increased significantly by the late 1980s.

6.22 Until the 1980s, India's development strategy was focused on self-reliance and import-substitution. There was a general disinclination towards foreign investment or private commercial flows. Since the initiation of the reform process in the early 1990s, however, India's policy stance has changed substantially. India has encouraged all major forms of capital flows, though with caution from the viewpoint of macroeconomic stability. The broad approach to reform in the external sector after the Gulf crisis was delineated in the Report of the High Level Committee on Balance of Payments (Chairman: C. Rangarajan). It recommended, *inter alia,* a compositional shift in capital flows away from debt to non-debt creating flows; strict regulation of external commercial borrowings, especially short-term debt; discouraging volatile elements of flows from non-resident Indians; gradual liberalisation of outflows; and dis-intermediation of Government in the flow of external assistance. In the 1990s, foreign investment has accounted for the major part of capital inflows to the country. The broad approach towards foreign direct investment has been through a dual route, *i.e.*, automatic and discretionary, with the ambit of the automatic route progressively enlarged to many sectors, coupled with higher sectoral caps stipulated for such investments. Portfolio investments are restricted to select players, *viz*., Foreign Institutional Investors (FIIs). The approach to external commercial borrowings has been one of prudence, with self imposed ceilings on approvals and a careful monitoring of the cost of raising funds as well as their end use. External commercial borrowings are also subject to a 'dual route'; these can be accessed without any discretionary approvals up to a limit, beyond which specific approvals are needed from the Reserve Bank/Government. Short-term credits above US $ 20 million require prior approval of the Reserve Bank. In respect of NRI deposits, some control over inflows is exercised through specification of interest rate ceilings. In the past, variable reserve requirements were stipulated to modulate such flows. At present, however, reserve requirements are uniform across all types of deposit liabilities.

6.23 As regards external assistance, both bilateral and multilateral flows are administered by the Government of India and the significance of official flows has declined over the years. Thus, in managing the external account, adequate care is taken to ensure a sustainable level of current account deficit, limited reliance on external debt, especially short-term external debt. Non-debt creating capital inflows in the form of FDI and portfolio investment through FIIs, on the other hand, are encouraged. A key aspect of the external sector management has, therefore, been careful control over external debt since 1990s (Reddy, 1998). India has adopted a cautious policy stance with regard to short-term flows, especially in respect of the debt-creating flows. It is worth noting that many countries had earlier viewed appropriate maturity structure of cross-border flows as a part of micro decision-making process. This, however, is increasingly being recognised as a macro factor with crucial implication for financial stability (Reddy, 1999).

6.24 In respect of capital outflows, the approach has been to facilitate direct overseas investment through joint ventures and wholly owned subsidiaries and provision of financial support to promote exports, especially project exports from India. Resident corporates and registered partnership firms have been allowed to invest up to 100 per cent of their net worth in overseas joint ventures or wholly owned subsidiaries, without any separate monetary ceiling. Exporters and exchange earners have also been given permission to maintain foreign currency accounts and use them for permitted purposes which facilitate their overseas business promotion and growth. Thus, over time, both inflows and outflows under capital account have been gradually liberalised.

6.25 Since the introduction of reforms in the early 1990s, India has witnessed a significant increase in

Table 6.3: Composition of Capital Inflows to India

Variable	1990-91	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
1	2	3	4	5	6	7	8	9	10
Total Capital Inflows (Net) (US $ billion):	**7.1**	**4.1**	**12.0**	**9.8**	**8.4**	**10.4**	**10.0**	**10.6**	**12.1**
Composition of Capital flows (Per cent to total)									
1. Non-debt Creating Inflows	1.5	117.5	51.3	54.8	28.6	49.7	67.8	77.1	46.6
a) Foreign Direct Investment	1.4	52.4	23.7	36.2	29.4	20.7	40.2	58.0	38.5
b) Portfolio Investment	0.1	65.1	27.6	18.6	-0.8	29.0	27.6	19.1	8.1
2. Debt Creating Inflows	83.3	57.7	61.7	52.4	54.4	23.1	59.4	9.2	-10.6
a) External Assistance	31.3	21.6	9.2	9.2	9.7	8.6	4.3	11.4	-20.0
b) External Commercial Borrowings #	31.9	31.2	23.7	40.6	51.7	3.0	37.2	-14.9	-19.4
c) Short- term Credits	15.2	1.2	7.0	-1.0	-8.9	3.6	1.0	-8.4	8.1
d) NRI Deposits	21.8	27.0	27.9	11.4	11.4	14.7	23.1	26.0	24.6
e) Rupee Debt Service	-16.9	-23.3	-6.1	-7.8	-9.5	-6.8	-6.2	-4.9	-3.9
3. Other Capital @	15.2	-75.2	-13.0	-7.2	17.0	27.2	-27.2	13.7	64.0
4. Total (1 to 3)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Memo:									
Stable flows*	84.7	33.7	65.4	82.4	109.7	67.4	71.4	89.3	83.8

\# : Refers to medium and long-term borrowings

@ : Includes leads and lags in exports (difference between the custom and the banking channel data), banking capital (assets and liabilities of banks excluding NRI deposits), loans to non-residents by residents, Indian investment abroad, India's subscription to international institutions and quota payment to IMF.

* : Stable flows are defined to represent all capital flows excluding portfolio flows and short-term credits

Note : Data on FDI have been revised since 2000-01 with expanded coverage to approach international best practices. FDI data for previous years would not be comparable with those figures.

Source : Reserve Bank of India.

cross-border capital flows. The net capital inflows have more than doubled from an average of US $ 4 billion during the 1980s to an average of about US $ 9 billion during 1993-2000. The proportion of non-debt flows in total capital flows has increased from about 5 per cent in the latter half of the 1980s to about 43 per cent during 1990s (Table 6.3). Notwithstanding a significant increase in overall capital inflows, particularly foreign investment during the 1990s, these remain smaller than other countries of similar economic size.

6.26 Capital flows have witnessed sharp occasional swings, which have engendered an appropriate policy response: the policy measures include changes in reserve requirements for financial entities, variations in the pace and sequencing of the reform measures and revisions in conditions governing end-use of external funds. Coordinated policy actions involving signalling changes, open market operations and sterilisation of foreign inflows were also undertaken to prevent undue pressure on the exchange rate (see Section IX). Measures have also been taken to deepen and widen the foreign exchange market (see Chapter VII). The basic objective has been to maintain orderly conditions in the financial markets and to ensure that capital flows promote efficiency without having an adverse impact on economic stability.

III. FOREIGN DIRECT INVESTMENT

6.27 Most developing countries consider FDI as an important channel for accessing resources for economic development. FDI represents transfer of a bundle of assets like capital, technology, access to export markets, skills and management techniques and modern environmental management systems. It may be noted, however, that a liberal policy towards FDI inflow is necessary, but not sufficient for reaping the benefits of globalisation. Market failures may occur for attracting FDI flows and the governments may have to intervene as they may face trade-offs between different benefits and objectives.

6.28 There is no ideal strategy with respect to the use of FDI that is applicable to all countries at all times. Any good strategy must be context specific, reflecting a country's level of economic development, the resource base, the specific technological context, the competitive setting, and the government's capabilities to implement policies. For instance, countries like Malaysia, Singapore and Thailand pursued policies to rely substantially on FDI, while integrating the economy into transnational corporations (TNCs) production networks and promoting competitiveness by upgrading within those networks. On the other hand, China and Korea pursued policies to develop domestic enterprises and autonomous innovative capabilities, relying on TNCs mainly as sources of technology.

6.29 Economic benefits of FDI are generally difficult to measure with precision. Over the last two decades there has been a change in the approach towards assessing the impact of FDI flows on the recipient economy. In the earlier approaches, the impact of FDI on growth was found to be limited in the short-run since long-term growth was largely considered to be contingent upon technological progress (Grossman and Helpman, 1991). On the other hand, according to the more recent endogenous growth theory, FDI is considered as a composite of capital, know-how and technology (Balasubramanyam *et al.*, 1996). Under this approach, FDI can have a permanent positive impact on economic growth by generating increasing returns to scale through externalities and positive productivity spillovers (de Mello, 1997). The positive impact of FDI is likely to be higher as value-addition under FDI increases. Apart from increasing capital formation, FDI is expected to encourage use of new inputs and technology in the recipient economy. In addition, FDI or even purely technical collaborations have been considered as a vehicle for change in management practices and organisational arrangements in the recipient developing countries (de Mello and Sinclair, 1995).

6.30 A related contentious issue revolves around the direction of causation between productivity and FDI. Cross-country studies are not conclusive in this regard. Empirical investigations have found that the positive impact of FDI is generally higher for recipient countries with a higher level of development (Blomstorm *et al.*, 1994). Such findings support the arguments that in the absence of a minimum threshold level of development, the positive impact of FDI would remain confined to particular FDI enclaves of the economy (Borensztein *et al.*, 1995). Moreover, the benefits of FDI can be realised fully only if the economy's savings rate is less than domestic investment, *i.e.*, in the context of a current account deficit. On the other hand, if the absorptive capacity of the economy is weak, higher FDI inflows could end up in higher foreign exchange reserves. The spillover effect of FDI is also found to be the highest in industries with high level of technical development and low concentration of foreign firms. Indigenous technological capabilities have been found to be positively associated with technology import, research and development in the recipient country, output growth and manufacturing exports (Zhao, 1995). Some studies have found that compared with firms under pure domestic ownership, FDI firms generally have higher capital intensity, exports to sales ratio and imported input component (O'Sullivan, 1993). There is, however, a tendency of technology imports to shift from physical capital-intensive to human capital-intensive type over time.

A Primer on the Determinants of FDI

6.31 The motivation and determinants of FDI differ among countries and across economic sectors. These factors include the policy framework, the extent of business facilitation and other economic determinants such as macroeconomic fundamentals and availability of infrastructure (Box VI.1).

6.32 Most studies conclude that FDI is a relatively stable type of capital flow (Radelet and Sachs, 1998). During the period 1992-97, commercial bank loans displayed the highest volatility, as measured by the coefficient of variation, followed by portfolio investment and FDI. Another study in respect of 12 major developing economies and countries in transition for the same period, based on annual data, confirmed that the volatility of foreign portfolio investment was generally higher than that of FDI (UNCTAD, 1998).

Trend in Global FDI Flows

6.33 Most FDI has been directed towards the developed world, although the share of developing countries had been growing steadily until 1997, when it reached a peak of around 40 per cent (Tables 6.4 and 6.5). Three important features characterise FDI flows to EMEs in the 1990s. First, there was a rapid increase in FDI inflows in the 1990s, owing largely to the adoption of macroeconomic and structural reforms by a number of these countries and the strengthening of their growth prospects. Second, the surge in FDI, especially in the latter half of the 1990s, was led by increased merger and acquisition activity. A number of EMEs in Latin America and Eastern Europe –

Box VI.1

Host Country Determinants of FDI

I. Policy Framework

- Economic, political and social stability
- Rules regarding entry and operations
- Standards of treatment of foreign affiliates
- Policies on functioning and structure of markets (especially competition and M&A policies)
- International trade and investment agreements
- Privatisation policy
- Trade policy (tariffs and non-tariff barriers) and coherence of FDI and trade policies
- Tax policy

II. Economic Determinants (A+B+C)

A. Market-seeking

- Market size and per capita income
- Access to regional and global markets
- Country-specific consumer preferences
- Structure of markets

B. Resource/asset-seeking

- Raw materials
- Low-cost unskilled labour
- Skilled labour
- Technological, innovatory and other creative assets (*i.e.*, brand names), including as embodied in individuals, firms and clusters
- Physical infrastructure (ports, roads, power, telecommunications)

C. Efficiency-seeking

- Cost of resources and assets listed under B, adjusted for productivity for labour resources
- Other input costs, *e.g.* transport and communications costs to/from and within host economy and costs of other intermediate products
- Membership of a regional integration agreement conducive to the establishment of regional corporate networks

III. Business Facilitation

- Investment promotion (including image-building and investment-generating activities and investment facilitation services)
- Investment incentives
- Hassle costs (corruption, administrative efficiency, *etc.*)
- Social amenities (bilingual schools, quality of life, *etc.*)
- Alternate investment services

Source : World Investment Report, 1998.

including Argentina, Brazil, Mexico and the Czech Republic – undertook extensive privatisation of State-owned assets during this period which in many cases took the form of mergers and acquisitions. Third, for a number of countries there was a significant shift of FDI into the services sector in tandem with the

Table 6.4: FDI Inflows by Host Region and Economy

(US $ billion)

Host Region/Economy	1991-1996 (Average)	1997	1998	1999	2000	2001	2002
1	2	3	4	5	6	7	8
World	254.3	481.9	686.0	1079.1	1393.0	823.8	651.2
Developed Economies	154.6	269.7	472.3	824.6	1120.5	589.4	460.3
Central and Eastern Europe	8.2	19.0	22.5	25.1	26.4	25.0	28.7
Developing Economies	91.5	193.2	191.3	229.3	246.1	209.4	162.1
of which:							
Latin America and the Caribbean	27.1	73.3	82.0	108.3	95.4	83.7	56.0
Argentina	4.3	9.2	7.3	24.0	11.7	3.2	1.0
Brazil	3.6	19.0	28.9	28.6	32.8	22.5	16.6
Chile	2.2	5.3	4.6	8.8	3.6	4.5	1.6
Colombia	1.3	5.6	2.8	1.5	2.2	2.5	2.0
Mexico	7.4	14.2	12.2	12.9	15.5	25.3	13.6
Asia	59.4	109.1	100.0	108.5	142.1	106.8	95.0
China	25.5	44.2	43.8	40.3	40.8	46.8	52.7
Hong Kong, SAR	6.1	11.4	14.8	24.6	61.9	23.8	13.7
India	1.2	3.6	2.5	2.2	4.0	6.1	4.7
Indonesia	3.0	4.7	-0.4	-2.7	-4.6	-3.3	-1.5
Korea, Republic of	1.2	2.8	5.4	9.3	9.3	3.5	2.0
Malaysia	5.4	6.3	2.7	3.9	3.8	0.6	3.2
Philippines	1.2	1.3	1.7	1.7	1.3	1.0	1.1
Singapore	6.9	13.5	7.6	13.2	12.5	10.9	7.7
Taiwan, Province of China	1.3	2.2	0.2	2.9	4.9	4.1	1.4
Thailand	2.0	3.9	7.5	6.1	3.4	3.8	1.1

Source: World Investment Report, UNCTAD, 2003; For India: Reserve Bank of India, data pertain to financial year (April-March).

Table 6.5: FDI Inflows by Host Region and Economy: Shares to Total

(Per cent)

Host Region/Economy	1991-1996 (Average)	1997	1998	1999	2000	2001	2002
1	2	3	4	5	6	7	8
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0
			(Per cent share of World)				
Developed Economies	60.8	56.0	68.8	76.4	80.4	71.5	70.7
Central and Eastern Europe	3.2	3.9	3.3	2.3	1.9	3.0	4.4
Developing Economies	36.0	40.1	27.9	21.2	17.7	25.4	24.9
of which:			(Per cent share of Developing Economies)				
Latin America and the Caribbean	29.6	37.9	42.9	47.2	38.8	40.0	34.5
Argentina	4.7	4.7	3.8	10.5	4.7	1.5	0.6
Brazil	4.0	9.8	15.1	12.5	13.3	10.7	10.2
Chile	2.4	2.7	2.4	3.8	1.5	2.1	1.0
Colombia	1.4	2.9	1.5	0.6	0.9	1.2	1.3
Mexico	8.0	7.3	6.4	5.6	6.3	12.1	8.4
Asia	64.9	56.5	52.3	47.3	57.7	51.0	58.6
China	27.8	22.9	22.9	17.6	16.6	22.4	32.5
Hong Kong, SAR	6.6	5.9	7.7	10.7	25.2	11.4	8.5
India	1.3	1.9	1.3	0.9	1.6	2.9	2.9
Indonesia	3.3	2.4	-0.2	-1.2	-1.8	-1.6	-0.9
Korea, Republic of	1.3	1.5	2.8	4.1	3.8	1.7	1.2
Malaysia	5.9	3.3	1.4	1.7	1.5	0.3	2.0
Philippines	1.3	0.7	0.9	0.8	0.5	0.5	0.7
Singapore	7.5	7.0	4.0	5.8	5.1	5.2	4.7
Taiwan, Province of China	1.4	1.2	0.1	1.3	2.0	2.0	0.9
Thailand	2.1	2.0	3.9	2.7	1.4	1.8	0.7

Source: World Investment Report, UNCTAD, 2003; For India: Reserve Bank of India, data pertain to financial year (April-March).

increasing share of services activities in these host countries. It may be noted that traditionally, FDI was directed towards the development of natural resources and manufacturing enterprises.

6.34 After reaching a peak in 2000, global FDI inflows declined in the subsequent years. In 2002, a handful of countries like China, Brazil, Hong Kong, Mexico, Singapore, India and Malaysia accounted for around 70 per cent of total FDI flowing into developing countries (Table 6.5). The source of FDI in East Asia has predominantly been the region itself - Hong Kong and Taiwan together account for about 45 per cent of FDI in the major recipient countries in the region including China. These two sources are inseparable, since a significant amount of investment from Taiwan is channelled through Hong Kong and they together account for almost 70 per cent of FDI in China. After the East Asian Newly Industrialised Economies (NIEs), Japan ranks as the second largest investor in the region - its investments are spread more or less equally between China, Malaysia and Thailand.

Trends in Foreign Direct Investment in India

6.35 With the liberalisation of the capital account and the initiation of structural reforms, there has been a marked shift in the magnitude and instruments of capital flows to India during the 1990s, reflecting the growing confidence among international investors. FDI to India which stood at a low level of US $ 97 million during 1990-91, picked up significantly thereafter, reaching a peak of US $ 6.1 billion in 2001-02 (Table 6.6). Cumulative foreign direct investment has been over US $ 30 billion over the period 1990-91 to 2002-03. FDI inflows have, however, slowed down in 2002-03 in tune with the global scenario.

6.36 At the global level, the financial sector accounts for the largest share of inward FDI followed by the trade sector. The position of financial services (banks, insurance, securities and other financial companies) as the top recipient has not changed over the past decade in view of increased financial liberalisation undertaken by many developing countries. Furthermore, in recent years, FDI in services has been growing at a faster rate than in other sectors. A discernable consistency in the source and direction of FDI flows to India has been evident in the 1990s. As regards the sources, inflows from Mauritius and USA dominated during most of 1990s. Many companies routed their investment to India through Mauritius to avail of the tax benefits under the bilateral tax treaty. The most favoured industries have been engineering and chemical and allied products in the 1990s. The services sector and computers have been attracting large FDI flows of late (Table 6.7).

Table 6.6: Foreign Direct Investment Inflows into India

(US $ million)

Items	1990-91	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03 (P)
1	2	3	4	5	6	7	8	9	10
Total Foreign Direct Investment	**97**	**2,144**	**2,821**	**3,557**	**2,462**	**2,155**	**4,029**	**6,131**	**4,660**
I. Equity (a+b+c+d+e)	–	2,144	2,821	3,557	2,462	2,155	2,400	4,095	2,700
a. Government (SIA/FIPB)	–	1,249	1,922	2,754	1,821	1,410	1,456	2,221	919
b. RBI	–	169	135	202	179	171	454	767	739
c. NRI	–	715	639	241	62	84	67	35	..
d. Acquisition of shares @	–	11	125	360	400	490	362	881	916
e. Equity capital of unincorporated Bodies	–	–	–	–	–	–	61	191	126
II. Re-invested Earnings $	–	–	–	–	–	–	1,350	1,646	1,498
III. Other Capital $$	–	–	–	–	–	–	279	390	462

P : Provisional. .. : Nil / Negligible SIA/FIPB : Secretariat of Industrial Assistance/Foreign Investment Promotion Board.
– : Not Available.
@ : Relates to acquisition of shares of Indian companies by non-residents under Section 5 of FEMA, 1999. Data on such acquisitions have been included as part of FDI since January 1996.
$: Data for 2002-03 are estimated as average of previous two years. $$: Data pertain to inter company debt transactions of FDI entities.
Note : Data on FDI have been revised since 2000-01 with expanded coverage to approach international best practices. FDI data for previous years would not be comparable with those figures.
Source : Reserve Bank of India.

6.37 A recent study (Banga, 2003) based on firm level data for the period 1993-94 to 1999-2000 shows that Japan-affiliated FDI firms have higher average productivity growth as compared to domestic firms and US-affiliated firms. Moreover, US-affiliated firms rely mainly on technological improvements to achieve

Table 6.7: Foreign Direct Investment to India: Country-wise and Industry-wise Inflows*

(US $ million)

Source/Industry	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
1	2	3	4	5	6	7	8	9	10	11	12
Total	**280**	**403**	**877**	**1,418**	**2,057**	**2,956**	**2,000**	**1,581**	**1,910**	**2,988**	**1,658**
Country-wise Inflows											
Mauritius	–	–	197	507	846	900	590	501	843	1,863	534
USA	22	99	203	195	242	687	453	355	320	364	268
UK	7	98	144	71	54	–	–	–	61	45	224
Germany	21	35	35	100	166	151	114	31	113	74	103
Netherlands	21	47	45	50	124	159	53	82	76	68	94
Japan	26	37	95	61	97	164	235	142	156	143	66
France	9	10	14	–	–	–	–	–	93	88	53
Singapore	3	10	25	60	76	–	–	–	22	54	39
Switzerland	35	23	26	–	–	–	–	–	8	6	35
South Korea	–	–	12	24	6	333	85	8	24	3	15
Others	136	45	76	351	446	562	470	462	194	280	227
Industry-wise Inflows											
Chemical and Allied Products	47	72	141	127	304	257	376	120	137	67	53
Computers	8	8	10	52	59	139	106	99	306	368	297
Engineering	70	33	132	252	730	580	428	326	273	231	262
Electronics and Electrical Equipment	33	57	56	130	154	645	228	172	213	659	95
Finance	4	42	98	270	217	148	185	20	40	22	54
Food and Dairy Products	28	44	61	85	238	112	19	121	75	49	35
Pharmaceuticals	3	50	10	55	48	34	28	54	62	69	44
Services	2	20	93	100	15	321	368	116	226	1,128	509
Others	85	79	276	348	292	720	262	553	578	395	309

— : Negligible/Nil
* : Data in this table exclude FDI inflows under the NRI direct investment route through the Reserve Bank and inflows due to acquisition of shares under Section 5 of FEMA, 1999.
Source : Annual Report, Reserve Bank of India (various issues).

productivity growth while the major thrust to productivity growth in Japan-affiliated firms emanates from efficiency improvements. The study also highlights the fact that domestic firms are catching up with higher productivity levels of foreign firms in the same industry.

Foreign Direct Investment in China and India

6.38 India and China received large FDI flows in the 1990s. FDI flows to China are, however, ten times of that in respect of India (Table 6.8). The timing, pacing and content of FDI liberalisation and the overall development strategy in the two countries seem to account for the difference in FDI performance. India ranked 122nd in UNCTAD's FDI Performance Index. China was placed much higher at the 54th position. A recent business environment survey indicated that China is more attractive than India in terms of the macroeconomic environment, market opportunities and policy orientation towards FDI. India, on the other hand, scored better on the political environment, taxes and financing (EIU, 2003). A confidence tracking survey in 2002 indicated that China was the top FDI destination, displacing the United States for the first time in the investment plans of the TNCs surveyed; India ranked 15th in the survey (AT Kearney, 2002). A Federation of Indian Chambers of Commerce and Industry (FICCI) survey also suggests that China has a better FDI policy framework, market growth, consumer purchasing power, rate of return, labour law and tax regime than India (FICCI, 2003).

6.39 The differential performance of India and China in attracting the FDI inflows has been the subject of increasing attention at the international level (UNCTAD, 2003). A detailed analysis indicates that the difference in FDI inflows to India and China can be attributed partly to definitional and conceptual issues (Box VI.2).

6.40 Notwithstanding the differences in the quality of data, divergence in data coverage and treatment of various forms of capital inflows, differences in FDI flow towards China and India remain significant. Recent literature suggests that domestic market size is a major factor in inducing FDI inflows (IMF, 2003). At present, the Chinese economy is two and a half times that of the Indian economy while per capita income is twice as high. The growth induced local demand for durables and non-durables, competitive business environment, wage-adjusted productivity of labour, higher literacy, better infrastructure and education rates drive the efficiency seeking investors to China (UNCTAD, 2003). FDI in China is also driven by 'peer pressure' since many firms have followed their competitors into China to preserve their global market share. In contrast to the role of the Chinese business networks abroad and their significant investment in mainland China, the overseas networks and investment in India are much smaller (Bhalla, 2002).

6.41 Another major factor could be the earlier initiation of reform measures in China (1978) as compared to India (1991). Moreover, China's manufacturing sector productivity is 1.6 times that of India and, in some sectors, as much as five times (McKinsey, 2001). Flexible labour laws, a better labour climate and entry and exit procedures for business, business-oriented and more FDI-friendly policies also make China an attractive destination

Table 6.8: China and India: Selected FDI indicators

Item	Country	1990	2000	2001	2002
1	2	3	4	5	6
1. FDI Flows (US $ billion)	China	3.5	40.8	46.8	52.7
	India	0.1	4.0	6.1	4.7
2. Inward FDI Stock (US $ billion)	China	24.8	348.3	395.2	447.9
	India	1.5	21.0	27.1	31.8
3. Growth of FDI Inflows (Annual %)	China	2.8	1.1	14.9	12.5
	India	-76.3	87.0@	52.2	-24.0
4. FDI Stock to GDP (%)	China	7.0	32.3	33.2	36.2
	India	0.5	4.5	5.6	6.2
5. FDI Flows to Gross Fixed Capital Formation (%)	China	3.5	10.3	10.5	–
	India	0.1	3.9	5.8	–
6. FDI Flows per Capita (US $)	China	3.0	32.0	36.5	40.7
	India	0.1	3.9	5.9	4.5

@: The large increase is due to change in definition. – : Not Available.
Source: World Investment Report, UNCTAD, 2003 and Reserve Bank of India.

Box VI.2

Data Reporting on FDI: China and India

Arguably, a part of the difference in FDI inflows to India and China can be traced to data reporting. A sizable portion of the FDI in China is investment made by the resident Chinese from foreign locations - the so called "round tripping" - and this takes place to a large extent due to special treatment extended by the Chinese authorities towards foreign investors *vis-à-vis* domestic investors. The round tripping is much smaller in India and takes place mainly through Mauritius for tax purposes. Estimates suggest that as much as 30 per cent of the reported FDIs in China may in fact be a result of round-tripping (UNCTAD, 2003).

The IMF definition of FDI includes as many as twelve different elements - equity capital, reinvested earnings of foreign companies, inter-company debt transactions, short-term and long-term loans, financial leasing, trade credits, grants, bonds, non-cash acquisition of equity, investment made by foreign venture capital investors, earnings data of indirectly-held FDI enterprises, control premium and non-competition fee. Until recently, Indian data on FDI did not include any other element other than equity capital reported on the basis of issue or transfer of equity or preference shares to foreign direct investors. China, on the other hand, includes all these in its definition of FDI. China also classifies imported equipment as FDI, whereas India includes these as imports in its trade data. In order to bring India's FDI data reporting system into alignment with international best practices, a committee was constituted which recommended that apart from equity capital, reinvested earnings (retained earnings of FDI companies) and other direct capital (inter-corporate debt transactions between related entities) should be included in the data in keeping with international norms. After the incorporation of new items, FDI inflows into India during 2000-01 and 2001-02 were revised upwards by US $ 1.7 billion and US $ 2.2 billion, respectively. However, even after adjusting for round tripping in China and considering the new FDI data for India, the difference in FDI in China and India at US $ 40 billion and US $ 6 billion, respectively, in 2001 continues to remain considerable.

In this context, it is also important to point out that India receives large private transfers in the form of remittance inflows from non-residents and also capital inflows in the form of NRI deposits. In recent times, gross workers' remittances to India per annum have been around US $ 13-14 billion while yearly net inflow in the form of NRI deposits is around US $ 3 billion. Inflow to China from Chinese diaspora, on the other hand, is recorded largely as FDI.

(AT Kearney, 2001). Investors underscore the predictability and stability of the tax system as an important factor in determining investment decisions. Higher import duties on raw materials in India result in higher prices of inputs, as most domestic players resort to import parity pricing. China has a flat 17 per cent VAT rate, while India's indirect taxes range from 25 per cent to 30 per cent of the retail price for most manufactured products. The emergence of China as a member of World Trade Organisation (WTO) in 2001 is a stabilising anchor and has led to substantial liberalisation in the services sector.

6.42 It is also important to note that India and China focused on different types of FDI and pursued different strategies for industrial development. India encouraged FDI only in higher technology activities, whereas China favoured export-oriented FDI concentrated in manufacturing sector. China's strategy is based on the premise that an increasing proportion of international trade is inter-firm trade between multinationals and between vertically integrated affiliates of the same multinational, and in such an environment there is no alternative to attracting FDI for export. China's FDI-driven merchandise exports grew at an annual rate of 15 per cent between 1989 and 2001. In 1989, foreign affiliates accounted for less than nine per cent of total Chinese exports; by 2002 these accounted for half of the exports and in high tech industries the propotion was much higher (World Investment Report, 2003). In contrast, in India, given its product reservation policy for Small Scale Industries (SSIs), FDI is not permitted in SSI reserved products such as garments and toys, which has adverse implications for export growth. In India, exports by FDI companies grew at an average of around nine per cent during 1990-91 to 2001-02. A major factor in the growth of Chinese exports was the relocation of labour-intensive activities by TNCs to China. However, in India, this has happened mainly in the services sector. Almost all major US and European information technology firms have presence in India now. Foreign companies dominate India's call centre industry, with a 60 per cent share of the annual US $ 1.5 billion turnover (World Investment Report, 2003).

6.43 Despite large FDI flows, restrictions on the organisational forms of FDI entry are still prevalent in China. For instance, in 31 industries the establishment of wholly foreign-owned enterprises is not allowed and the Chinese partners must hold majority share-holdings or a dominant position in another 32 sectors (OECD, 2002). A view has been expressed that China's large absorption of FDI is not necessarily a sign of the strength of its economy; instead, it may be a sign of some, rather substantial, distortions (Huang,

2003). It is argued that FDI plays a major role in the Chinese economy due to systematic and pervasive discrimination against efficient and entrepreneurial domestic firms. Furthermore, unlike India, a vibrant private sector is absent in China and most of the foreign investors must perforce tie up with only state-owned behemoths for joint ventures.

Foreign Investment in India: A Policy Review

6.44 India's policy regarding foreign investment can be broadly classified into four distinct phases: (i) cautious non-discrimination in controls during the period 1948 to mid/late 1960s; (ii) selective restrictions and control from the mid/late 1960s to the end 1970s with the promulgation of the Foreign Exchange Regulation Act (FERA), 1973 and the Industrial Licensing Policy, 1973, as the main instruments of control; (iii) gradual and partial liberalisation in the 1980s with special incentives for investment in export-oriented units; and, (iv) full-fledged liberalisation regarding foreign investment along with medium-term adjustment and long term structural reform that has been the hallmark since 1991.

6.45 Major changes in foreign investment policy were introduced in 1991 as a part of the economic reforms programme. Foreign investment is now freely allowed in all sectors including the services sector, subject to specified sectoral ceilings. Since 2000, all industries, except a small list, have been brought under the purview of the automatic route. Under the automatic route, prior approval is not required; only the reporting stipulations have to be met for monitoring purposes.[1] The policy towards FDI inflows is reviewed regularly (Box VI.3). In mid-January 2004, the Central Government revised FDI limits in several sectors, including banking, petroleum and natural gas to create an enabling environment for FDI inflows along with infusion of new technologies and management practices. In case of private sector banks, for example, the FDI limit (including both direct and porfolio investment) has been hiked to 74 per cent. Concurrently, overseas investments in Joint Ventures (JVs) and Wholly Owned Subsidiaries (WOSs) have been recognised as important avenues for promoting global business by Indian entrepreneurs. Accordingly, rules and procedures on various aspects of Indian overseas investments have been liberalised significantly.

6.46 Although the importance of a strategic FDI policy has been underscored in recent years, cross-country experience suggests that there is no unique universal strategy. Any strategy needs to be dynamically consistent with the evolving changes in a country's economic environment as well as its

Box VI.3

Report of the Steering Committee on Foreign Direct Investment

The Planning Commission constituted a Steering Committee on Foreign Direct Investment in 2001 to delve into various aspects of FDI inflows into India and suggest ways of improving their quantum while introspecting on causes for the low levels of existing FDI. The major recommendations of the Committee were:

- Enactment of Foreign Investment Promotion Law that incorporates and integrates aspects relevant to FDI promotion.
- FIPB may give initial Central level registrations and approvals where possible to hasten implementation. Foreign Investment Implementation Authority may be empowered to expedite the processing of administrative and policy approvals.
- States may enact special investment law relating to infrastructure to expedite investment therein and remove hurdles to its production.
- Aggregate FDI target for the Tenth Plan may be disaggregated in terms of various sectors and Ministries/ Departments for greater accountability. This would enable policy measures for specific sectors for greater FDI inflows.
- Sectoral FDI caps should be reduced to the minimum and also eliminate entry barriers except for defence industry.
- Company specific targeting approach rather than a broad approach should be practised. To this end, the Foreign Investment Promotion Council should be revamped.
- SEZs should be developed to be most competitive for export related FDI by simplifying applicable laws. The focus should be on accelerated/immediate implementation of reforms in SEZs rather than tax sops.
- Domestic policy reforms in the power sector, urban infrastructure and real estate and also de-control / delicensing should be expedited to promote investment - domestic and foreign.

[1] Separate approvals, however, are required for foreign investment in sectors which require an industrial licence, proposals in which the foreign collaborator has a previous venture or a tie-up in India, proposals relating to the acquisition of shares in an existing Indian company and proposals outside the sectoral policy/caps, or under sectors in which FDI is not permitted.

Box VI.4

Towards a Strategic FDI Policy

Liberalisation of norms relating to FDI and adoption of a policy stance supportive of globalisation do not by themselves ensure that the economy would attain a high growth path. On the contrary, such policies could, in fact, be inimical to the long-term development process of the country in the absence of adequate 'safeguards'. If FDI is to be utilised for sustaining the growth process of a country, it is essential to create local technological capabilities. The success of an industry in a globalised scenario hinges on its capacity to effectively cope with technical change. Skill development, industrial specialisation, enterprise learning and industrial restructuring lead to improvement in productivity and help industries to cope with technical change. In order to create such processes within an economy, the government may need to formulate a strategic FDI policy.

A strategic FDI policy entails government intervention in factor markets in order to develop local skills and to target FDI in areas where the country has dynamic comparative advantage (UNCTAD, 2003). The policy of the government should be aimed at reducing macro level inefficiencies and improving micro level conditions. The government should be an effective regulator, being neutral to domestic and foreign capital.

The effectiveness of a strategic FDI policy is, however, an unsettled issue. Some studies suggest that government intervention aimed at affecting FDI flows is at best ineffective and could be counterproductive. It is observed that direct foreign investors were not induced by incentives such as tax concessions or subsidies. Instead, policy measures aimed at strengthening the economic fundamentals of the host economy induced FDI inflows. It has also been argued that industrial policies that seek to direct foreign investment flows towards certain sectors only distort the normal functioning of the market. While such measures do not induce FDI, these can have serious negative implications in the form of reduced competition and creation of excess capacity in certain sectors (McKinsey Global Institute, 2003).

competitive position *vis-à-vis* the rest of the world. Accordingly, the formulation of an effective strategy mainly requires a vision of development, coherence and coordination between its different objectives (Box VI.4).

Modelling FDI Flows

6.47 An empirical exercise was undertaken to find the major factors influencing FDI inflows and outflows for India over the period 1970-71 to 2002-03. FDI inflows were modelled to depend upon growth in world GDP as a proxy for push factors as well as a domestic constraint in terms of the ratio of gross fiscal deficit to GDP, which also proxied for the credit rating of the Indian economy (Ranjan and Nachane, 2003). FDI outflows were hypothesised to be related to the ratio of exports plus imports to GDP, which is taken to reflect the extent of openness of the economy. The results indicate that growth in world GDP has significantly large positive impact on FDI inflows.[2] On the other hand, ratio of gross fiscal deficit to GDP has a negative impact on FDI inflows. Furthermore, FDI outflows varied in tandem with the level of openness of the Indian economy.[3]

FDI Inflow and Exports

6.48 Empirical analysis based on bivariate vector auto regression (VAR) model using quarterly data on FDI inflows and the growth rate of exports over the period from the first quarter of 1992-93 to third quarter

[2] Ln FDIIN = -13.13 + 0.43 Ln FDIIN{-1} + 3.45 Ln WGDP - 0.82 Ln GFDRATIO + 0.86 DUM94
(-4.29)*** (2.97)*** (4.50)*** (-2.54)** (2.21)**

$\bar{R}^2$ = 0.97 h = 0.21 SEE = 0.32

[3] Ln FDIOUT = -10.10 + 5.22 Ln OPENNESS - 0.96 DUMFDI1 - 1.71 DUMFDI2 - 0.78 DUMFDI3
(-4.73)*** (5.96)*** (-1.17) (-1.95)* (-1.36)

$\bar{R}^2$ = 0.61 DW = 1.69 SEE = 1.09

Where FDIIN = Foreign direct investment inflows; WGDP= World GDP;
GFDRATIO = Ratio of gross fiscal deficit to GDP; DUM94= Dummy variable with value one for period after 1993 to capture the policy regime changes with respect to foreign direct investment and zero for previous period;
FDIOUT = Foreign Direct Investment outflows;
OPENNESS = Ratio of export plus imports to GDP. Three dummies were included in the FDIOUT equation to account for abrupt decline in FDI outflows during the period 1974-76 (DUMFDI1), 1986-97 (DUMFDI2) and changes in FDI policy since 1993-94 (DUMFDI3).

Figures in brackets are t-values; ***, ** and * denote the 1, 5 and 10 per cent level of significance, respectively.

of 2002-03 indicates that there is a uni-directional causal relationship running from FDI to export growth in India.[4] Empirical analysis also suggests that an increase in FDI flows leads to rise in export growth to the extent of 1 to 1.5 percentage points over 3-4 quarters. On the other hand, changes in export growth positively affect FDI inflows after a lag of two quarters and the effect could persist for the subsequent three quarters. FDI flows account for up to one-fifth of the total variation in exports over a medium term horizon of about 3-5 years. On the other hand, export growth could explain about one-tenth of total variation in FDI flows over the same horizon.

FDI Outflows

6.49 Overseas investments in JVs and WOSs have been recognised as important channels for promoting global business by Indian entrepreneurs. The rules regarding Indian overseas investments have been progressively relaxed and the procedures have been simplified. Resident corporates and registered partnership firms have been allowed to invest up to 100 per cent of their net worth in overseas joint ventures or wholly owned subsidiaries, without any separate monetary ceiling. In recent years, outward FDI has increased significantly reflecting the global outreach of some Indian companies. The actual investment outflows during the financial year 2002-03 were placed at US $ 654 million as compared with US $ 469 during 2001-02. During April-November 2003, these outflows amounted to US $ 702 million. Since December 1995, 4,645 proposals have been cleared by the Reserve Bank amounting to US $ 9,885 million.

6.50 To sum up, there has been a marked increase in the magnitude of FDI inflows to India during the 1990s reflecting the liberal policy regime and growing investors' confidence. Inflows from Mauritius and the USA dominated during most of the 1990s, while engineering and chemical and allied products were the most favoured industries. The services and IT sectors have attracted large FDI in recent years. A comparison of FDI flows to China and India suggests that the difference is somewhat less pronounced than what is generally believed, although India still lags behind China in terms of FDI flows. The results of an empirical exercise reveal that the push factors proxied by growth in world GDP play an important role in attracting FDI flows to India. A uni-directional causal relationship running from FDI inflows to export growth is also found in the Indian context.

IV. PORTFOLIO INVESTMENT

6.51 One of the major forces changing the face and structure of international capital markets since 1990s has been the flow of cross border portfolio investments - especially by FIIs, from developed countries to the developing countries. Portfolio investors provide institutional character to the capital markets, flavoured by highly intensive research and diversified investments. FII investments inject global liquidity into the markets, raise the price-earning ratio and thereby reduce the cost of capital. Available evidence suggests a positive relationship between portfolio flows and the growth rate of an economy (Bekaert and Harvey, 2000). Although the issue is far from settled, some studies have also pointed out that foreign portfolio investment in equities promotes (inhibits) growth in countries with comparatively large (small) equity markets and limited (pervasive) corruption (Durham, 2003).

6.52 From the perspective of FIIs, investments in various countries provide a measure of portfolio diversification and hedging as also means to take advantage of arbitrage opportunities. The forces driving the recent change in the investment portfolio of FIIs, as reflected in the growing emphasis on equities of emerging market economies were, *inter alia*, increased accessibility of these markets after liberalisation, improved marketability, fewer problems relating to thin trading and improved macroeconomic fundamentals of these countries (Avgoustinos *et al.,* 1997). Although the home bias in equities is large, receding home bias in the 1990s can also explain the increased FII inflows to EMEs (Bohn and Tesar, 1996).

6.53 Notwithstanding the merits of FII flows, the Mexican crisis and more recently the East Asian crisis have highlighted the downside risks of such flows. The downside risks include political risk, currency risk, problems associated with low liquidity and volatility on returns. Cross-country studies indicate that reversal of portfolio flows could be disorderly and result in substantial economic hardship for EMEs (Gupta *et al.,* 2002).

[4]

Null Hypothesis	F-Statistic	Level of significance
FDI does not Granger cause export growth	4.11457	0.01289
Export growth does not Granger cause FDI	1.23969	0.32455

Volatility of Portfolio Flows

6.54 There is a general consensus that the main problem in managing portfolio flows towards developing countries emanates from the larger volatility associated with such flows as compared to FDI. It has been argued that under the process of globalisation, highly diversified investors participate in cross-border movement of capital. Such investors pay little attention to economic fundamentals and in the presence of asymmetric information they resort to herd behaviour, which results in volatility of international capital flows (Stiglitz, 2000). Such a view has, however, been challenged and it has been argued that there is high level of substitutability between various forms of foreign capital (Claessens *et al.,* 1995).

6.55 Countries with modest growth potentials and semi-developed financial market infrastructure are most vulnerable to reversal of portfolio investment flows (Chen and Khan, 1997). Existence of large asymmetry of information among the domestic companies and foreign investors in such countries can lead to sharp changes in portfolio and private debt flows in the face of even a slight change in investor perception about the health of the recipient economy or its financial system. This type of volatility is, however, not limited to portfolio flows. Even external commercial borrowings in the form of bank borrowing or bond financing show similar patterns.

Portfolio Flows to Developing Countries

6.56 While modest portfolio investment inflows to developing countries started in the 1980s, such flows assumed significant proportions only in the 1990s. Portfolio investment inflows reached a peak in the period prior to the onset of the East Asian crisis, but remained subdued thereafter (Table 6.9 and Chart VI.4). It may be noted that in the entire period since 1970, portfolio investments towards developing

Table 6.9: Developing Countries: Inward Portfolio Equity Flows and Equity Issuance

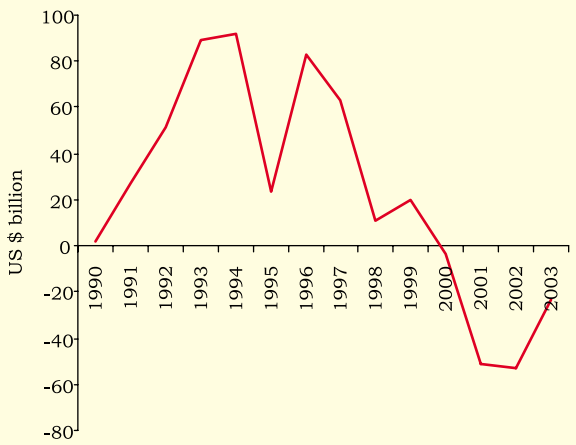
(US $ billion)

Country	1990	1995	1996	1997	1998	1999	2000	2001	2002
1	2	3	4	5	6	7	8	9	10
Inward Portfolio Equity Flows									
All developing countries	4.5	20.2	33.6	26.7	7.4	15.0	26.0	6.0	9.4
Argentina	0.1	1.1	1.0	1.4	-0.2	-10.8	-3.2	-0.1	-0.6
Brazil	0.1	2.8	5.8	5.1	-1.8	2.6	3.1	2.5	1.2
Chile	0.4	-0.2	0.7	1.7	0.6	0.5	-0.4	-0.2	-0.1
China	0.2	3.3	4.1	9.3	1.4	3.8	21.4	3.0	4.0
India	**0.1**	**1.6**	**4.0**	**2.6**	**-0.6**	**2.3**	**1.6**	**1.7**	**0.9**
Indonesia	0.5	1.5	1.8	-5.0	-4.4	-0.8	-1.0	0.2	0.2
Malaysia	0.4	2.2	0.8	-7.8	-0.4	0.1	-1.9	-0.7	1.0
Mexico	2.0	0.5	2.8	3.2	-0.7	3.8	0.4	0.2	0.5
Philippines	0.1	–	2.1	-0.4	0.3	0.5	-0.2	0.4	0.3
Thailand	0.4	2.1	1.2	3.9	0.3	0.9	0.9	–	–
Turkey	0.1	0.2	0.2	–	-0.5	0.4	0.5	-0.1	0.1
Gross International Equity Issuance by Developing Countries									
		1995	1996	1997	1998	1999	2000	2001	2002
All developing countries		6.4	12.6	21.4	8.0	13.5	34.3	5.7	10.9
Argentina		–	0.4	1.1	–	0.3	0.4	–	–
Brazil		0.2	0.4	2.4	0.1	0.2	3.1	1.1	1.1
Chile		0.2	0.1	0.6	0.1	–	–	–	–
China		0.8	2.1	9.1	1.2	3.7	21.9	2.9	5.5
India		**0.3**	**1.3**	**1.0**	**0.1**	**0.9**	**0.9**	**0.5**	**0.3**
Indonesia		1.4	1.3	0.9	–	1.2	–	0.3	0.3
Malaysia		0.6	0.6	0.4	0.2	–	–	–	1.2
Mexico		–	0.7	0.8	–	0.2	3.3	–	–
Philippines		0.7	0.8	0.3	0.4	0.2	0.1	–	–
Thailand		0.5	0.2	–	2.2	1.0	–	0.2	0.1
Turkey		0.1	–	0.4	0.8	–	2.4	–	0.1

– : Nil / Negligible.

Source : Global Development Finance, World Bank, 2003.

Chart VI.4 : Net Private Portfolio Investment Inflows to Emerging Market Economies



Source: World Economic Outlook, IMF.

countries remained much smaller than FDI inflows. A cross-country comparison reveals that the pattern of international equity issuance by Indian companies has not been significantly different from other countries, except China.

Determinants of Portfolio Investment

6.57 From a theoretical perspective, portfolio investments are generally expected to originate from countries with high levels of financial market infrastructure but low economic growth potential, *i.e.*, industrialised countries, and directed towards countries with high growth potential but relatively less developed financial markets, *i.e.* EMEs. Cross-country experience, however, does not support such a linear relationship on a universal basis. Portfolio investment flows originating from the United States and directed towards Latin America were in line with the above description. In Asia, however, portfolio investments have taken place mainly between developing countries with broadly similar growth potentials, although the capital suppliers generally had better financial market infrastructure than the recipient countries (Chen and Khan, 1997).

6.58 The debate on relative importance of domestic and external factors in determining portfolio investment flows towards a country, however, remains inconclusive. Certain studies highlight greater importance of external factors (Calvo *et al.,* 1993), while some other argue that domestic factors are equally important (Chuhan *et al.,* 1998). Some studies argued that portfolio investment flows to developing countries are decided at two levels. First, the overall quantum of investment for EMEs as a whole is decided by the investors and at the second stage, a decision is taken regarding the allocation of such flows to individual EMEs (Buckberg, 1996).

6.59 The link between cross-border portfolio flows and domestic stock returns, especially the direction of causality also continues to remain a contentious issue. Many studies have found a positive relation between these two variables (Bohn and Tesar, 1996; Richards, 2002). However, it has also been argued that rather than return chasing by foreign portfolio investors, the observed positive relation could be the result of rise in domestic stock prices as a result of foreign portfolio investment (Brennan and Cao, 1997). Certain studies have pointed out that a positive feedback of high stock prices on portfolio inflows in certain East Asian countries was evident before the crisis, but the same did not hold true after the crisis (Kim and Wei, 2000).

Portfolio Investment Flows to India

6.60 FII investments first started flowing to India in 1993. Portfolio investment inflows have since then been substantial, with the lone exception of 1998-99 (Chart VI.5). On an annual average basis, India received cross-border portfolio investment to the tune of US $ 2.2 billion per year between 1992-93 and 2002-03; the contribution of FIIs was close to US $ 1.2 billion, on an average. The cumulative FII

Chart VI.5 : Portfolio Investment to Total Foreign Investment

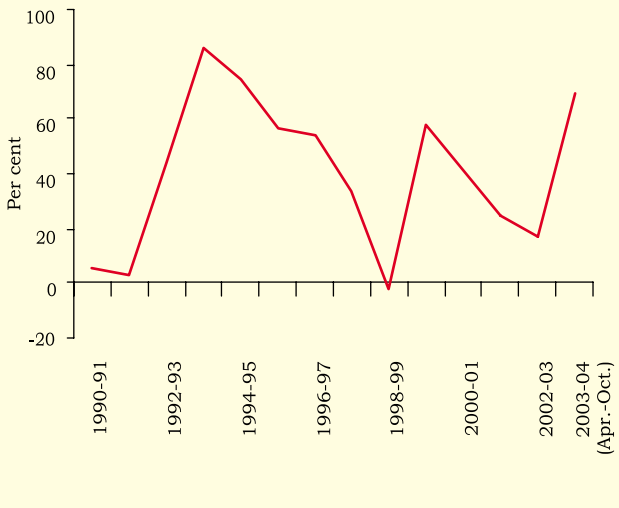


Table 6.10: Portfolio Investment In India

(US $ million)

	GDRs/ADRs#	FIIs*	Offshore funds	Total
1	2	3	4	5
1992-93	240	1	3	244
1993-94	1,520	1,665	382	3,567
1994-95	2,082	1,503	239	3,824
1995-96	683	2,009	56	2,748
1996-97	1,366	1,926	20	3,312
1997-98	645	979	204	1,828
1998-99	270	-390	59	-61
1999-00	768	2,135	123	3,026
2000-01	831	1,847	82	2,760
2001-02	477	1,505	39	2,021
2002-03(P)	600	377	2	979

P : Provisional.

: Represents the amount raised by Indian corporates through Global Depository Receipts (GDRs) and American Depository Receipts (ADRs).

* : Represents fresh inflow of funds by Foreign Institutional Investors.

Source : Reserve Bank of India

investment in India is close to US $ 19 billion. FII investments in India account for over 10 per cent of the total market capitalisation of the Indian stock market.

6.61 ADR/GDR issues by Indian companies are another important source of cross-border portfolio investment in India. On an average basis, ADR/GDR accounted for over one-third of the total cross-border portfolio investment to India (Table 6.10).

6.62 Studies show that volatility of cross-border portfolio investment flows into India has been less than what has been experienced by other EMEs (Table 6.11). The stability in portfolio flows to India has been attributed to factors such as robust economic performance since early 1990s and relatively low level of co-movements between Indian and global stock prices (Gordon and Gupta, 2003).

6.63 FII inflows to India display seasonality, with inflows being significantly higher in the first four

Table 6.11: Average Portfolio Flows and their Volatility (1995-2002)

Country	Mean (US $ million)	Coefficient of Variation (CV) (Per cent)
1	2	3
India	1,950.3	69.4
Malaysia	-651.0	109.4
Philippines	2,556.3	103.2
Korea	10,998.6	57.9
Mexico	1,705.6	371.3
Indonesia	234.1	1,253.5

Source : International Financial Statistics, IMF.

months of each calendar year (Gordon and Gupta, 2003). The average of FII investments in equities for the first four months from January to April constituted, on an average, almost 70 per cent of the annual flows. This could be due to global factors such as money flowing into the market at the start of the year from tax saving investments and from year-end bonuses. The pattern might also reflect improved domestic sentiment, since reforms are typically announced in the run-up to the end-February Union Budget. A seasonality test using dummy variable approach, however, confirms seasonality only for the month of February.[5]

Policies Relating to Portfolio Flows in India

6.64 Prior to 1992, only non-resident Indians (NRIs) and overseas corporate bodies (OCBs) were allowed to undertake portfolio investment in India. In line with the recommendations of the High Level Committee on Balance of Payments (Chairman: C. Rangarajan), FIIs were allowed to invest in the Indian debt and equity market. Ceilings on FII investments have been progressively relaxed and at present, aggregate investment by FIIs in a company is allowed within the sectoral cap prescribed for FDI. Apart from equity, FIIs registered under the 100 per cent debt route can invest in debt instruments – both Government as well as corporate, the current aggregate ceiling being US

[5] Introducing monthly dummies, the FII equation is:

FII = 339.50 + 401.77 M1 + 647.59 M2 + 353.50 M3 + 426.13 M4 + 233.23 M5 + 165.95 M6 +
(1.3) (1.1) (1.7)* (0.9) (1.1) (0.6) (0.4)

262.32 M7 + 174.77 M8 + 115.41 M9 – 237.70 M10 + 89.60 M11
(0.7) (0.5) (0.3) (-0.6) (0.2)

$\bar{R}^2$ = 0.1 DW = 1.1

Figures in brackets are t-values.

* denotes the 10 per cent level of significance.

The significantly positive coefficient of M2 points towards the presence of seasonality in the month of February.

$ 1 billion. Indian corporates are also allowed to access equity capital from foreign sources in the form of ADR/GDR and Euro issues. At present, policies on international offerings on ADRs/GDRs have been liberalised substantially and corporates are allowed to raise funds by way of ADRs/GDRs under an automatic route, subject to specified guidelines.

6.65 Two-way fungibility in ADR/GDR issues of Indian companies has been introduced under which investors in India can purchase shares and deposit them with an Indian custodian for issue of ADRs/ GDRs by the overseas depository to the extent of the ADRs/GDRs converted into underlying shares (Box VI.5).

Determinants of Portfolio Flows to India

6.66 Studies on the determinants of portfolio flows to India find the co-movement between FII flows and the BSE Sensex to be fairly high (Chart VI.6). Contemporaneous domestic stock market return was found to be an important determinant for FII flows (Chakrabarti, 2002). A combination of domestic, regional and global variables has been important in determining equity flows to India (Gordon and Gupta, 2003).

6.67 With a view to evaluating the factors influencing FII inflows to India, an empirical exercise was undertaken in a risk-return framework using monthly data. The hypothesis tested was that FIIs compare the return on Indian markets with that on international equity markets. FII investments in domestic markets are expected to be positively related to risk in international markets. Furthermore, opportunity costs measured by the one-month LIBOR rate were taken into cognisance. The results of the first order autocorrelated error regression model suggest that FII flows were positively related to returns on BSE

Box VI.5

ADRs/GDRs: Fungibility and Alignment of Share Prices

The process of convergence of domestic and international share prices becomes more efficient if there is flexibility in conversion of ADRs/GDRs into domestic shares and their re-conversion back, *i.e.,* if two-way fungibility is permitted. Empirical findings indicate that spreads between domestic and international equity prices tend to narrow as a result of dual listing although there are periods of divergence. The evidence not only suggests strong inter-linkages across global stock markets but also a stronger relation especially for the technology stocks in the domestic and international stock exchanges.

Except for a brief interlude of 1994-95 and 1998-99, the prices of Indian GDRs/ADRs generally traded at a premium to the domestic share prices, even though many of these instruments were issued at a discount. The premium could be explained in terms of brokerage commission, tax and risk premium on account of exchange rate fluctuations. Also, the cost and time involved in conversion of GDRs into domestic shares discouraged market players from effectively using the facility of conversion. The prevalent one-way fungibility also suffered from price volatility and liquidity problems as conversion meant lower float until a fresh issuance. For facilitating conversion/ re-conversion of shares between ADRs/GDRs and domestic shares and alignment of prices, the two way ADR/GDR fungibility was announced in Union Budget, 2001-02.

The Markov-switching model (Goldfeld and Quandt, 1973) is used to evaluate impact of two-way fungibility on select scrips in aligning share prices across markets. The results suggested that industry and country specific factors primarily continue to dominate movements in share prices (Chart). Two-way fungibility, however, helped in making the share prices across countries more aligned though perfect alignment has not been achieved yet. More significantly, the effect of two-way fungibility was evident on share prices after nearly a quarter. Partial convertibility, limited number of participants, illiquid stocks, differential demand-supply conditions, asymmetry of information, varying disclosure norms across exchanges, non-overlapping trading hours, tax and transactional costs may have led to this fragmentation of markets and a complete alignment of prices may not happen on a real time basis.

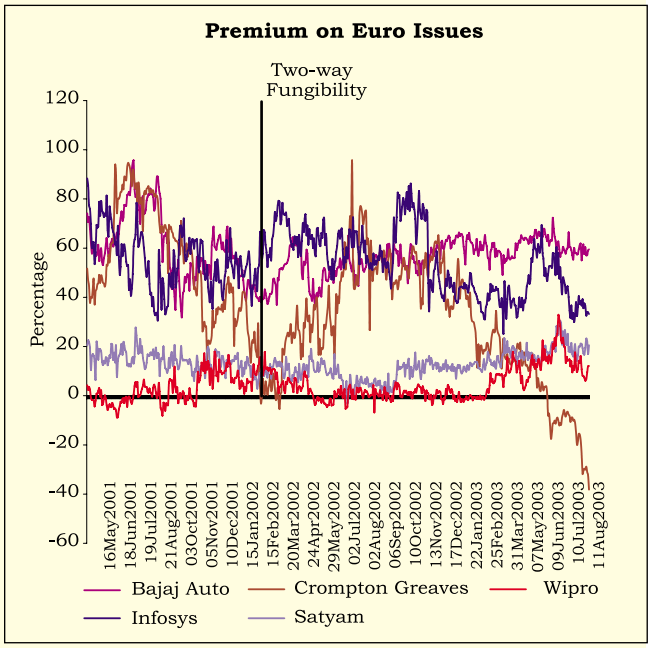
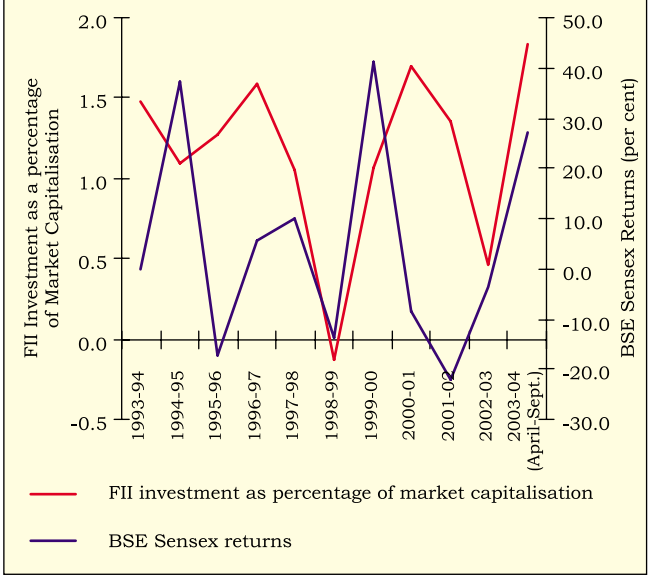


Chart VI.6 : Returns and FII Flows



Sensex.[6] FII investments in equities in India were also positively related to risk on Nasdaq as expected. The opportunity cost variable was significant with expected sign.

6.68 Another exercise was undertaken based on annual data for the period 1970-71 to 2002-03 to model inflows and outflows on account of portfolio investment in India. The inflows and outflows up to 1992-93 were mainly on account of non-resident Indians. It was only after 1992-93 that portfolio investment by FIIs was permitted in Indian stock exchanges. Consequently, even though the variability in the BSE Sensitive Index over the variability of the Dow Jones Index was included in the equation, it was not expected to play an important role in explaining portfolio investments during most of the period in the sample. A one-period lagged exchange rate was included to reflect the impact of an expected depreciation of the Indian rupee on the level of investments. World GDP was included as a proxy for "push" factors. The equation was estimated in a partial adjustment framework.[7] Foreign portfolio investment was found to be very strongly related to world GDP implying that "push" factors were important in attracting foreign portfolio investment, particularly in the 1990s.

6.69 The outflows on account of portfolio investments are explained in terms of differential in returns in India and abroad, captured by difference between rate of interest on Government securities and rate of interest on medium term US Government bonds. The ratio of gross fiscal deficit to GDP was also included to reflect the macro economic conditions in the economy. A dummy variable was included to highlight the liberalisation period. The results indicated that even though the interest rate differential had the expected negative sign, it was not significant, possibly because FIIs were not allowed to invest in Indian stock markets during major part of the sample period.

6.70 In sum, policies relating to portfolio investment in India have been substantially liberalised in the 1990s.

[6] FII = 172.52 + 584.12 DIFFRET + 1.69 SPNASDAQ – 113.52 LIBOR1 + 1816.35 DUMMY + 0.44 AR(1)
(0.42) (2.03)** (3.37)*** (-1.94)* (7.71)*** (5.25)***
$\bar{R}^2$ = 0.49 DW= 2.07
Sample period January 1993 to September 2003.
DIFFRET = Difference between returns on BSE Sensex and that on Nasdaq.
SPNASDAQ = Proxy for risk on Nasdaq measured by the high low spread.
LIBOR1 = One-month Libor rate. DUMMY was included to capture very large errors.

[7] Ln PIIN = -26.96 + 0.55 Ln PIIN{-1} + 7.67 Ln WGDP - 4.38 Ln EXCHRATE{-1} + 0.01 VBSESEN + 5.32 DUMPIIN
(-3.14)*** (4.85)*** (3.34)*** (-2.81)*** (1.68)* (4.89)***
$\bar{R}^2$ = 0.95 h = 0.51 SEE = 0.82

Ln PIOUT = -1.74 + 0.36 Ln PIOUT{-1} - 0.02 INTDIFF + 1.45 Ln GFDRATIO + 5.15 DUMPIOUT
(-1.21) (2.59)** (-0.46) (1.64)* (4.85)***
$\bar{R}^2$ = 0.89 h = 0.63 SEE = 1.18

PIIN = Inflows of portfolio investment.
WGDP = World GDP.
EXCHRATE = Exchange rate of the Rupee (Rs per US dollar).
VBSESEN = Variability of the BSE Sensitive Index over variability of the Dow Jones Index.
DUMPIIN = Dummy variable to highlight the policy changes with respect to portfolio investment since 1992.
PIOUT = Portfolio investment outflows.
INTDIFF = Interest rate differential between rate on Government securities in India and rate on medium term US Government bonds.
GFDRATIO = Ratio of GFD to GDP.
DUMPIOUT = Dummy variable with value one from 1993-94 to 2002-03 and zero for previous period.
Figures in brackets are t-values; ***, ** and * denote the 1, 5 and 10 per cent level of significance, respectively.

India received cross-border portfolio investment to the tune of US $ 2.2 billion per year, on an average, between 1992-93 and 2002-03. The volatility of cross-border portfolio investment flows into India has been less than that in respect of other emerging market economies. Empirical estimates indicate that FII flows are positively related to returns on BSE Sensex. FII inflows to India display seasonality, with inflows being significantly higher in the first few months of the calendar year, particularly the month of February.

V. EXTERNAL COMMERCIAL BORROWINGS

6.71 External Commercial Borrowings (ECBs) provide an additional source of funds for corporates to finance the expansion of existing capacity as well as new investment, taking cognisance of interest rate differentials between domestic and international markets and the associated market risks. ECBs include commercial bank loans, buyers' credit, suppliers' credit, securitised instruments such as Floating Rate Notes and Fixed Rate Bonds and, commercial borrowings from the private sector window of multilateral financial institutions such as International Financial Corporation (IFC) and Asian Development Bank (ADB). An important objective of ECB policy in India has been to provide flexibility in borrowings by Indian corporates, while maintaining prudent limits for total external borrowings.

6.72 The policy on ECBs has been made transparent in the 1990s. Procedures have also been streamlined to enable borrowers to improve access to international financial markets. The ECB policy favours long-term borrowings and maintains a strict control on short-term borrowings.

6.73 One of the guiding principles for ECB policy has been to encourage infrastructure financing since such facilities are crucial for the overall growth of the economy. A revised external commercial borrowings policy was announced in January 2004. A key feature of the revised policy is substantial increase in eligibility limits for automatic route (Box VI.6). As against the automatic route that was available for borrowings up to US $ 50 million, the new policy permits borrowings up to US $ 500 million under the automatic route, subject to specified maturity prescriptions. Prior approval of the Reserve Bank for short term credit *i.e.,* Suppliers' and Buyers' credit for a period of less

Box VI.6

External Commercial Borrowings Policy

To enhance investment activity in the real sector, particularly in infrastructure, and to enable corporates to access resources from international markets at competitive rates, the policy of external commercial borrowings (ECBs) was reviewed in January 2004. The review was undertaken in view of the need to supplant the prevailing temporary restrictions on access to ECBs with more stable, transparent and simplified procedures and policies. The review was based on the current macroeconomic situation reflecting subdued investment activity, challenges faced in external sector management, the experience gained so far in administering the ECB policy and concerns expressed by borrowers in this regard. The comfortable level of key indicators of India's external debt provide the necessary headroom for some increase in incremental debt in the form of ECBs to finance the real investment for higher growth.

The liberalised framework is expected to introduce stability in ECB policy by simplifying and rationalising procedures, while minimising discretionary elements and promoting greater transparency. Key features of the revised guidelines are set out below:

- *Removal of End-use Restrictions:* ECBs would be allowed for corporate investments in industrial sector especially infrastructure sector. Money has to be parked abroad unless actually required. Usual restriction on ECB for investment in capital market or in the real estate will, however, continue.
- *Eligibility*: All corporates except banks, NBFCs and financial institutions shall be eligible ECB borrowers. However, banks and financial institutions that have participated in the textile or steel sector restructuring package of the Government/Reserve Bank will be permitted to the extent of their investment in the package.
- *Interest Rate Spreads:* ECBs with average maturity of 3-5 years shall be subject to a maximum spread of 200 basis points over six month LIBOR of the respective currency in which the loan is being raised or the applicable benchmark(s). ECBs with more than 5 years of average maturity shall be subject to a maximum spread of 350 basis points.
- *Guarantee*: Banks, FIs and NBFCs will not be able to provide guarantee/letter of comfort etc.
- *Procedure:* All ECBs satisfying the above criteria will be under the automatic route up to US $ 20 million for ECBs between 3-5 years of average maturity and up to US $ 500 million for ECBs having average maturity of more than 5 years.
- The above relaxations will also be applicable to Foreign Currency Convertible Bonds (FCCBs).

All cases which fall outside the purview of the automatic route in the new liberalised ECB policy will be decided by an Empowered Committee of the Reserve Bank.

Table 6.12: Gross International Bank Lending to Developing-Country Borrowers

(US $ billion)

Country	1995	1996	1997	1998	1999	2000	2001	2002
1	2	3	4	5	6	7	8	9
All developing countries	**105.4**	**115.4**	**166.6**	**105.2**	**85.7**	**113.2**	**85.7**	**82.8**
Argentina	3.8	10.0	11.5	11.8	7.2	6.7	5.0	2.1
Brazil	2.2	3.2	14.9	11.4	6.9	13.7	10.6	6.4
Chile	1.8	4.3	7.2	4.3	7.6	6.5	5.6	2.1
China	12.7	9.8	11.1	7.0	3.4	5.8	1.2	9.6
India	**4.1**	**5.0**	**7.5**	**3.9**	**2.8**	**3.5**	**2.0**	**1.8**
Indonesia	13.6	17.3	14.7	0.7	1.6	1.0	0.5	0.3
Malaysia	7.0	7.8	8.3	3.2	4.6	5.5	3.2	5.6
Mexico	8.2	10.6	14.7	11.5	8.7	10.9	11.7	7.4
Philippines	1.8	1.2	4.4	3.4	2.6	4.7	3.1	1.5
Russian Federation	3.6	3.8	12.9	2.8	0.7	4.7	3.1	5.9
Thailand	9.8	8.8	6.5	4.3	1.2	4.3	2.0	3.6
Turkey	4.6	5.7	5.7	5.7	7.1	11.2	4.7	3.7

Source: Global Development Finance, World Bank, 2003.

than three years and up to US $ 20 million per import transaction has been dispensed with, effective September 2002. Proposals for short-term credit above US $ 20 million are considered by the Reserve Bank. Over a period of time, the ECB policy has witnessed many changes:

- The ECB proceeds can be utilised for any general corporate purposes except investment in stock market and real estate due to risk of speculative bubbles associated in these sectors. In the real estate sector, the ECB proceeds can be used for the purpose of development of integrated townships. Similarly, ECBs are permitted for the purpose of first stage acquisition of shares in PSU dis-investments and in mandatory second stage offer to the public;
- Refinancing of ECBs, without any limit, has been placed under automatic route; and
- In recent years, the Reserve Bank has simplified the norms for prepayments of ECB by the corporates by allowing prepayment without any limit out of the balances held in Exchange Earner's Foreign Currency (EEFC) account as well as out of local resources/market purchases.

Trends in ECB Flows

6.74 After the recent financial crises, the access of the developing countries to commercial borrowings from international banks declined substantially, before rising again in 2000. In the following two years the lending of the international banks remained subdued (Table 6.12). Several factors could be ascribed to the decline in banks' lending in the last two years, *viz*., continuing global slowdown, impact of Argentina's default on its international bond obligations, generalised retrenchment of international banks from cross-border exposure to developing countries, Iraq conflict, sharp deterioration in corporate credit in major developed countries, emergence of a string of corporate accounting scandals in the US that undermined investor confidence and induced high volatility in credit markets and intense risk aversion (Global Development Finance, 2003).

6.75 In India, the total stock of securitised borrowings, increased during the period 1998-2003 mainly due to Resurgent India Bonds (RIBs) and India Millennium Deposits (IMDs) (Table 6.13). Total ECB outstanding has, however, declined since 2001, on account of weak demand for ECBs reflecting weakness in domestic investment demand and prepayments (Table 6.14).

6.76 An exercise was undertaken to model ECBs during the period 1970-71 to 2002-03. ECBs are hypothesised to depend upon rate of interest in India, debt service ratio and imports.[8] As expected, imports were found to have a very significant and strong impact on inflows of ECBs with elasticity of ECBs with respect to imports at around 1.0. Debt service

[8] Ln ECBR = -5.46 + 0.04 DSR{-1} + 1.05 Ln IMP + 0.15 GSROI - 1.15 DUMECBR
(-8.79)*** (2.22)** (12.34)*** (2.44)** (-2.78)***
$\bar{R}^2$ = 0.96 DW = 1.98 SEE = 0.39
Where ECBR = External commercial borrowings inflows
DSR = Debt service ratio
GSROI = Domestic rate of interest on Government securities
DUMECBR = Dummy variable for ECB inflows to account for sudden decline in ECB during 1993-94
Figures in brackets are t-values; ***, ** and * denote the 1, 5 and 10 per cent level of significance, respectively.

Table 6.13: India's External Commercial Borrowings - Outstanding Stocks

(US $ million)

	1998	1999	2000	2001	2002	2003
1	2	3	4	5	6	7
External Commercial Borrowing	**16,986**	**20,978**	**19,943**	**24,215**	**23,248**	**22,371**
a) Commercial bank loans	9,981	10,343	10,094	9899	9,976	9,899
b) Securitised borrowings (includes IDBs, RIBs, IMDs and FCCBs)	6,022	9,772	9,073	13694	12,758	11,966
c) Loans/securitised borrowings, *etc.* with multilateral/ bilateral guarantee and IFC (W)	874	808	750	622	514	506
d) Self Liquidating Loans	109	55	26	0	0	0
Total External Debt	**93,531**	**96,886**	**98,263**	**1,01,132**	**98,761**	**1,04,699**
ECB to total debt (%)	**18.2**	**21.7**	**20.3**	**23.9**	**23.5**	**21.4**

Source : Reserve Bank of India and Government of India.

requirements have not played a major role in attracting ECBs, as indicated by significant but low elasticity, but the impact of the domestic rate of interest was found to be significant. ECB outflows were hypothesised as a function of imports which proxy for an activity variable and a one-period lagged exchange rate to capture the impact of expected movements in the exchange rate.[9]

Table 6.14: Trends in External Commercial Borrowings in India

(US $ million)

Year	Disburse-ment	Amorti-sation	Interest Payment	Debt Service Payments	Net Inflow
1	2	3	4	5	6
1990-91	1,700	1,191	1,042	2,233	-533
1991-92	2,798	1,146	994	2,140	658
1992-93	1,001	1,357	917	2,274	-1,273
1993-94	1,859	1,703	896	2,599	-740
1994-95	2,670	2,513	1,091	3,604	-934
1995-96	4,538	3,311	1,162	4,473	65
1996-97	7,018	4,032	1,177	5,209	1,809
1997-98	7,400	3,411	1,406	4,817	2,583
1998-99	6,927	3,153	1,575	4,728	2,199
1999-2000	2,289	3,460	1,635	5,095	-2,806
2000-01	9,295	5,043	1,683	6,726	2,569
2001-02	2,909	4,012	1,444	5,456	-2,547
2002-03	1,904	3,679	923	4,602	-2,698

Source: India's External Debt : A Status Report, Government of India, 2003.

Relevance of Sovereign Credit Ratings

6.77 Credit ratings by major agencies play an important role in accessing commercial borrowings abroad. Sovereign credit ratings have been found to be significantly linked to economic fundamentals such as per capita GDP, inflation, external debt and indicators of default history and development (Cantor and Packer, 1996).

6.78 It is, however, argued that the fundamentals, which are taken into consideration by credit rating agencies need not necessarily be good indicators of financial crisis and default by the sovereign or entities from that economy. Studies indicate that rating agencies have attached little importance to indicators of liquidity, currency misalignment and assets price behaviour, all of which have close links with financial crisis and default (Reinhart, 2002). Studies on *ex post* performance of sovereign credit rating in terms of their ability to anticipate financial crisis are inconclusive. There is evidence that such ratings generally fail to anticipate banking crisis and even their predictive power regarding currency crisis is very limited (Goldstein, Kaminsky and Reinhart, 2000). Sovereign ratings, especially for EMEs, are reactive rather than anticipative of economic events. In fact, while the occurrence of currency crisis helps predicting sovereign rating downgrade for EMEs, there is no conclusive evidence that currency crisis affects sovereign ratings of industrialised countries in a systemic and significant way (Reinhart, 2002).

[9] Ln ECBP = - 2.46 + 0.71 Ln ECBP{-1} + 0.30 Ln IMP + 0.64 Ln EXCHRATE{-1} - 0.53 DUMECBP
(-1.68)* (5.07)*** (1.63)* (1.25) (-1.10)

$\bar{R}^2$ = 0.98 h = 0.53 SEE = 0.30

ECBP = External Commercial Borrowings Outflows; IMP = Imports;

EXCHRATE = Exchange rate (rupees per US dollar); DUMECB = Dummy variable reflecting changes in the policy regime relating to ECBs since 1992-93.

Figures in brackets are t-values; ***, ** and * denote the 1, 5 and 10 per cent level of significance, respectively.

Table 6.15: Long-Term Sovereign Ratings by Select Rating Agencies

Year	Standard & Poor's	Moody's		Duff & Phelps	Japan Bond Research Institute
1	2	3		4	5
1988	Satisfactory (no formal rating)	A2		–	–
1989	Satisfactory (no formal rating)	A2		–	–
1990	BBB	Watch list Baa1	(August 1) (October 4)	–	–
1991	BBB (March 7) (Credit Watch) BBB (September 25) (No credit Watch)	Baa3 Ba2	(March 26) (June 24)	–	–
1992	BB+ (June 22)	Ba2	(No Change)	–	–
1993	BB+ (No Change)	Ba2	(No Change)	–	
1994	BB+ (No Change)	Baa3	(December 2)	–	BBB+ (March 24)
1995	BB+ (Stable)	Baa3	(October 2)	–	BBB+
1996	BB+ (Positive, October 1)	Baa3	(No Change)	–	BBB+
1997	BB+ (Stable, October 6)	Baa3	(Negative,February)	BBB- (Stable, August 18)	BBB+
1998	BB+ (Negative, May) BB (Stable, October 22) BB+ (Stable, August 10)	Ba2 BBB	(Stable, June 19)	BBB-	(Negative, June 6)
1999	BB (Stable)	Ba2		BB+	BBB
2000	BB (Positive, March 20) BB+ (Stable, October 11)	Ba2		BBB	
2001	BB (Negative, August 7)	Ba2	(Negative)	BB (November 21)	BBB
2002	BB (Negative)	Ba2	(Negative)	BB	BBB
2003	BB (Stable, December 5)	Ba2	(Negative)	BB	BBB (As on September)

Note : Positive: Rating may be raised; Negative : Rating may be lowered; Stable : Rating is not likely to change.

Rating Grades: Standard and Poor's
Investment Grade : AAA, AA+, AA, A+, A, BBB+, BBB, BBB-
Non-Investment Grade: BB+, BB, BB-, B+, B, B-
Default Grade : CCC+, CCC, CCC-, CC, C

Rating Grades: Moody's
Investment Grade : Aaa, Aa1,Aa2, Aa3,A1, A2, A3, Baa1, Baa2, Baa3
Non-Investment Grade: Ba1, Ba2, Ba3, B1, B2, B3
Default Grade : Caa, Ca, C

Rating Grades: Duff and Phelps
Investment Grade : AAA, AA+, AA, AA-, A+, A, A-, BBB+, BBB, BBB-
Non-Investment Grade: BB+, BB, BB-, CCC
Default Grade : DD, DP

Rating Grades: Japan Bond Research Institute (JBRI)
Investment Grade : AAA, AA+, AA, AA-, A+, A, BBB+, BBB, BBB-
Non-Investment Grade: BB+, BB, BB-, B+, B, B-
Default Grade : CCC, CC, C

6.79 India has so far not issued any sovereign bond. Over time, India's sovereign credit rating has ranged between low investment grade and high non-investment grade (Table 6.15).

6.80 Notwithstanding the generally subdued perception of international credit rating agencies regarding the Indian economy, Indian corporates have been able to mobilise funds in the international capital market at rates which are generally more favourable than those accessed by corporates from many other developing countries with similar credit ratings. This may have been due to the more favourable perception of investors about the Indian economy as compared to that of the credit rating agencies, as well as India's unblemished record in honouring external obligations (Reddy, 1997). Even on the basis of factors and weights used by credit rating agencies, there are indications that India should have been assigned credit rating one or two notches above what has been actually assigned in recent years (Afonso, 2003).

Role of Special Purpose Commercial Borrowing by India

6.81 Since 1991, India has resorted, on three occasions, to special types of ECBs through banking channels with exchange rate guarantees. These borrowings provide interesting examples of management of capital account in adverse situations. Instruments which were used for such purposes were India Development Bonds (IDBs), 1991; Resurgent India Bonds (RIBs), 1998; and, India Millennium Deposits (IMDs), 2000. In each of these three cases, India had to resort to external borrowing in response to certain unfavourable external developments. The possibility of

direct sovereign borrowing to meet the actual or potential funding needs was also explored. It was, however, felt that raising resources through such route might be time consuming. Moreover, given the lack of any precedence of direct sovereign borrowing in post-Independence India, it was felt that such an approach under adverse conditions might not be appropriate (Reddy, 1998).

6.82 In the aftermath of the balance of payments crisis, the State Bank of India floated IDBs in October 1991 of 5-years maturity. An aggregate amount of US $ 1.6 billion was mobilised through these bonds. The IDBs were redeemed in foreign currency to the non-residents and in rupees to the resident holders of the bonds. The issue of RIBs was contemplated in view of extraordinary developments in 1998-99, when a shortfall in capital flows consequent upon imposition of sanctions, especially debt flows, in relation to current account deficit was anticipated. Instead of drawing down foreign exchange reserves which could have adversely affected market sentiments, or reducing the current account deficit through drastic import cuts which would have affected real economic activity, it was felt that RIBs would enhance the debt flows at the least possible cost. It was envisaged that such borrowings could offset the adverse market sentiment created in international capital markets in the light of the downgrading of India's sovereign rating to non-investment grade. This could have been done by demonstrably raising debt resources at a cost lower than that any organised financial intermediary was prepared to provide in the context of the rating downgrade (Reddy, 1998). At the same time, it was necessary to ensure that amounts so obtained were restricted quantitatively to meet essential needs as a replacement for normal debt flows, by keeping an option for premature closure. Furthermore, by keeping the maturity of RIBs to five years, it was ensured that the borrowing had an appropriate medium-term maturity. The success of RIBs could be gauged from the substantial amount of funds mobilised (US $ 4.2 billion) in the international market at a competitive rate. The RIBs were redeemed on October 1, 2003 without any pressure on the exchange rate and liquidity conditions. External financing through IMDs (US $ 5.5 billion) was again resorted in 2000 as a pre-emptive step in the face of hardening of world petroleum prices and the possible consequent depletion of India's foreign exchange reserves.

6.83 Unlike most bonds, these bonds/deposits could not be traded in the secondary market, nor could be encashed prematurely in foreign exchange. Therefore, IDBs, RIBs and IMDs provided assured access to long-term foreign currency funds unlike foreign currency NRI deposits, most of which have much shorter minimum maturity periods and premature withdrawal options. The extent of substitution between these funds and foreign currency deposit schemes for NRIs was found to be limited. Moreover, these instruments resulted in elongation of India's external debt profile. The interest spread offered on such instruments was generally favourable compared to spreads offered by other developing countries on similar instruments issued during those specific periods. In fact, there are indications that spreads offered on these instruments were much lower than what countries with much higher international credit ratings could offer (Reddy, 1998 and GoI, 2001) (Table 6.16).

Table 6.16: Special Borrowings by India since 1991

Currency Denomination	Amount Collected (US $ million)	Interest Rate* (per cent per annum)	5-year Government Bond Yield #	Spread (Col 3-4)
1	2	3	4	5
India Millennium Deposits, 2000	**5,520**			
Mobilisation in US Dollar	5,182	8.50	5.57	2.93
Mobilisation in Pound Sterling	258	7.85	4.63	3.22
Mobilisation in Euro	80	6.85		
Resurgent India Bonds, 1998	**4,230**			
Mobilisation in US Dollar	3,987	7.75	5.26	2.49
Mobilisation in Pound Sterling	180	8.00	5.45	2.55
Mobilisation in Euro	63	6.25		
India Development Bonds, 1991	**1,627**			
Mobilisation in US Dollar	1,307	9.50	7.86	1.64
Mobilisation in Pound Sterling	320	13.25	9.92	3.33

* Interest payments are half-yearly and carried both cumulative and non-cumulative options.
\# Average yields to maturity in per cent per annum.
Source: India's External Debt: A Status Report, Government of India, October 2001.

6.84 Thus, the policy on ECBs has been made transparent with gradual phasing out of end-use restrictions, except in respect of investments in real estate and stock market. A new, more liberal policy for ECBs has been announced with a view to promote investment activity in industry. As expected, imports were found to have a significant and strong impact on inflows of ECBs, although debt service requirements have not been that important in this regard.

VI. NON-RESIDENT DEPOSITS

6.85 A number of developing economies mobilise a part of their external capital requirements through special deposit schemes designed for non-residents. These schemes have been especially popular and successful in countries with large expatriate population such as Turkey, Israel, Egypt, Lebanon, Greece, Spain, Pakistan, Sri Lanka, Thailand and some East European countries *e.g.,* Czech Republic. Most of these countries have instituted deposit schemes denominated in both foreign currency as well as their local currency. In most cases, the principal of the deposit along with the accrued interest are freely repatriable without an exchange rate guarantee provided by the central bank.

6.86 In the 1970s, the two oil shocks shifted substantial resources towards oil exporting countries which provided investment and employment opportunities in the oil-rich countries. The Reserve Bank devised specific deposit schemes to tap the savings of non-resident Indians employed in these countries. Non-Resident Indians/Overseas Corporate Bodies were allowed to open and maintain bank accounts in India under special deposit schemes – both rupee and foreign currency denominated. Special schemes for Non-Resident Indians were initiated in February 1970 with the introduction of the Non-Resident External Rupee Account [NR(E)RA]. This was followed by the Foreign Currency Non-Resident (Account) [FCNR(A)] scheme in November 1975. In the 1980s, investor preferences clearly shifted in favour of foreign currency denominated deposits, partly due to interest rate differential over the prevailing international interest rates as also the foreign exchange guarantee provided by the Reserve Bank. Accordingly, at end-March 1991, foreign currency deposits formed 72 per cent of total NRI deposits. Such a high proportion with easier repatriability provided an in-built incentive to the holders to liquidate their deposits in the event of a crisis. The external payments difficulties of 1990-91 demonstrated the vulnerability associated with these deposits.

6.87 The provision of exchange guarantee in respect of the FCNR(A) was a major policy concern in the early 1990s. Under FCNR(A) scheme, scheduled commercial banks in India were permitted to accept freely repatriable term deposits in varying maturities ranging from 6 months to 3 years from NRIs in four designated currencies, *viz.,* US Dollar, Pound Sterling, Deutsche Mark and Japanese Yen. The Reserve Bank prescribed interest rates that the banks could offer to depositors corresponding to varying maturities. The exchange risk in this scheme was borne by the Reserve Bank although the liabilities incumbent in the acceptance of deposits under the scheme rested with the banks themselves. The exchange guarantee had quasi-fiscal costs and implications for the central bank's balance sheet. Given the increasing size of these losses in a market determined exchange rate system, the Government of India agreed to take over the liabilities relating to exchange loss on FCNR(A) deposits with effect from July 1, 1993. Nonetheless, the Reserve Bank transferred additional profits to the Government to meet these liabilities to the extent the Reserve Bank earned adequate profits, which were, in fact, more or less sufficient to meet the losses without impacting the Union Budget. Thus, notwithstanding the closure of the scheme in August 1994, the maturing deposits continued to be a burden on the Reserve Bank's balance sheet till August 1997.

6.88 Since the 1990s, the policy with respect to the non-resident deposit schemes has been to retain the attractiveness of these schemes to maintain capital flows from abroad, while at the same time, reducing the effective cost of borrowing in terms of interest outgo and the cost to macroeconomic management. In line with these objectives, while the interest rates on these deposits have been gradually deregulated, the reserve requirements and, in recent period, interest rate ceilings have been fine-tuned in relation to capital flow cycles in order to modulate these flows consistent with the overall macroeconomic management. The exchange guarantee was withdrawn by phasing out the FCNR(A) scheme. In order to provide depositors with an alternative to FCNR(A), a new scheme, *i.e.,* Foreign Currency Non-resident (Banks) (FCNR(B)) was introduced under which the foreign exchange risk was borne by banks on the basis of their risk perception. The interest rate differential between FCNR(B) and international rates was kept very low to discourage arbitrage. A new rupee denominated scheme, Non-resident Non-repatriable Rupee Deposit (NR(NR)RD), was devised, which was initially non-repatriable but later provided

Table 6.17: Outstanding Balances Under Various NRI Deposit Schemes

(US $ million)

End-March	NR(E)RA	FCNR(A)*	FCNR(B)	NR(NR)RD**	FC(O)N	Total
1	2	3	4	5	6	7
1975	40	–	–	–	–	40
1980	856	188	–	–	–	1,044
1985	2,304	770	–	–	–	3,074
1990	3,777	8,638	–	–	–	12,415
1995	4,556	7,051	3,063	2,486	10	17,166
1996	3,916	4,255	5,720	3,542	13	17,446
1997	4,983	2,306	7,496	5,604	4	20,393
1998	5,637	1	8,467	6,262	2	20,369
1999	6,045	–	7,835	6,618	–	20,498
2000	6,758	–	8,172	6,754	–	21,684
2001	7,147	–	9,076	6,849	–	23,072
2002	8,449	–	9,673	7,052	–	25,174
2003	14,923	–	10,199	3,407	–	28,529

* : Withdrawn effective August 1994. – : Nil
** : Withdrawn effective April 2002.
Note : Balances are inclusive of accrued interest (in case of FCNR(A) from 1989 onwards).
Source : Reserve Bank of India.

for repatriation of only interest income. Deposits under this scheme, given their non-repatriability, were promoted by exempting them from SLR and CRR over most of the period. The scheme was withdrawn in April 2002.

6.89 Reflecting these policy initiatives and the overall management of the exchange rate, flows under NRI deposits have been relatively stable since 1991-92. A positive development has been the decline in the proportion of foreign currency denominated deposits from a high of 78 per cent at end-March 1992 to less than 40 per cent of total NRI deposits at end-March 2003 (Table 6.17). The composition of FCNR(B) deposits indicates that investors prefer to hold these deposits in US dollar (almost 60-70 per cent of total FCNR(B) deposits) followed by pound sterling (almost a quarter).

6.90 An empirical exercise was undertaken to assess the determinants of NRI deposits. The explanatory variables for non-resident deposits (NRIDEP) included exports of the Gulf countries (since a large proportion of these deposits are from the Gulf countries), and the interest rate differential (INTDIFF) between India and abroad. The results indicated that all the variables were significant with expected signs.[10]

NRI Deposits and Monetary Management

6.91 While NRI deposits have been an important source of external finance, the acceptance of these deposits form a liability of the banking system and also impact on monetary aggregates. NRI deposits were, therefore, subject to monetary regulation in the form of reserve requirements and interest rate stipulations, taking into account the trends in external financing requirements and external capital flows. While the cash reserve ratio (CRR) on NR(E)RA deposits over the 1970s and in the early 1980s was the same as on domestic deposits, the 1980s witnessed a preferential treatment to these deposits in the form of a significantly lower CRR, reflecting the need to mobilise more deposits in view of the then widening current account deficit. A similar preferential treatment to FCNR(A) was also provided. The CRR was, however, increased and brought more or less at par with domestic deposits from late 1980s onwards. While FCNR(B) and NR(NR)RD, which were introduced in early 1990s, were initially exempted from CRR, reserve requirements were imposed in late 1994 and early 1995 to make these deposits relatively unattractive so as to counter the monetary impact of

[10] Ln NRIDEP = -2.48 + 0.67 Ln NRIDEP{-1} + 0.12 INTDIFF + 0.97 Ln GULFEXP - 2.19 DUMNRI
(-1.85)* (7.12)*** (2.41)** (2.74)*** (-2.69)***

$\bar{R}^2$ = 0.93 h = -0.03 SEE = 0.79

Where NRIDEP = Net inflows under NRI deposits; INTDIFF = Interest rate Differential;
GULFEXP = Exports from GULF countries; DUMNRI = Dummy variable for 1995-96.

Figures in brackets are t-values; ***, ** and * denote the 1, 5 and 10 per cent level of significance, respectively.

higher inflows. In late 1995 and early 1996, in view of the volatility in the foreign exchange market, the CRR was reduced to make these deposits more attractive. The variability in the use of SLR on these deposits has been rather limited. A survey of 17 EMEs by the Bank for International Settlements (BIS, 1999) on monetary policy operating procedures found that the authorities usually apply such reserve requirements uniformly to all types of deposits. Nonetheless, differential ratios are applied at times to serve specific objectives. For instance, higher reserve requirements were sometimes imposed on foreign currency deposits compared with domestic currency deposits in Peru and Thailand on prudential and liquidity grounds; in Poland, on the other hand, the statutory ratio for foreign currency deposits was lower than that for domestic currency denominated deposits, although the intention was to have a uniform rate for all type of deposits.

6.92 In line with the regulation of deposit rates in the period prior to the 1990s, the interest rates on various NRI schemes were also regulated. While prior to August 1985, interest rate on both NR(E)RA and FCNR(A), the schemes in vogue at that time, was two percentage points higher than that prescribed for domestic term deposits, interest rates on FCNR(A) in the subsequent period were revised taking into account trends in international interest rates. The differential, however, widened in the early 1990s reflecting efforts to attract these deposits in view of the external payments crisis of 1991. As a first step towards more flexibility, the detailed maturity-wise prescriptions were rationalised in case of NR(E)RA deposits, on the lines of flexibility provided in case of domestic deposits, by allowing banks to determine their own term structure, subject to a single prescription of 'not more than 13 per cent' (effective October 1992) and 'not more than 12 per cent' (effective April 8, 1993). The banks were given full freedom for all maturities effective September 13, 1997. Similarly, in the case of FCNR(B) deposits, banks were initially permitted, effective April 16, 1997, to determine interest rates subject to ceilings prescribed by the Reserve Bank. Subsequently, effective October 21, 1997, the banks were provided more freedom, by linking these rates to LIBOR. In the case of NR(NR)RD scheme, the banks were allowed the flexibility to fix the interest rates from the inception of the scheme (June 1992), *i.e.*, even before the freedom was granted to domestic deposits.

6.93 Some adjustments have been made in the recent past regarding policies relating to interest rates on non-resident deposits in response to changing conditions in the financial markets. A ceiling of 250 basis points above the corresponding US dollar LIBOR/ Swap rates was placed on the interest rates on fresh NR(E)RA deposits effective July 17, 2003. The ceiling was reduced to 100 basis points on September 15, 2003 and further to 25 basis points on October 18, 2003. In addition, after a review of the investment activities of Overseas Corporate Bodies (OCBs), in consultation with Government of India, they were derecognised as a distinct eligible class of investors in India with effect from September 16, 2003. They will now be treated on par with any other foreign investors.

6.94 In sum, the policy since the 1990s has focused on attracting stable non-resident deposits. Over time, the Reserve Bank has aligned the interest rates on these deposits with international rates, fine-tuned the reserve requirements, end-use specifications and other concomitant factors influencing these deposits in order to modulate these flows consistent with the overall macroeconomic management.

VII. EXTERNAL AID

6.95 A number of studies have shown that foreign aid can facilitate economic and social transformation by overcoming temporary shortages in specific human and material resources, promoting strategic activities, inducing and facilitating critical government policies and providing certain amount of working capital for carrying out programmes involving a transformation of the structure of the economy (Mikesell, 1968). A time series analysis of several countries in Asia, including India, Pakistan and China, suggests that aid contributed to growth both in poor and middle income countries (Islam, 1972 and Krueger, 1978). There is no evidence to suggest that countries that received a large amount of external aid have performed poorly (apart from countries suffering from civil or external conflicts), and the empirical evidence that high aid levels exert an independent negative impact on governance is unconvincing (World Bank, 2003). It is often argued that governments of the aid-receiving countries divert foreign aid from intended purposes to various unproductive uses and/or to support general government expenditure. Various studies have indeed found fungibility of foreign aid. In view of this, it has been argued that rather than targeting aid to specific sectors or activities, it is more efficient to link aid to overall public expenditure programme in the recipient country (Feyzioglu *et al.,* 1998). As effectiveness of aid depends on the policy framework of the recipient economy, it is argued that such flows should be concentrated in countries with sound policy frameworks (World Bank, 1998).

Foreign Aid and Millennium Goals

6.96 Through a broad-based consensus, the United Nations Millennium Summit in September 2000 framed time-bound and measurable goals and targets [Millennium Development Goals (MDGs)] to address poverty, hunger, disease, illiteracy, environmental degradation and gender bias. It was envisaged during the Summit that many countries would not be able to reach these targets unless they receive substantial external support including and in the form of advocacy, expertise and resources.

6.97 The pace of progress on MDGs has been both slow and uneven across countries (United Nations, 2003). In the recent discussions of the United Nations meeting in Monterrey, Mexico, the United States and the European Union agreed to expand their aid programmes which could lead to some increase in aid but not sufficient to meet the MDGs. The donors have also signalled the need for effective utilisation of aid. Many industrialised countries have cited their own domestic considerations including fiscal problems.

6.98 The Heavily Indebted Poor Countries (HIPC) initiative launched in 1996 to reduce the debt burden of the world's poorest and most heavily indebted countries has made substantial progress in the recent period with six countries having received irrevocable debt relief by September 2002 under the enhanced HIPC Initiative. An additional 20 countries have begun to receive interim debt relief. Availability of long-term external financing on sufficiently concessional terms to support poverty reduction and growth strategies is important for the sustainability of HIPCs. The agreement under IDA-13 to provide a proportion of IDA resources in the form of grants to particularly vulnerable low-income countries will be an important step forward in this regard (World Bank, 2003).

6.99 External assistance with high element of concessionality played a significant role in the development process in India till the early 1980s. For most of this period, external assistance formed almost 100 per cent of the capital account flows. During the 1980s, however, the share of external assistance in the capital account declined as the widening current account deficit necessitated recourse to additional sources of foreign savings such as commercial borrowings and non-resident deposits. On an average, external assistance formed almost one-half of capital account during 1980s, which declined to around 11 per cent in the second-half of 1990s. The lower recourse to official aid was also attributed to other factors such as structural changes in global capital flows, lack of matching resources, delays involved in project appraisals and tender finalisation due to administrative bottlenecks, lack of cost related tariff structure for power and delays in land acquisition. Net inflows to India, as a result, fell sharply during the 1990s (Table 6.18). Net officials inflows to developing countries as a group have also been sluggish (Table 6.19).

Table 6.18: Trends in External Aid: India

(US $ million)

Year	Authorisation			Utilisation			Debt Servicing	Net inflows	Aid Utilisation Ratio(%)
	Loans	Grants	Total@	Loan	Grants	Total #			
(1)	(2)	(3)	(4) = (2)+(3)	(5)	(6)	(7) = (5)+(6)	(8)	(9) = (7) – (8)	(10) = (7)/(4)
1970s	1,533.9	302.8	1,858.0	1,219.3	186.9	1,436.5	799.5	636.9	83.6
1980s	4,596.5	352.7	4,949.2	2,385.9	372.5	2,758.4	1,390.9	1367.5	61.1
1990s	3,828.1	454.8	4,282.9	3,271.8	286.7	3,558.4	3,120.0	438.4	83.1
1990-91	4,236.4	291.0	4,527.4	3,438.7	297.8	3,736.5	2,398.0	1338.5	82.5
1991-92	4,766.0	364.1	5,130.1	4,317.9	371.0	4,688.9	2,688.0	2000.9	91.4
1992-93	4,275.7	330.7	4,606.4	3,301.8	287.5	3,589.3	2,814.0	775.3	77.9
1993-94	3,717.5	772.7	4,490.2	3,486.0	283.4	3,769.4	3,055.0	714.4	83.9
1994-95	3,958.2	343.8	4,302.0	3,184.8	292.7	3,477.5	3,315.0	162.5	80.8
1995-96	3,249.8	399.0	3,648.8	2,987.4	319.1	3,306.4	3,699.0	-392.5	90.6
1996-97	4,000.4	825.6	4,826.0	3,066.8	305.6	3,372.4	3,320.0	52.4	69.9
1997-98	4,006.8	566.3	4,573.1	2,917.4	248.3	3,165.7	3,120.0	45.7	69.2
1998-99	1,979.2	49.9	2,029.1	2,936.0	213.0	3,149.0	3,314.0	-165.0	155.2
1999-00	4,091.4	604.4	4,695.8	3,080.8	248.2	3,329.0	3,477.0	-148.0	70.9
2000-01	3,769.3	206.3	3,975.6	2,967.2	159.5	3,126.7	3,664.0	-537.3	78.6
2001-02	4,438.7	711.1	5,149.8	3,306.3	297.1	3,603.4	3,271.0	332.4	70.0
2002-03	4,183.0	260.0	4,443.0	2,946.5	386.0	3,332.5	6,091.1	-2,758.6	75.0

@ The total also includes PL 480 *etc.* payable in foreign currency of US $ 30.1 million in 1971-72 ; payable in rupees of US $ 128.7 million in 1971-72 , US $ 23 million in 1975-76, US $104.3 million in 1976-77 and US $ 26.6 million in 1977-78.

The total also includes PL 480 *etc.* payable in foreign currency of US $ 49.9 million in 1970-71 and US $11.8 million in 1971-72; payable in rupees of US $ 67.9 million in 1970-71 ,US $ 138.0 million in 1971-72, and US $ 5.6 million in 1972-73.

Source: Economic Survey, Government of India (various issues).

Table 6.19: Net Official Financing of Developing Countries

(US $ billion)

	Item	1995	1996	1997	1998	1999	2000	2001	2002
	1	2	3	4	5	6	7	8	9
1.	Total (2+3)	71.6	31.6	39.7	62.3	42.9	23.4	57.5	49.1
2.	Grants	32.8	27.8	26.7	28.2	29.4	29.6	29.5	32.9
3	Net Lending (4+11)	38.8	3.8	13.0	34.1	13.5	-6.2	28.0	16.2
4.	Multilateral (5+6+7+8=9+10)	28.2	14.0	19.9	37.4	15.7	0.9	35.7	21.3
5.	World Bank Group	6.3	7.3	9.2	8.7	8.8	7.8	7.5	1.5
	IBRD	1.4	1.5	3.9	3.9	4.2	3.6	2.5	-4.1
	IDA	4.9	5.7	5.3	4.8	4.5	4.3	5.0	5.6
6.	Major Regional Development Banks@	5.1	4.6	6.3	8.6	9.0	6.2	6.5	1.9
7.	IMF	16.8	1.0	3.4	14.1	-2.2	-10.6	19.5	14.5
8.	Other	0.0	1.1	0.9	5.9	0.1	-2.5	2.2	3.4
9.	Concessional	8.8	8.5	7.6	7.4	7.0	5.6	7.2	9.3
10.	Non-concessional	19.4	5.5	12.3	30.0	8.8	-4.7	28.5	12.0
11.	Bilateral (12+13)	10.5	-10.2	-6.9	-3.3	-2.3	-7.1	-7.7	-5.1
12.	Concessional	5.5	2.7	0.0	2.5	5.1	1.3	1.5	1.8
13.	Non-concessional	5.0	-12.9	-6.9	-5.9	-7.3	-8.4	-9.3	-6.9

@ Inter-American Development Bank, Asian Development Bank, European Bank for Reconstruction and Development and African Development Bank.

Source: Global Development Finance, World Bank, 2003.

6.100 In recent years, the Government of India has decided to pre-pay costly external aid. The Government pre-paid US $ 3.0 billion of high cost multilateral debt in February 2003 and US $ 1.6 billion in November 2003. The Government of India has also decided to discontinue receiving aid from bilateral partners other than Japan, UK, Germany, USA, EC and Russian Federation and has already prepaid bilateral debt amounting to US $ 0.6 billion in 2003.

6.101 Given the nature of external assistance and its relation to the level of development of the economy, an exercise was undertaken to assess the determinants of the inflows and outflows of external assistance in India over the period 1970-71 to 2002-03. The inflows under external assistance were expected to depend on the level of development proxied by the gross domestic product at factor cost (GDPFC) and the debt service ratio in the previous period. The results validate the assumption that the external assistance into India depended on the level of economic activity as proxied by GDPFC.[11] On the other hand, the outflows on account of external assistance, which are, scheduled repayment obligations, were, as expected, found to depend on the outflows during the last period and the activity variable. Both the variables turned out to be significant.

6.102 Despite differing viewpoints, the role of external assistance in the development process of developing countries cannot be over emphasised. In the absence of alternative sources of funds, external assistance emerged as a major financing item in the capital account of the balance payments as was the case with India till the early 1980s. In recent years, however, the policy towards management of external liabilities has changed and the initiative is towards attracting private capital flows, especially non-debt creating direct investment inflows.

[11] Ln EXTASSR = -7.38 + 0.59 Ln EXTASSR{-1} + 0.79 Ln GDPFC + 0.02 DSR{-1}
(-2.23)** (3.73)*** (2.33)** (2.75)***

$\bar{R}^2$ = 0.97 h = 0.36 SEE = 0.18

Where EXTASSR = Inflows under external assistance; GDPFC = Gross domestic product at factor cost; DSR = Debt service ratio

Ln EXTASSP = -18.08 + 0.27 Ln EXTASSP{-1} + 1.76 Ln GDPFC + 0.37 DUMEXTASSP
(-3.40)*** (1.27) (3.50)*** (2.19)**

$\bar{R}^2$ = 0.98 h = 0.82 SEE = 0.19

Where EXTASSP = Outflows under external assistance; GDPFC= Gross domestic product at factor cost;
DUMEXTASSP = Dummy variable to account for large increase in repayments since 1991-92.

Figures in brackets are t-values; ***, ** and * denote the 1, 5 and 10 per cent level of significance, respectively.

VIII. TRANSACTIONS WITH THE INTERNATIONAL MONETARY FUND (IMF)

6.103 The Financial Transaction Plan (FTP) of the IMF essentially reflects the cooperative spirit underlying the financial transactions with its members. Under the FTP, members with strong balance of payments (BoP) and foreign exchange reserves enable the IMF to finance the BoP needs of countries with BoP imbalances. Thus, the position of an IMF member could, over time, change from one of debtor to creditor *vis-à-vis* the IMF, depending on the member's BoP and foreign exchange reserve position. Participation in FTP as a creditor has a positive signalling effect at the international level. In a way, it amounts to international recognition of the strength and resilience of a country's external sector. Moreover, participation in FTP does not alter either the total quota contribution or the total foreign exchange reserves of a country, but only the composition of quota and foreign exchange reserves.

6.104 India became a member of the IMF's FTP from the quarter September-November, 2002 in view of its strong BoP and comfortable foreign exchange reserve position. Depending on the extent of its participation in the FTP, India's Reserve Tranche Position (RTP) in the IMF would increase on which the IMF would pay remuneration at market related rates. Based on the expected purchase (borrowing) needs of the members, IMF prepares a quarterly FTP indicating the expected total amount that all creditor countries may have to provide during any quarter. The actual transfers are generally less than what is planned. In the quarters September-November 2002 and December 2002-February 2003, India was allocated SDR 156 million and SDR 128 million, respectively. As the actual demand from the borrowing members was much less than what was planned under the FTP for both the quarters, India was not required to effect any actual transfer during those two quarters. This situation changed in the subsequent quarters. India was allocated SDR 140 million for the quarter March-May, 2003 but the actual utilisation was only SDR 5 million effected on May 07, 2003 for the first time. During June-August 2003, India was allocated SDR 303 million of which the actual transfer for India was SDR 200 million. During September-November 2003, India was allocated SDR 304 million and the actual transfer for India was SDR 150 million. India has, thus, become a creditor to the IMF – a long way from the situation in 1981 when it was the largest borrower.

IX. SURGES IN CAPITAL FLOWS AND CONDUCT OF MONETARY POLICY

6.105 Reflecting the progressive globalisation of the Indian economy since the 1990s, capital flows increased from an average of US $ 5.8 billion per annum (Rs. 8,225 crore) during the second half of the 1980s to US $ 9.1 billion (Rs. 35,354 crore) billion during the second half of the 1990s and further to US $ 12.1 billion (Rs.58,506 crore) during 2002-03. At the same time, the current account deficit declined significantly, before turning into a surplus in 2001-02 and 2002-03, in turn, resulting in a large and growing surplus in the overall balance of payments. The concomitant excess supply in the foreign exchange market has been absorbed by the Reserve Bank in line with its stance on exchange rate management and with a view to building-up foreign exchange reserves. In the process, the net foreign assets of the Reserve Bank increased multifold from Rs. 6,068 crore at end-March 1990 to Rs. 4,68,745 crore by January 16, 2004. As a result, the share of net foreign assets (NFA) in reserve money increased from 7.8 per cent to more than 100 per cent (119 per cent) over the same period (Charts VI.7 and VI.8).

6.106 The absorption of these flows has expansionary impact on money supply with implications for price as well as financial stability. This necessitates the neutralisation of the expansionary impact of external flows (see Chapter III). In general, apart from exchange rate flexibility and foreign exchange market intervention there are several other

Chart VI.7 : Movements in Reserve Money

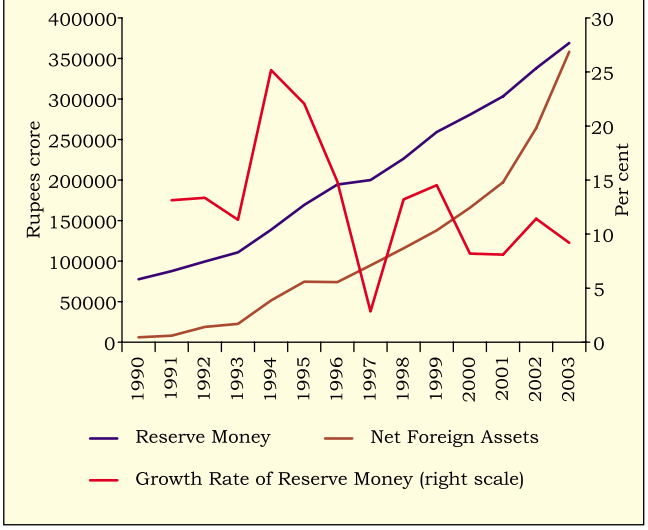


Chart VI.8 : Reserve Money - Compositional Shifts

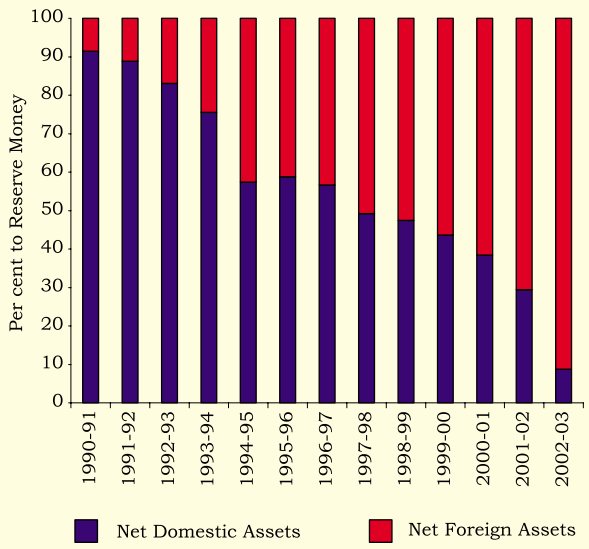
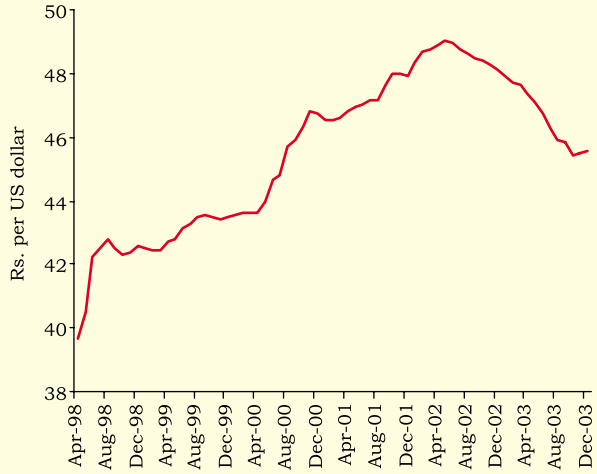


Chart VI.9 : Exchange Rate of the Indian Rupee



policy responses that can be used to manage large capital inflows. These include: (i) trade liberalisation leading to a higher trade and current account deficit which would enable the economy to absorb the capital inflows; (ii) investment promotion through measures designed to facilitate greater investment in the economy; (iii) liberalisation of the capital account; (iv) management of external debt through pre-payment and moderation in the access of corporates and intermediaries to additional external debt; (v) management of non-debt flows like foreign direct investment (FDI) and portfolio investments; (vi) taxation of inflows such as the imposition of a "Tobin" type tax; and, (vii) use of foreign exchange reserves for productive domestic activities through on-lending in foreign currencies to residents (RBI, 2003c).

6.107 In India, a number of steps have been taken to manage the excess supply in the foreign exchange market. These include a phased liberalisation of the policy framework in relation to current as well as capital accounts. Efforts to moderate capital flows have been focused on a number of measures, as discussed earlier in this chapter, such as minimum maturity prescriptions and interest rate ceilings on non-resident rupee deposits. In regard to capital outflows, the automatic route of FDI abroad has been substantially expanded. Similarly, corporates have been provided greater flexibility with regard to the pre-payment of their external commercial borrowings. Surrender requirements for exporters have been liberalised to enable them to hold up to 100 per cent of their proceeds in foreign currency accounts; foreign currency account facilities have been extended to other residents; and banks have been allowed to liberally invest abroad in high quality instruments. A significant step in this process was the pre-payment of a part of the debt owed to multilateral and bilateral agencies by the Government of India. Furthermore, in 2002-03, the exchange rate of the rupee *vis-à-vis* the US dollar appreciated, an event unprecedented in the recent monetary history of India (RBI 2003). The appreciation of rupee *vis-à-vis* the US dollar has continued during 2003-04 so far (Chart VI.9).

6.108 Notwithstanding the measures undertaken by the Reserve Bank, the overall balance of payments surplus has continued to increase in the last few years. The net foreign assets of the Reserve Bank have also increased sharply. As a result, the major instrument of managing capital flows in India has been sterilisation - open market operations involving sale of Government of India securities from the Reserve Bank's portfolio and repo transactions - in order to offset the liquidity created by the purchases of foreign currency from the market (Table 6.20). Accordingly, the share of net domestic assets in reserve money declined throughout the 1990s. In particular, the stock of the Government of India securities - the main instrument of sterilisation - declined from Rs.1,46,534 crore at end-March 2001 to Rs.36,919 crore by January 16, 2004 (Chart VI.10).

6.109 The cross-country experience with regard to the management of capital flows suggests a menu of possible approaches ranging from liberalisation

Table 6.20: Accretion to Foreign Exchange Reserves and Open Market Operations

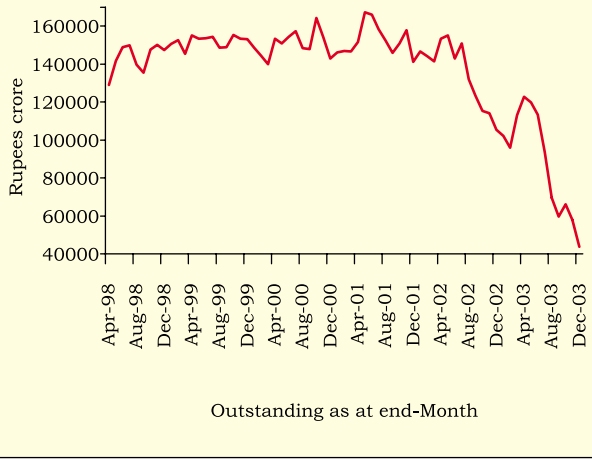
(Rupees Crore)

Year	Accretion to Foreign Exchange Reserves	Open Market Purchases	Open Market Sales	Net OMO Sales	Net OMO Sales (net of Private Placements and Devolvements)
1	2	3	4	5 = 4-3	6
1996-97	20,548	623	11,206	10,583	6,885
1997-98	20,973	467	8,081	7,614	-5,414
1998-99	22,100	0	26,348	26,348	-11,857
1999-00	27,908	1,244	36,614	35,370	8,370
2000-01	31,291	4,471	23,795	19,324	-11,827
2001-02	66,832	5,084	35,419	30,335	1,443
2002-03	94,244	0	53,402	53,402	17,605
2003-04 (Apr-Dec)	1,06,190	0	36,517	36,517	31,517

Source: Reserve Bank of India.

of outflows to punitively high non-remunerated reserve requirements. These measures can broadly be classified into (i) use of market-based instruments (*i.e.*, instruments of sterilisation) and (ii) non-market based measures involving, *inter alia*, control on inflows and liberalisation of outflows (RBI, 2003c). Besides making use of well known instruments of sterilisation such as open market operations (including repos) with the help of government securities and foreign exchange swaps, there exists a wide variety of other instruments, ranging from provision for remunerated/uncollateralised deposit facilities for financial intermediaries with central banks (*viz*., China, Taiwan and Malaysia), issuance by the central bank of money stabilisation bonds/ central bank bills (*viz*., Korea, China, Malaysia, Indonesia, Thailand, Sri Lanka, Poland and Peru), and Government/Public Sector deposits with the central bank (*viz*., Indonesia, Malaysia, Singapore, Thailand and Peru). Countries have also used Cash Reserve Ratio (CRR) on domestic/foreign deposits (on remunerated/non-remunerated basis) to absorb liquidity (China and Taiwan). There are several countries that have liberalised capital outflows (China and Taiwan). Among the countries that have imposed capital control on short term capital inflows, mention may be made of Thailand, China, Taiwan and Malaysia. Latin American countries, such as, Chile and Colombia adopted the policy of unremunerated reserve requirements. Countries have also used variants of "Tobin" taxes on capital inflows (*viz*., Brazil and Chile) (Box VI.7).

Chart VI.10 : Net Reserve Bank Credit to the Central Government



6.110 With the continued surges in capital flows in the recent period, countries like Thailand, China and Taiwan have undertaken several measures to manage them (Box VI.8).

6.111 As noted above, sterilisation operations have been the principal instrument of managing capital flows in India. Unsterilised intervention in foreign exchange markets could lead to an alignment of domestic interest rates with international interest rates which could have beneficial effects on investment and growth (RBI, 2003c). In the short run, however, unsterilised intervention could lead to asset price volatility, imprudent lending and adverse selection which could have inimical effects on the real economy with possibilities of capital flow reversals. There is a broader agreement on the policy response of sterilisation as a temporary measure since it addresses temporary inflows effectively, and can be implemented quickly. Moreover, if the inflows are more enduring in nature, it provides some breathing space to formulate a longer term response. Even in the case of mixed flows – enduring and short term – some degree of sterilisation is often considered necessary. The arguments in favour of sterilisation are that it

Box VI.7

Management of Capital Inflows: Restrictions and Prudential Requirements – Country Experiences

Asia

Indonesia (1990)

- Measures imposed to discourage offshore borrowing, including limits on banks' net open-market foreign exchange positions and on off-balance-sheet positions. The three-month swap premium raised by 5 percentage points.
- All state-related offshore commercial borrowing made subject to prior approval and annual ceilings were set for new commitments over the next five years.

Malaysia (1989)

- Limits on non-trade-related swap transactions imposed on commercial banks.
- Banks subjected to a ceiling on their non-trade- or non-investment-related external liabilities.
- Residents prohibited from selling short-term monetary instruments to non-residents.
- Commercial banks were required to place with Bank Negara the ringgit funds of foreign banking institutions (Vostro accounts) held in non-interest-bearing accounts. During January-May 1994, these accounts were considered part of the eligible liabilities base for the calculation of required reserves, resulting in a negative effective interest rate on Vostro balances.

Philippines (1992)

- Bangko Central begins to discourage forward cover arrangements with non-resident financial institutions.

Thailand (1988)

- Banks and finance companies (a) net foreign exchange positions not to exceed 20 per cent of capital (subsequently increased to 25 per cent) and (b) net foreign liabilities not to exceed 20 per cent of capital.
- Residents disallowed from holding foreign currency deposits except only for trade-related purposes.
- Reserve requirements, to be held in the form of non-interest-bearing deposits at the Bank of Thailand, on short-term non-resident baht accounts raised from two to seven per cent. The seven per cent reserve requirement extended to finance companies short-term (less than one year) promissory notes held by non-residents. Offshore borrowing with maturities of less than one year (excepting loans for trade purposes) by commercial banks, finance companies, and finance and security companies also subjected to 7 per cent minimum reserve requirement.

Eastern Europe and Latin America

Brazil (1992)

- Between October 1994 and March 10, 1995, following measures imposed: (a) one per cent tax on foreign investment in the stock market, (b) tax on Brazilian companies issuing bonds overseas raised from 3 to 7 per cent of the total and (c) tax paid by foreigners on fixed-interest investments in Brazil raised from 5 to 9 per cent.

Chile (1990)

- Non-remunerated 20 per cent (subsequently increased to 30 per cent) reserve requirement (to be deposited at the central bank for a period of one year) on liabilities in foreign currency for direct borrowing by firms.
- The stamp tax of 1.2 per cent a year (previously paid on domestic currency credits only) applied to foreign loans as well (excepting trade loans).

Colombia (1991)

- A 3 per cent withholding tax imposed on foreign exchange receipts from personal services rendered abroad and other transfers (but allowed to be claimed as credit against income tax liability).
- Banco de la Republica increased its commission on its cash purchases of foreign exchange from 1.5 to 5 per cent.
- Non-remunerated reserve requirement to be deposited at the central bank on liabilities in foreign currency for direct borrowing by firms. The reserve requirement to be maintained for the duration of the loan and applied to all loans with a maturity of five years or less, except for trade credit with a maturity of four months or less. The percentage of the requirement declined as the maturity lengthened, from 140 per cent for funds that are 30 days or less to 42.8 per cent for five-year funds.

Czech Republic (1992)

- The central bank introduced a fee of 0.25 per cent on its foreign exchange transactions with banks, with the aim of discouraging short-term speculative flows.
- Limit on net short-term (less than one year) foreign borrowing by banks introduced.
- Each bank to ensure that its net short-term liabilities to non-residents, in all currencies, do not exceed the lower of 30 per cent of claims on non-residents or Kc 500 million.
- Administrative approval procedures imposed to slow down short-term borrowing by non-banks.

Mexico (1990)

- Foreign currency liabilities of commercial banks limited to 10 per cent of their total loan portfolio. Banks had to place 5 per cent of these liabilities in highly liquid instruments.

Note : Dates in brackets refer to the first year of the surge in inflows.
Source : Reinhart and Smith (1998).

Box VI.8

Management of Capital Inflows: Recent Experience of Thailand, China and Taiwan

In the latest episode of surges in capital flows, Thailand has imposed a variety of measures including restrictions to limit speculative short-term capital flows, liberalisation of capital outflows, resort to massive pre-payment of external debt, tightening of fiscal policy and a flexible exchange rate. Restrictions on interest payments have been imposed, effective October 14, 2003, on short-term borrowing in Baht from non-residents to prevent Thai Baht speculation. These include: (i) non-residents can maintain only current or saving accounts for settlement of international trade and investment transactions; deposits for other purposes must have maturity of at least six months; (ii) a deposit ceiling of 300 million Baht (equivalent of around US $ 7.5 million) per non-resident account; and (iii) financial institutions not to pay interest to overseas holders of Thai cheque and savings accounts. The liberalisation measures include: (i) permission to institutional investors to invest in overseas securities; (ii) encouragement to mutual funds to invest on behalf of local residents in Asian bonds issued by sovereign and quasi-sovereign entities; and (iii) increase in the holding period of foreign currency deposits from 3 to 6 months. The external debt more than halved from a peak of US $ 112 billion in June 1997 to US $ 52 billion by July 2003. Furthermore, substantial fiscal correction – public debt/GDP ratio has declined from 57 per cent to 50 per cent of GDP during 2003 – has also been witnessed (Devakula, 2003).

China has managed capital flows through increase in base money as well as sterilisation by issuing its own bills. From April 22, 2003 the People's Bank of China (PBC) started outright issue of central bank bills with maturities up to one year. By the end of September 2003, 42 issues cumulating to RMB 545 billion yuan had been made. The outstanding issues reached RMB 425 billion yuan (about 4 per cent of GDP). In the context of sustained capital flows, the PBC decided to coordinate the issue of central bank bills with a one percentage point increases in the cash reserve ratio to 7 per cent effective September 21, 2003. Moreover, the PBC liberalised capital outflows through measures such as reforming the current account administration, allowing enterprises to retain more foreign exchange, lifting the limits for individuals to buy and carry foreign currencies when traveling abroad. Furthermore, it carried out a pilot programme on foreign exchange administration of overseas investment to widen channels for outward capital flows. International financial institutions have also been permitted to issue local currency RMB bonds in the domestic market.

Taiwan has sterilised capital flows through open market operations (OMOs) by employing government securities and, in the recent period, through issue of its own negotiable certificates of deposits (NCD). These instruments are issued or sold on outright basis as well as under repurchase agreements. In addition, Taiwan has absorbed liquidity through redeposits from financial institutions and depositing a part of the foreign exchange reserves in the overseas branches of domestic banks to promote their international financial activities and to support Taiwanese firms operating overseas. Capital outflows have been encouraged by permitting (i) international financial institutions such as the European Bank for Reconstruction and Development (EBRD), the European Investment Bank and the Inter-American Development Bank to issue local currency bonds and (ii) domestic securities investment and trust companies to raise funds from the domestic market to invest in foreign securities under an aggregate ceiling.

keeps base money and money supply unchanged, thereby avoiding the undesirable expansionary effects of capital inflows. Furthermore, foreign exchange market intervention accompanied by sterilisation allows the monetary authority to build up international reserves that could help to withstand future shocks, and provide comfort and confidence to market participants. On the other hand, prolonged sterilisation may exert an upward pressure on interest rates, which could, in turn, attract further foreign exchange inflows neutralising the impact of sterilisation. Sterilisation also has its financial costs: if it is conducted through OMO, the net cost of sterilisation to the central bank is the difference between the interest rate on domestic securities and the rate of return on foreign exchange reserves adjusted for any exchange rate change. The magnitude of the cost varies with the extent of sterilisation and the yield differentials. These are termed "quasi-fiscal" costs since the costs to the central bank are passed on to the sovereign through a lower transfer of profits. Similarly, when sterilisation is effected through an increase in reserve requirements, this could adversely affect the profitability of the financial system as it is a tax on banks and could give rise to dis-intermediation. Sterilisation as a process, therefore, involves a range of costs and benefits. On balance, there must be adequate preparedness to undertake sterilisation operations, which includes availability of instruments. The need for and size of such operations is, however, governed by several larger policy considerations. At the same time, it must be stressed that sterilisation is essentially a means of buying time since, in the ultimate analysis, only durable and consistent policies enhance a country's capacity to absorb capital flows (RBI, 2003c).

6.112 In recent years, the declining stock of the Government of India securities with the Reserve Bank has brought into a sharp focus the limitations on the Reserve Bank's ability to sterilise capital flows in the future. An internal Working Group on Instruments of Sterilisation constituted by the Reserve Bank reviewed the various instruments used in India and in other countries and deliberated on the suitability of various instruments to the current conditions in India and possibility for deployment in the future. The Group felt that the appropriate mix of the instruments would depend on the prevailing circumstances, the associated costs and benefits, and the opportunity cost of not using sterilisation as a policy option (Box VI.9).

6.113 In the context of sterilisation operations, it is also important to examine whether capital inflows reflect higher money demand by residents. In other words, it is debatable whether it is the reduction in net domestic assets that caused subsequent capital inflows or whether the reduction in NDA offset the previous capital inflows. For instance, contraction of NDA through open market sales to sterilise initial capital flows could place upward pressure on interest rates attracting, in turn, further capital inflows. The size of inflows depends on the degree of substitutability between domestic and foreign assets. If the assets are perfect substitutes, even a small rise in domestic interest rates would attract large capital inflows rendering monetary policy sterilisation operations ineffective (Kouri and Porter, 1974; Schadler *et al.*, 1993). A key issue, therefore, is the ability of the monetary authority to sterilise the capital inflows and yet retain control over money supply so

Box VI.9

Recommendations of the Report of the Working Group on Instruments of Sterilisation

Against the background of international experience with various instruments of sterilisation and application of available instruments with the Reserve Bank within the existing financial and legal structure, the Group felt that there was a need for a two-pronged approach: (i) strengthening and refining the existing instruments; and (ii) exploring new instruments appropriate in the Indian context. The Group examined the option of sterilisation of inflows by using/refining the existing instrument without changing the legal framework. These instruments included: (i) Liquidity Adjustment Facility (LAF); (ii) Open Market Operations (OMO); (iii) Balances of the Government of India with the Reserve Bank; (iv) Forex Swaps; and, (v) Cash Reserve Requirements. The Group also considered the introduction of certain new instruments which would involve amendments to the RBI Act: (i) Interest Bearing Deposits by Commercial Banks; and (ii) Issuance of Central Bank Securities. Moreover, the Group explored the possibility whether the Government could issue Market Stabilisation Bills / Bonds for sterilisation purposes if the existing instruments are found to be inadequate to meet the size of operations in future. The major recommendations of the Group for use of various instruments were as follows:

Existing instruments not requiring amendment to the Reserve Bank of India Act

- It is not desirable to use the LAF as an instrument of sterilisation on an enduring basis; however, for limited periods, it can be used in a flexible manner along with other instruments.
- Open market operations of outright sales of government securities should continue to be an instrument of sterilisation to the extent that securities with the Reserve Bank can be utilised for the purpose. However, as the OMO sales entail the permanent absorption of the liquidity and transfer market risk to participants, the alternative of using the existing stock of securities for longer-term repos (up to 3 to 6 months) as an option can also be considered.
- Surplus balances of the government may be maintained with the Reserve Bank without any payment of interest so as to release securities for OMO. This would entail a review of the 1997 agreement between the Government of India and the Reserve Bank.
- Use of CRR as an instrument of sterilisation, under extreme conditions of excess liquidity and when other options are exhausted, should not be ruled out altogether by a prudent monetary authority ready to meet all eventualities.

New instruments requiring amendment to the Reserve Bank of India Act

- The RBI Act may be amended to provide for flexibility in determination/remuneration of CRR balances so that interest can be paid on deposit balances actually maintained by scheduled banks with the Reserve Bank.
- In the context of current fiscal situation and considerations of market fragmentation, it is not desirable to pursue the option of issuance of central bank paper.

New instrument not requiring amendment to the Reserve Bank of India Act

- The Government may issue Market Stabilisation Bills/ Bonds (MSBs) for mopping up liquidity from the system. The amounts so raised should be credited to a fund created in the Public Account and the Fund should be maintained and operated by the Reserve Bank in consultation with the Government.

as to pursue its stated objectives. Following Kouri and Porter (*op cit*), this can be examined empirically by analysing the behaviour of the central bank's NDA and its net foreign assets (NFA). In specific terms, the direction of causality between NDA and NFA needs to be established. For most countries, both lines of causality could be operational depending upon the degree of capital account liberalisation and sensitivity of foreign flows to interest rate differentials. The "offset" coefficient – the response of net foreign assets to net domestic assets – measures the degree to which capital inflows offset the effect of a change in NDA on money supply. An offset coefficient close to unity would imply that the efforts of the monetary authority to tighten monetary policy would induce equal and offsetting foreign inflows leaving no scope for independent monetary policy. In contrast, an offset coefficient of zero would provide the monetary authority with complete control over money supply and, therefore, discretion in the conduct of monetary policy.

6.114 Using quarterly data for the period 1976-1991 for a sample of six countries, Schadler *et al* (1993) found that the offset coefficient ranged ranging between (-) 0.1 and (-) 0.5 for Colombia, Egypt, Mexico and Spain indicating sufficient scope for an independent monetary policy. The offset coefficient was found to be less than (-) 0.5 for Indonesia, Korea and Spain (Lee, 1996). For Thailand, the offset coefficient was close to unity suggesting little scope of pursuing an independent monetary policy (Schadler, *et al*, 1993; Lee 1996). On the other hand, the offset coefficient for Thailand was only (-) 0.33 during 1984-95, once the simultaneity bias between NDA and capital flows is taken into account, indicating some scope for sterilisation and an independent monetary policy. Moreover, consistent with the hypothesis of increasing capital mobility in the 1990s and the consequent declining monetary policy independence, the magnitude of the offset coefficient increased from (-) 0.21 (1984-89) to (-) 0.33 (1990-95) for Indonesia and from (-) 0.21 (1984-87) to (-) 0.41 (1988-95) for Thailand.

6.115 For India, the offset coefficient was estimated to be (-) 0.3 over the period April 1993 to March 1997, suggesting that sterilisation operations conducted during this period enabled sufficient independence for monetary policy to pursue domestic goals (Pattanaik, 1997). In the subsequent period, net foreign assets have increased rapidly. Over the sample period April 1994 to September 2003, Granger causality tests indicate a uni-directional causality from changes in NFA to net domestic assets (NDA).[12] Thus, over the sample period, capital inflows were not induced by domestic monetary conditions. The extent of sterilisation can be examined by estimating the central bank reaction function which studies the behaviour of central bank's net domestic assets in response to variations in its net foreign assets. For India, the sterilisation coefficient - the response of change in NDA to that in NFA - is found to be (-) 0.92, *i.e.,* an increase of Rs.100 in NFA induced a policy response of sterilisation that drained away NDA worth Rs.92 from the system.[13] As a result, the Reserve Bank was able to offset the expansionary effect of foreign capital flows on domestic money supply, consistent with its macroeconomic objectives.

6.116 All accretions to NFA do not have a monetary impact; for instance, aid receipts, revaluation and the Reserve Bank's income on its foreign assets contribute to NFA but have no monetary impact, obviating the need for sterilisation to that extent. As such, an appropriate measure to study the degree of sterilisation in India would be to examine the impact of the Reserve Bank's net market purchases/ sales of foreign currency from/to authorised dealers

[12] In a bivariate VAR of net foreign exchange assets (NFA) and net domestic assets (NDA) of the Reserve Bank (with both variables in first-difference) over the period April 1994 to September 2003, the null hypothesis of Granger non-causality of NDA can not be rejected (chi-square of 0.002 at p-value of 0.97). On the other hand, the null hypothesis of Granger non-causality of NFA can be rejected at 10 per cent level of significance (chi-square of 3.05 at p-value of 0.08). The VAR was estimated with one lag based on Schwarz Bayesian Information Criterion (SBIC).

[13] The estimated equation, using monthly data from April 1994 to September 2003, is:

DNDA = - 607 – 0.92 DNFA +158.7 DIIP{-1} + 5755 DCRRAVG.
(1.4) (13.3)*** (2.0)** (11.4)***

$\bar{R}^2$ = 0.81 DW = 2.0

The figures in brackets are t-values; ***, ** and * denote significance at 1, 5 and 10 per cent level, respectively. DNDA, DNFA, DIIP and DCRRAVG denote monthly variations in net domestic assets, net foreign assets, index of industrial production and average CRR, respectively. In addition, monthly dummies for March, April, May, October and November turned out to be significant and were included in the estimated equation. The variable DCRRAVG was included in the regression to capture the reduction in NDA over the sample period that was due to the lowering of CRR.

(ADSALES) on the Reserve Bank credit to the Centre (RBICC), and not the entire NDA. For India, data on market sales/purchases are available effective October 1995. For instance, during 2002-03, net market purchases of foreign currency contributed Rs.75,661 crore out of a total increase of Rs.94,275 crore in NFA. As in the previous case, Granger causality tests indicate a uni-directional causality from changes in foreign exchange purchases to reduction in net Reserve Bank credit to the Centre.[14] The sterilisation coefficient is 0.65, *i.e.,* Rs.100 increase in foreign currency purchases from ADs induces sterilisation operations involving sales of Government securities worth Rs.65 from the Reserve Bank.[15]

6.117 It is worth stressing that sterilisation operations notwithstanding, there has been no hardening of domestic interest rates as is normally feared. On the contrary, interest rates have continued to soften in recent months. Sterilisation operations have so far been successful in keeping the monetary aggregates close to the desired trajectory thus enabling a softer interest rate regime.

X. CAPITAL FLOWS AND DEMOGRAPHY

6.118 As noted in the previous paragraphs, large capital flows and overall surpluses in the balance of payments in respect of several emerging market economies have posed serious problems of monetary management. The evolving patterns of demography across nations could exacerbate the challenges to monetary policy formulation over the longer term (Mohan, 2003). In general, economies pass through three stages of demographic transition - (i) high youth dependency (large proportion of population in the 0-14 years group), (ii) rise in working age population (15-59 years) relative to youth dependency and (iii) rise in elderly dependency (60+ years) relative to working age population. The second stage is regarded as the most productive from the point of view of secular growth since it is associated with the high rates of saving and work force growth relative to the other stages. Over the next half-century, the population of the world will age faster than during the past half-century as fertility rates decline and life expectancy rises. Developed regions like Europe, North America and Japan have been leading the process of population ageing and are likely to be deep into the third stage of demographic transition. These regions will switch to importing capital. On the other hand, high performers of East Asia and China are in the second stage of the demographic cycle. East Asia could increasingly become an important supplier of global savings up to 2025; however, rapid population ageing thereafter would reinforce rather than mitigate the inexorable decline of global saving. Increasingly it would be the moderate and the low performers among the developing countries which would emerge as exporters of international capital. India is entering the second stage of demographic transition and over the next half-century, a significant increase in both saving rates and share of working age population is expected. The regional pattern of global population ageing is expected to bring about changes in the behaviour of global saving and investment balances which would be reflected in the magnitude and direction of international capital flows with implications for the conduct of monetary policy.

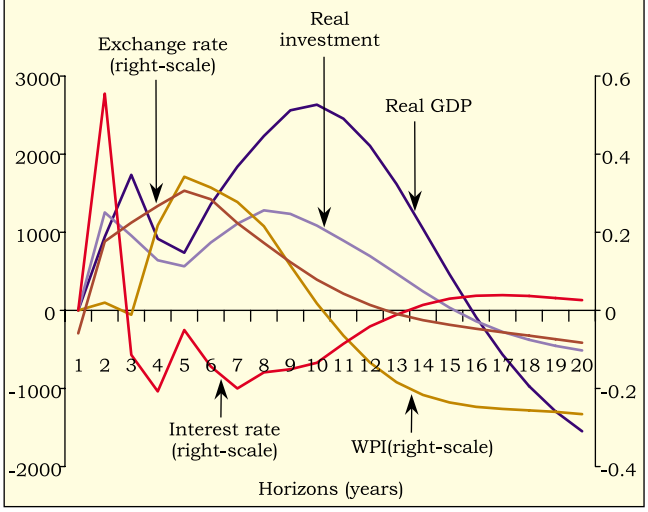
XI. CAPITAL FLOWS AND GROWTH: THE INDIAN EXPERIENCE

6.119 Access to international capital enables a country to supplement domestic savings and smoothen inter-temporal consumption. This could strengthen the growth process and foster employment generation in the recipient country. The actual impact of capital flows on economic growth is undoubtedly an empirical issue and varies widely across countries. An increase in capital flows is expected to augment domestic savings/investment, boost aggregate demand and lead to an increase in aggregate output/

[14] In a bivariate VAR of net monthly sales/purchases of foreign exchange from ADs (ADPURC) and monthly variations in net Reserve Bank credit to Centre (DRBICCG) over the period October 1995 to September 2003, the null hypothesis of Granger non-causality of DRBICCG can not be rejected (chi-square of 0.03 at p-value of 0.87). On the other hand, the null hypothesis of Granger non-causality of ADPURC can be easily rejected (chi-square of 5.90 at p-value of 0.02). The VAR was estimated with one lag based on Schwarz Bayesian Information Criterion (SBIC).

[15] The estimated equation, using monthly data over October 1995 to September 2003, is:
DRBICCG = 1066 – 0.65 ADPURC - 200.1 DIIP{-1} + 5555 DCRRAVG.
(1.5) (5.2)*** (1.7)* (6.4)***
$\bar{R}^2$ = 0.55 DW = 2.46
The figures in brackets are t-values; *, ** and *** denote significance at 10, 5 and 1 per cent level, respectively. DRBICCG, ADPURC, DIIP and DCRRAVG are defined as before. In addition, monthly dummies for March, April, May, October and November turned out to be significant and were included in the estimated equation.

Chart VI.11 : Impulse Responses to One Standard Deviation Shock to Capital Flows



income. At the same time, capital flows induced appreciation of the exchange rate could adversely affect exports and increase imports thereby dampening the impact on aggregate demand and lead to a deterioration in the current account. The policy response to the loss of external competitiveness may entail a softer interest rate environment to prevent appreciation of the exchange rate and to strengthen growth prospects.

6.120 In order to gauge the impact of capital flows on macro aggregates, an unrestricted vector autoregression (VAR) model was formulated based on annual data for the period 1951-2002 in respect of gross domestic product (GDP), gross domestic capital formation (GDCF), wholesale price index (WPI), interest rate, capital flows and exchange rate. The appropriate lag length of the model was found to be 2 years.[16] The results were in line with *a priori* expectations (Chart VI.11). A positive shock to capital flows resulted in higher investment and higher output in the medium to long-run. Prices did not increase immediately in the short-run, although a positive effect could be discernible over the medium-run. The exchange rate appreciated while the interest rate declined.

XII. CONCLUDING OBSERVATIONS

6.121 Net capital flows to developing countries increased sharply during 1990-96 but declined in the later part of the 1990s in the aftermath of the East Asian crisis. The composition of flows in respect of emerging market economies also altered significantly, with private flows exceeding official flows by the end of the 1980s. Furthermore, while bank lending was the major component of capital flows to emerging markets in the 1970s, equity and bond investors became dominant from early 1990s. Although portfolio flows became important, it was FDI which accounted for the bulk of private capital flows to emerging market economies - witnessing a six-fold jump between 1990 and 1997. Most FDI flows, however, are concentrated in handful of emerging market economies. Cross-country studies have identified a large regional bias in portfolio investment flows, particularly in Latin America and Asia.

6.122 Notwithstanding their potentially favourable impact on growth prospects, highly volatile nature of capital flows, especially portfolio flows and short-term debt, underscores the need for efficient management of these flows. While managing capital flows, clear distinction should be made between debt and non-debt creating flows, private and official flows and short-term and long-term capital flows. An overbearing objective of external sector policies of developing countries has been to devise strategies so as to maximise the benefits of capital inflows while limiting their adverse impact. At an individual country level, an appropriate response would be to build a resilient and robust financial sector which could appropriately intermediate large capital flows. It is imperative that such capital flows are absorbed smoothly in real sector embodying growth impulses. Adoption of proper macroeconomic policies, particularly in respect of exchange rate management and monetary stance also assumes significance in dealing with large capital flows. The volatility and the possibility of reversals associated with capital flows were brought out quite strikingly by the East Asian and the subsequent financial crises.

6.123 Until the 1980s, India's development strategy was focused on self-reliance and import-substitution. There was a general disinclination towards foreign investment. As a result, the magnitude of capital flows was not large to India as compared to other East Asian countries. Since the initiation of the reform process in the early 1990s, India's policy stance has changed substantially. India has encouraged stable capital flows from the viewpoint of macroeconomic stability. The importance of official flows is declining. A cautious

[16] Based on Akaike's Information Criterion (AIC).

approach has been pursued for management of capital account liberalisation. India's approach to managing capital flows during the 1990s, as reflected in a revealed preference for non-debt creating flows and long-term debt flows while de-emphasising short-term flows, has been successful in its objective of attracting stable flows. All the key indicators of external debt sustainability have, in fact, significantly improved during the 1990s. In the recent period, significant relaxations have been allowed for capital outflows.

6.124 The experience with capital flows suggests that these flows are highly beneficial if they are absorbed. However, if the current account deficits are too large and unsustainable then the reversal of capital flows could cause major problems. The speed of reversals of capital flows could be quite high. The large and volatile capital flows combined with sharp rise in current account deficits played a significant role in exacerbating the vulnerabilities leading to the Asian crisis. Moreover, capital movements have rendered exchange rates significantly more volatile than before, which could lead to macro management problems. The large movements in capital flows cause sharp movements in exchange rate which are not in alignment with macroeconomic fundamentals. In this context, the next chapter on "Foreign Exchange Reserves, Exchange Rate and External Debt Management" dwells on these issues in detail.

6.125 In the context of managing large capital inflows, the key issue that emerges is the efficacy and extent of sterilised foreign exchange market intervention. It is evident that sterilisation operations are undertaken as part of a package encompassing exchange rate policy, level of reserves, interest rate policy, along with considerations relating to domestic liquidity, financial market conditions, and the degree of openness of the economy. India's approach to sterilisation has ensured monetary stability without any adverse impact on interest rates.

6.126 Empirical exercises in the Indian context indicate that (i) growth in world income has a favorable impact on the capital flows, underscoring the significance of "push" factors; (ii) outflows of foreign direct investments increase with the increase in the level of openness of the economy; (iii) a strong uni-directional causal relationship running from FDI to export growth exists; (iv) FII investments in India are positively related to risk on Nasdaq; (v) interest rate differential between India and abroad is an important factor determining inflows under non-resident deposits; and, (vi) capital flows have a favorable impact on the growth prospects of the Indian economy. It is also expected, that given the favorable demographic structure, saving rates in India would increase over the next half of this century. The key challenge for macroeconomic policies would be to ensure that the anticipated expansion in saving is productively utilised within the economy and not exported abroad. Accordingly, it is vital to ensure that the investment rate rises in close co-movement with the saving rate.

VII FOREIGN EXCHANGE RESERVES, EXCHANGE RATE AND EXTERNAL DEBT MANAGEMENT

Introduction

7.1 Policies in respect of management of the exchange rate, foreign exchange reserves and external debt have received increasing emphasis in emerging market economies (EMEs) after the East-Asian crisis and crises elsewhere during the 1990s. The need for a more dynamic and pragmatic approach towards management of exchange rates, reserves and external debt, keeping in view the country specific circumstances, is increasingly being felt by many countries. The scope for exchange rate flexibility has generated considerable debate, particularly in view of the recent build up of reserves in many countries. It is now widely recognised that in judging the adequacy of reserves in emerging economies, it is not enough to relate the size of reserves to the quantum of merchandise imports or the size of the current account deficit. In view of the importance of capital flows, and associated volatility of such flows, it has become imperative to take into account the composition of capital flows, particularly, short-term external liabilities, in judging the adequacy of foreign exchange reserves. An additional factor which is being built into this assessment is the need to take into account contingencies such as unanticipated increases in commodity prices. Furthermore, the need for careful assessment of the external debt situation has assumed an added significance.

7.2 Conventionally, trade flows were deemed to be the key determinants of exchange rate movements. Consequently, the degree of openness to international trade, price and non-price competitiveness and factors which determined market shares abroad were thought to have a crucial bearing on the level and the movement of the exchange rate. In more recent times, the importance of capital flows in determining the exchange rate movements has increased considerably, rendering some of the earlier guide-posts of monetary policy formulation possibly anachronistic (Mohan, 2003). Furthermore, on a day-to-day basis, it is capital flows that influence the exchange rate and interest rate arithmetic of the financial markets. Rather than real factors underlying trade competitiveness, it is expectations and reactions to news that drive capital flows and exchange rates, often out of alignment with fundamentals. Capital flows have been observed to cause overshooting of exchange rates as market participants act in concert with pricing information. Foreign exchange markets are prone to bandwagon effects. The effects of capital flows on the exchange rate are amplified by the fact that capital flows in 'gross' terms can be several times higher than the 'net' capital flows (Jalan, 2003b).

7.3 Against this background, the present Chapter focuses on three major areas, *viz.*, foreign exchange reserves, exchange rates and external debt. Section I deals with management of foreign exchange reserves. An attempt is made to assess the costs and benefits of holding reserves alongside adequacy indicators and to benchmark India's approach to management of reserves against the cross-country experience. Section II on exchange rate management presents a theoretical perspective on exchange rates, followed by a review of the debate relating to choice of exchange rate regime. The section then dwells on various issues relating to exchange rate management practices in India. Interest parity conditions have also been tested in the Indian conditions. Section III on external debt management attempts a cross-country comparison of external indebtedness followed by an analysis of India's external debt over the years. Concluding observations are set out in the final section.

7.4 The perspectives on the need to build adequate foreign exchange reserves have changed in recent time, especially for an economy with a higher degree of capital account openness. Moreover, the reserve build-up is closely linked to exchange rate management policy. In recent period, accretion to reserves of EMEs also reflects growing macroeconomic imbalances in the US. Reflecting the paradigm shift in external sector and other macroeconomic policies, India's foreign exchange reserves rose significantly in the last decade. Based on the various reserve adequacy indicators, the level of foreign exchange reserves in India is comfortable. India has also been designated as a creditor country under the Financial Transaction Plan (FTP) of the International Monetary Fund (IMF) in view of its comfortable level of reserves. Together, these developments have led to a sharp increase in the confidence of domestic and foreign investors in the strength of the Indian economy.

7.5 The recent experience with exchange rates has highlighted the need for developing countries to allow greater flexibility in exchange rates but the authorities should also have the capacity to intervene in foreign exchange markets in view of herding behaviour. The Chapter brings out the increased role of capital flows in exchange rate determination and the pitfalls of higher exchange rate volatility on EMEs. Against this background, India's exchange rate policy of focusing on managing volatility with no fixed rate target while allowing the underlying demand and supply conditions to determine the exchange rate movements over a period in an orderly way has stood the test of time. Concomitantly, the Reserve Bank has undertaken several measures to deepen and widen the foreign exchange market in India so as to provide the market participants the necessary support to undertake foreign exchange transactions with reduced uncertainty. International research on viable exchange rate strategies in emerging markets has also lent considerable support to the exchange rate policy followed by India.

7.6 Finally, the Chapter documents the perceptible improvement in India's external debt scenario. This is the outcome of policy reforms that focused, *inter alia*, on modest current account deficits, a policy preference in favour of equity, tight monitoring of short-term flows, a market determined exchange rate, a transparent policy on external commercial borrowings with prudential restrictions on end-use and a commensurate growth in current receipts.

I. MANAGEMENT OF FOREIGN EXCHANGE RESERVES

7.7 Of late, the debate over holding large reserves has gained renewed interest with the spectacular growth in accumulation of reserves by the central banks of the EMEs. Under the Bretton Woods system, foreign exchange reserves were used by monetary authorities mainly to maintain the external value of their respective currencies at a fixed level. With the breakdown of the Bretton Woods system in the early 1970s, countries started adopting relatively flexible exchange rate regimes. Under a perfectly flexible exchange rate regime, foreign exchange reserves play only a marginal role. In practice, however, the common exchange rate regime adopted by countries is not a 'free float' but an 'intermediate regime'. Under the intermediate regime, central banks intervene in foreign exchange markets, which necessitates maintenance of adequate stock of foreign exchange reserves. Over time, this need for maintaining foreign exchange reserves has increased with the acceleration in the pace of globalisation and enlargement of cross border capital flows. Foreign exchange reserves are often also seen as a means of crisis prevention to address unforeseen contingencies.

Recent International Trends in Reserves Holding

7.8 Global foreign exchange reserves have almost doubled from 4.1 per cent to 7.8 per cent of world GDP between 1990 and 2002. Such rapid reserve accumulation continued in 2003 (IMF, 2003a). The share of global reserves held by emerging market countries rose from 37 per cent in 1990 to 61 per cent in 2002, with emerging economies in Asia accounting for much of the increase (Table 7.1). Ironically, the EMEs have accumulated larger volume of reserves, despite a distinct decline in adherence to fixed exchange rate regimes.

Cost and Benefits of Holding Reserves

7.9 An assessment of the costs of holding reserves *vis-à-vis* their benefits has, for long, been engaging attention of policy makers. The direct financial cost of holding reserves is the difference between interest paid on external debt and returns on external assets in reserves. In any cost-benefit analysis of holding reserves, it is essential to keep in view the objectives of holding reserves, which, *inter alia*, include: (i) maintaining confidence in monetary and exchange rate policies; (ii) enhancing the capacity to intervene in foreign exchange markets; (iii) limiting external vulnerability so as to absorb shocks during times of crisis; (iv) providing confidence to the markets that external obligations can always be met; and (v) reducing volatility in foreign exchange markets (Jalan, 2003a). Sharp exchange rate movements can be highly disequilibrating and costly for the economy during periods of uncertainty or adverse expectations, whether real or imaginary. If the level of reserves is considered to be in the high comfort zone, it may be possible to attach larger weight to return on foreign exchange assets than on liquidity, thereby reducing net costs of holding reserves. Thus, an inter-temporal view of the adequacy as well as costs and benefits of foreign exchange reserves is needed. It is also necessary to assess the costs of not adding to reserves through open market operations at a time when the capital flows are strong. In other words, the costs and benefits arise as much out of open market operations of the central bank as out of management of levels of reserves.

Table 7.1: Reserves Accumulation@

(US $ billion)

Country	1990-2003	1990-1995	1995-1997	1997-2000	2000-2003	2001	2002	2003	Level of Reserves 2003*
1	2	3	4	5	6	7	8	9	10
Japan	574.3	104.7	36.4	135.3	297.9	40.3	66.0	191.6	652.8
China	376.4	45.8	67.4	25.5	237.7	47.3	75.5	114.9	406.0
Taiwan Province of China	137.5	23.1	-7.0	22.9	98.6	15.7	37.9	44.9	206.6
Korea	140.6	17.9	-12.3	75.8	59.3	6.6	18.6	34.1	155.4
Hong Kong SAR	93.8	30.8	37.4	14.7	10.9	3.6	0.7	6.5	118.4
India	**96.1**	**16.1**	**6.4**	**13.2**	**60.4**	**8.0**	**21.7**	**30.6**	**97.6**
Singapore	68.6	40.9	2.6	8.8	16.2	-4.8	6.6	14.3	96.3
Brazil	47.0	42.3	1.1	-18.3	21.9	3.3	1.9	16.7	54.4
Mexico	47.5	7.0	12.0	6.7	21.9	9.2	5.9	6.8	57.4
Thailand	27.7	22.7	-9.8	5.8	9.0	0.3	5.7	3.0	41.0
Malaysia	35.1	14.0	-3.0	8.7	15.4	1.0	3.7	10.7	44.9
Indonesia	28.7	6.2	2.9	11.9	7.7	-1.3	3.7	5.2	36.2
Philippines	15.9	5.4	0.9	5.8	3.7	0.4	-0.3	3.7	16.8
World	1,873.6	539.7	234.0	314.5	785.4	120.5	371.8	293.0	2,806.6

Data pertain to end-December; * : For China as at end-October 2003, Brazil as at end-November 2003 and for World as at end-August 2003.
@ excluding gold.
Source: International Financial Statistics, IMF; The Economist; and the Reserve Bank of India.

7.10 The size of reserves holding could be explained by five key factors - size of the economy, current account vulnerability, capital account vulnerability, exchange rate flexibility and opportunity cost (IMF, 2003a). As the population and real per capita GDP increase, reserves are expected to rise. Furthermore, greater current and capital account openness is often associated with higher vulnerability to crisis, which, in turn, is linked to higher level of reserves holding. Again, greater flexibility in the exchange rate reduces the demand for reserves. The size of reserves also depends on the opportunity cost of holding reserves.

7.11 Recent strengthening of the external position of many developing countries through building up of substantial foreign exchange reserves can be viewed from several perspectives (Reddy, 2003). First, it is a reflection of the lack of confidence in the international financial architecture. International liquidity support through official channels is beset with problems relating to adequacy of volumes, timely availability, reasonableness of costs and above all, limited extent of assurances. Second, it is also a reflection of efforts to contain risks from external shocks. Private capital flows which dominate capital movements tend to be pro-cyclical even when fundamentals are strong. It is, therefore, necessary for developing countries to build cushions when times are favourable. High reserves provide some self-insurance which is effective in building confidence including among the rating agencies and possibly in dealing with threat of crises. Third, the reserve accumulation could also be seen in the context of the availability of abundant international liquidity following the easing of monetary policy in industrial countries which enabled excess liquidity to flow into the emerging markets. In the event of hardening of interest rates in industrialised countries, this liquidity may dry up quickly; in that situation, emerging markets should have sufficient cushion to withstand such reverse flow of capital. Fourth, and most important, the reserve build up could be the result of countries aiming at containing volatility in foreign exchange markets. It should be recognised that the self-corrective mechanism in foreign exchange markets seen in developed countries is conspicuously absent among many emerging markets.

7.12 The accumulation of reserves is also a reflection of imbalances in the current account of some countries. The US has accumulated twin deficits - current account deficit (CAD) of five per cent of GDP, and fiscal deficit of six per cent (a sharp turnaround from a surplus of 1.2 per cent in 2000). With the emergence of such an imbalance in the US, other regions in the world have to exhibit an equal and opposite imbalance in their own account. Ironically, it is the developing countries of Asia who are funding the CAD of the US and exhibiting surpluses. Central banks of Asia are financing roughly 3-3.5 per cent of the CAD of the US and most of its fiscal deficit, as compared to the earlier situation where it was private sector flows that were funding these deficits (Mohan, 2003).

7.13 It is important to note that the level of reserves held by any country is really a consequence of the exchange rate policy being pursued. Capital flows have implications for the conduct of domestic monetary policy and exchange rate management. The manner in which such flows impact domestic monetary policy depends largely on the kind of exchange rate regime that the authorities follow. In a fixed exchange rate regime, excess capital inflows would, perforce, need to be taken to foreign exchange reserves so as to maintain the desired exchange rate parity. In a fully floating exchange rate regime, on the other hand, the exchange rate would adjust itself according to the demand and supply conditions in the foreign exchange market, and as such there would be no need to take such inflows into the reserves.

7.14 High demand for reserves in developing countries can be explained by sovereign risk, political instability, inelastic fiscal outlay and high cost of tax collection and does not reflect any productive investment (Aizenman and Marion, 2003). It has also been argued that accumulating large volume of reserves creates moral hazard problems and reflects insurance against weak domestic fundamentals and political uncertainty (Kapur and Patel, 2003).

7.15 While in practice, all central banks intervene in the foreign exchange markets, a more intensive approach to intervention may be warranted in the EMEs in the context of large capital inflows. In emerging markets, capital flows are often relatively more volatile and sentiment driven, not necessarily being related to the fundamentals. Such volatility imposes substantial risks on market agents, which they may not be able to cope. Even in countries where the exchange rate is essentially market determined, the authorities often intervene in order to contain volatility and reduce risks to market participants and for the economy as a whole. In such cases, policy makers are confronted with some difficult choices: first, a choice has to be made whether or not to intervene in the foreign exchange market; and second, if the choice is made to intervene, the extent of intervention (RBI, 2003b). Despite the fact that the level of reserves is the consequence of the exchange rate policy and the consequent choices with regard to intervention in the foreign exchange market, reserves can still be evaluated according to the various adequacy indicators.

7.16 Traditionally, the adequacy of reserves was determined by a simple rule of thumb, *viz.*, the stock of reserves should be equivalent to a few months of imports. Such a rule-based reserve adequacy measure stems from the fact that official reserves serve as a precautionary balance to absorb shocks in external payments. Triffin (1960) had suggested 35 per cent of import cover. In terms of import cover, India's foreign exchange reserves are the highest among major EMEs (Table 7.2).

7.17 The financial crises in the 1990s highlighted the limitations of the traditional approach to reserve adequacy that laid emphasis only on flows of current account. This, coupled with wide ranging changes in financial markets have motivated policy makers to increase their emphasis on the capital account while assessing reserve adequacy. Among various components of capital account transactions, short-term external debt has gained prominence in determining reserve adequacy (Table 7.3). From the perspective of crisis prevention, reserves to short-term debt ratio has emerged as a benchmark to

Table 7.2: Reserves Adequacy Indicator: Import Cover of Reserves

(Months of imports)

Country	1990-94	1995	1996	1997	1998	1999	2000	2001	2002
1	2	3	4	5	6	7	8	9	10
Japan	4.9	7.4	8.2	8.6	10.3	12.3	12.4	15.1	18.3
China	6.5	8.2	9.8	12.6	13.1	11.9	9.4	11.1	12.4
Korea	2.7	3.0	2.8	1.7	6.9	7.6	7.3	8.9	9.8
Hong Kong SAR	..	..	..	..	5.9	6.5	6.1	6.7	6.5
Singapore	6.8	7.0	7.4	6.9	9.4	8.8	7.5	8.3	9.0
India	**5.9**	**6.0**	**6.5**	**6.9**	**8.2**	**8.2**	**8.6**	**11.3**	**13.8**
Brazil	10.0	12.0	13.1	10.2	8.8	8.5	7.0	7.7	9.6
Mexico	3.3	2.8	2.6	3.1	3.0	2.7	2.4	3.2	3.6
Thailand	6.6	6.8	7.1	5.7	9.5	9.6	6.8	7.1	8.0
Malaysia	5.4	4.0	4.4	3.4	5.6	6.0	4.6	5.3	5.9
Indonesia	4.5	4.0	5.0	4.3	8.5	10.4	8.5	9.4	10.4
Philippines	2.9	2.9	3.8	2.4	3.7	5.4	4.7	5.0	4.6

.. : Not Available.

Source: International Financial Statistics, IMF; For India: Reserve Bank of India, data pertain to financial year (April-March).

Table 7.3: Debt Related Adequacy Indicators of Select EMEs

(Per cent)

Country	Reserves to External Debt					Reserves to Short-Term Debt				
	1990	1995	1999	2000	2001	1990	1995	1999	2000	2001
1	2	3	4	5	6	7	8	9	10	11
Brazil	6.2	31.0	14.3	13.6	15.8	31.4	159.1	119.0	104.9	126.4
China	53.5	63.8	103.7	115.5	126.7	317.5	337.6	1,039.1	1,286.5	490.9
India	**7.0**	**23.1**	**38.7**	**41.8**	**54.8**	**68.3**	**430.8**	**966.4**	**1,165.4**	**1,971.1**
Indonesia	10.7	11.0	17.5	19.8	20.1	67.0	52.8	132.0	125.9	124.9
Korea	42.3	38.1	56.7	74.9	93.3	137.0	70.1	213.0	237.6	292.6
Malaysia	63.6	69.2	73.0	70.6	70.3	511.7	326.8	508.8	636.2	597.3
Mexico	9.4	10.1	19.0	22.4	28.3	61.3	45.2	132.1	187.6	248.6
Philippines	3.0	16.8	25.0	25.9	25.7	20.9	120.7	230.3	219.4	222.2
Thailand	47.4	36.0	35.2	40.2	48.0	159.9	81.6	145.5	215.2	244.7

Source: Global Development Finance, World Bank, 2003; For India, Reserve Bank of India, data pertain to financial year (April-March).

determine the adequacy of reserves. It has been suggested that empirical assessment of reserve adequacy should be so defined that the country can meet its external repayment obligations without additional borrowing for one year - the so called Guidotti Rule (Guidotti, 1999). Taking a similar view, Greenspan (1999) proposed short-term debt by remaining maturity of one year as the yardstick to measure reserve adequacy. The Guidotti rule has subsequently been refined in two aspects: (i) average maturity of the external debt should be three years and above; and (ii) countries must maintain liquidity at risk. There must be a 95 per cent probability of external liquidity being sufficient to avoid new borrowings for one year. The short-term debt *vis-à-vis* reserves is thus seen as a superior predictor of the depth of crisis over other indicators (Bussière and Mulder, 1999). This suggests that a country's liquidity position prior to the onset of a crisis plays an important role in determining exchange market pressure and the potential for a crisis to occur.

7.18 An important aspect of reserve adequacy norms is the identification of various indicators, which can help predict the occurrence as well as depth of crises, and consequently the amount of reserves to be maintained. Apart from reserves to short-term debt ratio, other potential indicators of external vulnerability include: reserves over either monetary base or some measure of money stock, and reserves over GDP. For instance, reserves to monetary base ratio is deemed to reflect the potential for resident-based capital flight from the domestic currency during a financial crisis. Empirical studies, however, find a weak relationship between money based indicators and occurrence and depth of international crises (Reddy, 2002) (Table 7.4).

Table 7.4: Money Based Reserve Adequacy Indicators

(Per cent)

Country	Reserves to Broad Money					Reserves to Reserve Money				
	1990-94	1995	2000	2001	2002	1990-94	1995	2000	2001	2002
1	2	3	4	5	6	7	8	9	10	11
Brazil	10.9	25.2	20.2	23.6	..	22.0	119.6	94.9	104.1	56.2
China	8.0	10.4	10.2	11.4	12.9	20.0	30.3	36.8	42.8	51.4
Hong Kong SAR	..	23.0	27.9	29.0	29.0	454.0	516.2	389.4	377.4	354.6
India	**9.8**	**12.4**	**15.0**	**17.6**	**20.8**	**31.1**	**38.3**	**65.0**	**78.1**	**97.1**
Indonesia	16.8	14.1	32.4	33.4	35.3	123.0	113.5	153.5	154.0	160.3
Korea	14.3	16.4	29.4	28.9	27.7	73.2	86.4	430.5	411.1	378.9
Malaysia	40.3	31.5	32.2	32.4	30.3	163.6	123.9	132.2	147.1	135.7
Mexico	17.6	20.2	29.7	32.3	36.2	108.5	133.1	130.6	128.6	117.2
Philippines	17.9	16.6	27.9	32.0	32.6	52.2	64.2	145.7	194.8	165.7
Singapore	86.3	95.0	81.1	77.1	79.2	490.2	568.4	750.5	696.1	714.9
Thailand	24.4	27.1	24.7	27.1	25.4	208.6	221.8	187.6	197.7	219.5

.. : Not Available.

Source: International Financial Statistics, IMF, 2003; For India, Reserve Bank of India, data pertain to financial year (April-March).

7.19 Stability of select components of the domestic financial markets has also received increasing attention in designing reserve adequacy norms. For instance, volatility in the stock market exerts pressure on the exchange rate, leading to overall financial instability. When the domestic money market, capital market and forward market segments of the foreign exchange markets are closely integrated, the shock in either capital market or money market tends to affect the foreign exchange markets, necessitating the availability of adequate amounts of reserves to mitigate the panic or rumour induced variations in the financial markets.

The Indian Scenario

7.20 India's foreign exchange reserves comprising foreign currency assets, gold and Special Drawing Rights (SDRs) have increased significantly since 1991-92. It may be recalled that during the crisis period in 1990-91, the foreign currency assets had dipped below US $ 1.0 billion, covering barely two weeks of imports. The subsequent reform period has coincided with a record accretion, especially since 1993. The reserves have almost doubled in the last three years rising from US $ 38.0 billion at end-March 2000 to US $ 75.4 billion at end-March 2003. In the current year (up to January 16, 2004), the reserves have risen further by as much as US $ 27.7 billion to US $ 103.1 billion, with India being the sixth largest holder of reserves in the world. The reserves have not only increased in absolute terms, but as a per cent of GDP as well, though this ratio for India is lower than many EMEs (Table 7.5).

7.21 The strength of the foreign exchange reserves has, *inter alia*, led the International Monetary Fund (IMF) to designate India as a creditor country under its Financial Transaction Plan (FTP). Strong foreign exchange reserves and low interest rates in the domestic markets have enabled the Government to prepay certain foreign currency loans amounting to US $ 5.6 billion during 2003 through outright purchase of foreign exchange from the Reserve Bank. These foreign debts were substituted with domestic debt by the issue of Government securities on private placement basis to the Reserve Bank. These transactions did not have any fiscal or monetary impact, as it was a substitution of external sovereign debt with domestic sovereign debt placed with the Reserve Bank. Corporate bodies have also taken advantage of low international interest rates in prepaying a part of their external commercial borrowings (ECBs). As to the perspective of use of reserves, it may be noted that most of the accretion in reserves in the recent period has been through net purchases by the Reserve Bank in the domestic foreign exchange market for which an equivalent amount of domestic currency has been released to the domestic entities concerned which could decide on their use either for investment, deposits or as liquid assets. To the extent that this counterpart local currency is used by recipient entities for further investment in the economy, the impact on industrial demand and growth would be favourable.

Table 7.5: Ratio of Reserves to GDP

(Per cent)

Country	1990-94	1995	1996	1997	1998	1999	2000	2001	2002
1	2	3	4	5	6	7	8	9	10
Japan	2.3	3.5	4.6	5.1	5.5	6.4	7.4	9.5	11.6
China	7.3	10.8	13.0	15.8	15.6	15.8	15.6	18.1	23.5
Korea	5.6	6.7	6.5	4.3	16.4	18.2	20.8	24.1	25.5
Hong Kong SAR	34.7	39.1	40.7	53.4	54.3	59.9	65.0	67.8	68.7
Singapore	81.1	82.8	84.5	75.2	90.9	92.7	87.4	88.7	94.3
India	**3.6**	**6.3**	**6.9**	**7.6**	**7.9**	**8.6**	**9.4**	**11.5**	**14.5**
Brazil	4.6	7.1	7.6	6.3	5.4	6.5	5.4	7.0	8.3
Mexico	4.7	5.9	5.8	7.2	7.6	6.6	6.1	7.2	7.9
Thailand	18.3	21.4	20.7	17.3	25.8	27.8	26.1	28.1	30.1
Malaysia	29.6	26.7	26.8	20.7	35.4	38.6	32.7	34.6	36.1
Indonesia	7.0	6.8	8.0	7.7	23.8	18.9	18.7	18.8	..
Philippines	7.1	8.6	12.1	8.8	14.2	17.4	17.2	18.7	16.9

.. : Not Available.

Note : The countries in this table have been arranged in a descending order based on their absolute level of reserves in 2002.

Source : International Financial Statistics, IMF, 2003. For India, Reserve Bank of India and Central Statistical Organisation, data pertain to financial year (April-March).

7.22 Addition to reserves in the last few years in India largely reflects higher remittances, quicker repatriation of export proceeds and non-debt inflows while the overall level of external debt has remained virtually unchanged. Even after taking into account foreign currency denominated NRI flows (where interest rates are linked to LIBOR), the financial cost of additional reserve accretion in India in the recent period is quite low.

7.23 A concern has been expressed in several fora that accretion to foreign exchange reserves in India has resulted from capital inflows induced by "arbitrage" motives. Indian interest rates have come down substantially in the last three or four years. To an extent, these interest rates are still higher than those prevailing in the U.S., Europe, U.K. or Japan. This provides an "arbitrage" opportunity to the holders of liquid assets abroad, who may take advantage of higher domestic interest rates in India leading to a possible short-term upsurge in capital flows. However, there are several considerations, which indicate that "arbitrage" *per se* is unlikely to have been a primary factor in influencing remittances or investment decisions by NRIs or foreign entities (Jalan, 2003b). These include:

- The minimum period of deposits by NRIs in Indian rupees is now one year, and the interest rate on such deposits is subject to a ceiling rate of 25 basis points over LIBOR/swap rates (interest rates on dollar deposits by NRIs are actually below LIBOR).
- Outside of NRI deposits, investments by Foreign Institutional Investors (FIIs) in debt funds is subject to an overall cap of only US $ one billion in the aggregate. In other words, the possibility of arbitrage by FIIs in respect of pure debt funds is limited.
- Interest rates and yields on liquid securities are highly variable abroad as well as in India, and the differential between the two rates can change very sharply within a short time depending on market expectations. The yield on 10-year Treasury note in the U.S. was around 4.04 per cent as compared with 5.14 per cent on Government bonds of similar maturity in India as on January 21, 2004. Taking into account the forward premia on dollars and yield fluctuations, except for brief period, there is likely to be little incentive to send large amounts of capital to India merely to take advantage of the interest differential.

India's Approach to Reserve Management

7.24 India's approach to reserve management, until the balance of payments crisis of 1991, was based on the traditional approach, *i.e.*, to maintain reserves in relation to imports. With the introduction of a market determined exchange rate, the emphasis on import cover was supplemented with the objective of smoothening out the volatility in the exchange rate (RBI, 1996).

7.25 The High Level Committee on Balance of Payments (Chairman: C Rangarajan, 1993) had recommended that due attention be paid to payment obligations in addition to the traditional measure of import cover of 3 to 4 months. Subsequently, against the backdrop of currency crises in East-Asian countries, and in the light of country experiences of volatile cross-border capital flows, the Reserve Bank identified the need to hold a level of reserves assets, that could be considered as adequate, taking into consideration a host of factors such as the stock of short term and volatile external liabilities, shift in the pattern of leads and lags in payments/receipts during exchange market uncertainties along with the conventional norm of cover for sufficient months of imports (RBI, 1998). The Reserve Bank also took note of suggestions from Guiddotti (1999) and Greenspan (1999) which take into account the foreseeable risks that a country could face under a range of possible outcomes for relevant financial variables like exchange rates, commodity prices and credit spreads.

7.26 In the recent period, the overall approach to management of India's foreign exchange reserves has mirrored the changing composition of balance of payments, and has endeavoured to reflect the 'liquidity risks' associated with different types of flows and other requirements. The policy for reserve management is thus judiciously built upon a host of identifiable factors and other contingencies. Such factors, *inter alia*, include: the size of the current account deficit; the size of short-term liabilities (including current repayment obligations on long-term loans); the possible variability in portfolio investments and other types of capital flows; unanticipated pressures on the balance of payments arising out of external shocks (such as the impact of the East Asian crisis in 1997-98 or increase in oil prices in 1999-2000); and movements in the repatriable foreign currency deposits of non-resident Indians. A sufficiently high level of reserves is necessary to ensure that even if there is prolonged uncertainty, reserves can cover the "liquidity at risk"

Table 7.6: Reserve Adequacy Indicators: India

(per cent)

Year	Import Cover of Reserves (months)	Reserves to Reserve Money	Reserves to Broad Money	Reserves to External Debt	Reserves to Short-Term Debt	Net Foreign Exchange Assets (NFEA) to Currency
1	2	3	4	5	6	7
1990-91	2.5	13.0	4.3	7.0	68.3	14.4
1991-92	5.3	24.0	7.5	10.8	130.4	29.6
1992-93	4.9	27.8	8.4	10.9	155.1	31.8
1993-94	8.6	43.6	14.0	20.8	530.9	60.2
1994-95	8.4	47.1	15.1	25.4	590.0	71.4
1995-96	6.0	38.3	12.4	23.1	430.8	60.4
1996-97	6.5	47.5	13.6	28.3	392.8	69.1
1997-98	6.9	51.2	14.1	31.4	582.0	76.7
1998-99	8.2	53.2	14.1	33.5	760.2	78.5
1999-00	8.2	59.1	14.8	38.7	966.4	84.2
2000-01	8.6	65.0	15.0	41.8	1,165.4	90.4
2001-02	11.3	78.1	17.6	54.8	1,971.1	105.2
2002-03	13.8	97.1	20.8	72.0	1,650.9	126.8

Source: Reserve Bank of India.

on all accounts over a fairly long period. Furthermore, the quantum of reserves in the long-run should be in line with the growth in the economy and the size of risk-adjusted capital flows, which provides greater security against unfavourable or unanticipated developments that can occur quite suddenly. Taking these factors into account, India's foreign exchange reserves are presently comfortable. Trends in select indicators show progressive improvements during 1990s (Table 7.6).

Benchmarking Reserve Management Practices in India

7.27 Reserve management in a central bank is quite different from that of risk management by portfolio managers in other financial institutions. Reserve management encompasses preservation of the long-term value of reserves in terms of purchasing power and the need to minimise risk and volatility in returns given the parameters of safety, liquidity and profitability. India was one of the 20 countries selected for a case study in a recent document published by the International Monetary Fund (IMF, 2003b) as a supplement to the IMF's ''Guidelines for Foreign Exchange Reserve Management''. The IMF study clearly brings out that the basic traditional objectives of reserve management, *viz.*, safety, liquidity and return are evident across all countries included in the case study. However, increasingly the focus is on efficient management of reserves in order to maximise return (or reduce costs) while preserving capital and liquidity. The case study clearly brings out that India, along with Hong Kong, Israel, and Tunisia consider preservation of purchasing power of reserves as a long-term objective. An attempt has been made to discuss the reserve management practices in the Reserve Bank as a case study in the light of general policies pursued by various countries (IMF, 2003b).

7.28 The essential framework for reserve management in the Reserve Bank is provided by the legal enactments as regards currency, market and instruments for investment. The legal parameters are provided in the Reserve Bank of India Act, 1934. Broadly, the law permits the following investment categories: (i) deposits with other central banks and the Bank for International Settlements (BIS); (ii) deposits with foreign commercial banks; (iii) instruments representing sovereign/sovereign-guaranteed debt where residual maturity does not exceed 10 years; and, (iv) other instruments/ institutions as approved by the Central Board of the Reserve Bank.

7.29 The reserve management strategies are continuously reviewed by the Reserve Bank in consultation with the Government. In deploying reserves, attention is paid to the currency composition and duration of investment. All foreign currency assets are invested in assets of top quality while a good proportion is convertible into cash at short notice. The choice of the highest possible quality investment instruments and explicit constraints on critical portfolio variables, such as limits on various securities, currencies, counter-parties and sovereigns form the basic elements of reserve management. The counterparties with whom deals are conducted are also subject to a rigorous selection process. Counterparties could be banks, subsidiaries of banks or security houses. Such counter parties are approved by the Reserve Bank taking into account their international reputation and track record apart from factors such as size, capital, credit rating, financial position and service provided by them. The reserves are also invested in money market including deposits with top international commercial banks.

External Asset Managers

7.30 Several EMEs, such as Brazil, Chile, Mexico and Korea use external managers for reserve management. In India, a small portion of the reserves has been assigned to external asset managers with the objectives of gaining access to and deriving benefit from their market research. It also helps to take

advantage of the technology available with asset managers while utilising the relationship to have the required training/exposure to the Reserve Bank's personnel responsible for foreign exchange reserve management. The asset managers are carefully selected from among the internationally reputed asset management companies. They are given clear investment guidelines and benchmarks and their performance is evaluated at periodic intervals by a separate unit within the middle office. External asset managers' views and outlook on international bond and currency markets are examined and taken as inputs.

Audit and Management Information System

7.31 In almost all EMEs participating in the IMF case study (IMF, 2003b), reserve management activities are audited annually by an independent external auditor as part of the annual audit of the reserve management entity's financial statements to ensure compliance with appropriate accounting standards. In the Reserve Bank, there is a system of concurrent audit for monitoring compliance in respect of all the internal control guidelines, independent of the process flows. Furthermore, reconciliation of *nostro* accounts is done on a daily basis in respect of major currencies. In addition to the annual inspection by the Inspection Department of the Reserve Bank and Statutory Audit by external auditors, there is a system of appointing a management auditor to audit dealing room transactions. The main objective of such an audit is to see that risk management systems are functioning properly and internal control guidelines are adhered to.

Risk Management Practices

7.32 Higher reserve levels, expanding asset classes, more sophisticated instruments and more volatile financial markets have increased the need for risk management. Risk management entails the existence of a framework that identifies, assesses and allows the management of risks within acceptable parameters and levels. A risk management framework seeks to identify the possible risks that may impact on portfolio values and to manage those risks through the measurement of exposures, and where necessary, by supporting procedures to mitigate the potential effects of these risks. The overall stance of the Reserve Bank's reserve management policy continues to be a risk averse one aiming at stable returns. The Reserve Bank has put in place sound systems to identify, measure, monitor and control credit risk, market risk (arising out of currency and interest rate movements), liquidity risk and operational risk. Within the parameters of safety and liquidity return optimisation dictates operational strategies.

Credit Risk

7.33 Reserve management entities are exposed to credit risk on all deposits, investments and off-balance sheet transactions. All the countries surveyed by the IMF (2003b) were found to be very sensitive to credit risk and, therefore, invested the bulk of their assets in securities or deposits of highly rated sovereigns, rated international banks, international financial institutions and the BIS. Many countries allowed the use of derivatives, mainly for market risk management, although the nature of derivatives allowed varied from country to country. In India, credit risk has been addressed by instituting a framework under which investment is made in financial instruments issued by Triple A rated sovereigns, banks and supra-nationals apart from those with the BIS. Investments in bonds/treasury bills, which represent debt obligations of Triple A rated sovereigns and supra-national entities do not give rise to any substantial credit risk. However, placement of deposits with commercial banks as also transactions in foreign exchange and bonds/treasury bills with commercial banks/security firms give rise to credit risk. Stringent credit criteria are, therefore, applied to selection of approved counterparties. Fixation of limits for each category of transactions is also in place. Ratings given by international rating agencies as also various other financial parameters are considered before grading and fixing limits in respect of each counterparty. Day-to-day developments in respect of the counter-parties are closely monitored to identify institutions whose credit quality is under potential threat.

Market Risk

7.34 Most of the high reserve-holding countries have developed a framework and capacity to assess market risks involved in reserve management operations based on a benchmark portfolio. Determination of the optimal currency distribution is a critical decision in reserve management since currency risk is an area where reserve management entities confront high market risk. In recent years, the major reserve holding Asian economies have revealed a common tendency towards shifting away from dollar denominated reserve assets to Euro and other currencies in the face of a weak dollar as a part of their currency risk management policies. Central banks of China, Taiwan, Hong Kong and

South Korea accumulated ''unprecedented'' accretions of foreign reserves in 2003, but it is reported that they did not place those reserves in US dollar assets.

7.35 In India, under market risk, currency as well as interest rate risks are identified and appropriately managed. Currency risk arises due to uncertainty in exchange rates. Foreign currency reserves are invested in multi-currency multi-market portfolios. In tune with international trends, the Reserve Bank follows the practice of expressing the foreign exchange reserves in US dollar terms. Operationally, this means that the share of the US dollars in the reserves would increase or decrease depending on whether the US dollar is appreciating or depreciating *vis-à-vis* other major currencies. Decisions are taken regarding the exposure on different currencies depending on the likely currency movements and other considerations in the medium- and long-term such as the necessity of maintaining major portion of reserves in the intervention currency and that of maintaining the approximate currency profile of the reserves in tune with the changing external trade profile of the country.

7.36 The central aspect of the management of interest rate risk for a central bank is to protect the value of the investments from the adverse impact of the interest rate movements. Interest rate risk is managed in most countries by defining target duration that depends on the risk-return preference of the reserve management entity. Countries like Australia, Brazil, Colombia and the Czech Republic address interest rate risks through minimising the probability of capital loss over certain time horizon. Many countries like Australia, Brazil, Chile, Colombia, Hong Kong, Korea, Mexico, New Zealand and the UK use value at risk method to limit market risk.

7.37 In India, the interest rate sensitivity of the reserves portfolio is identified in terms of benchmark duration and the permitted deviation around the benchmark. The emphasis is to keep the duration short, which is in tune with the approach to remain risk averse and keep a liquid portfolio. Short duration also implies a cautious approach on the liquidity front and a conservative approach on the returns front. The benchmark duration as also the leeway are suitably altered keeping in view the market dynamics. Given the currency composition of the reserve portfolio and the liquidity level, a decision is then taken as to how much of the portfolio should be in bonds. There are four broad currencies into which the reserves are allocated: US Dollar, Euro, Pound Sterling and Japanese Yen. A benchmark based on the risk tolerance levels accepted and set by the management is specified for each portfolio to evaluate performance.

Liquidity Risk

7.38 Risk arising out of inadequate liquidity can create a serious problem for a reserve management entity at times of crisis as reserves are essentially held to meet unexpected needs. The reserve management entity has to decide how much liquidity to hold and in what form, and the decision involves assessment of likely future intervention and future calls on the reserves. India, along with a number of countries such as Colombia, Hong Kong, Hungary, Israel and Korea use stress test for liquidity assessment. Certain other countries like Australia, Brazil, Canada, Chile, Turkey and the UK also use stress tests for market exposures. A majority of countries allow active management within limits, ranges, tracking error or “value at risk (VaR)” limits. Performance is measured on an absolute as well as relative basis which includes the use of performance attribution models in some cases. In India, efforts are made to manage the liquidity risk by appropriate choice of instruments. While bonds and treasury bills of Triple A rated sovereigns are highly liquid, BIS fixbis/Discount fixbis can be liquidated at any time to meet the liquidity needs. Exercises are undertaken to estimate ‘‘liquidity at risk (LaR)’’ of reserves.

Operational Risk

7.39 There is a total separation of the front office and back office functions in India and the internal control systems ensure several checks at the stages of deal capture, deal processing and settlement. The middle office is responsible for risk measurement and monitoring, performance monitoring and concurrent audit. The deal processing and settlement system in the Local Area Network (LAN) is also subject to internal control guidelines based on the principle of one point data entry and powers are delegated to officers at various levels for generation of payment instructions. To subject the dealers to a high degree of integrity, a code of conduct has been prescribed.

Custodial Risk

7.40 A major portion of the securities held by India is custodised with the central banks. While all US Government securities are held with the Federal

Reserve, all UK gilts and Japanese Government Bonds (JGBs) are with the Bank of England and the Bank of Japan, respectively. All primary cash accounts are with the central banks in respective countries. BIS provides both custodial and investment services and accordingly they are also the custodians for investments with them. A small portion of other Euro securities and assets managed by external asset managers are custodised with carefully selected global custodians. The custodial arrangements are reviewed from time to time and developments relating to the custodians are monitored regularly to ensure that the risk is kept to the minimum.

Management of Gold Reserves

7.41 The Reserve Bank has a modest gold holding of 357 tonnes; of this, 65 tonnes (18.2 per cent of total gold holdings of the Reserve Bank) is held abroad. The fact that gold held with the Reserve Bank provides an ample cushion to the reserves of the country was demonstrated in the critical periods of the foreign exchange crisis in 1991. Loans were raised against the collateral of gold from the Bank of Japan and the Bank of England. On repayment of the loans in November 1991, the gold was not brought back and since December 1991, but was placed as gold deposits with Bank of England and BIS (the latter on a specific request, as BIS normally does not accept gold deposits). These gold stocks are in short-term interest bearing deposits in terms of provisions of the Reserve Bank of India Act, and they earn a return of about one per cent per annum.

7.42 In this connection, the recommendation of the High Level Committee on Balance of Payments (Chairman: C. Rangarajan) is relevant. The Committee had stated that it would be advantageous to locate about one-fourth of the gold holding of the Reserve Bank at an offshore centre so that the same could be utilised in times of need. In terms of Section 33(2) of the RBI Act, gold should be held at least to the extent of Rs.115 crore (which translates into a physical quantity of 3 tonnes approximately at current market price) as assets in the Issue Department. Furthermore, as per Section 33 (5) of the Reserve Bank of India Act, not less than 85 per cent of the gold held as assets of the Issue Department shall be held in India.

7.43 To sum up, India's foreign exchange reserves have risen significantly in the last few years. From the point of view of the central bank, the level of reserves is intricately linked with the exchange rate management. Based on the various reserve adequacy indicators, the level of foreign exchange reserves in India is comfortable. India has also been included as a creditor country under the FTP at the IMF in view of its comfortable level of reserves. Prepayment of certain loans has been carried out by India. The actual impact of the foreign exchange reserve management policies followed by India has been highly positive as it resulted in orderly movements in exchange rates with lower volatility. Together, these developments have led to a sharp increase in the confidence level of domestic and foreign investors in the strength of the Indian economy. India's reserve management policies have also been described by the IMF as being "comparable to global best practices" in a recent study of 20 select industrial and developing countries (IMF, 2003b).

II. MANAGEMENT OF EXCHANGE RATES

7.44 Conduct of exchange rate policy in an open economy framework has become increasingly complex for EMEs especially in the presence of increased volatility in international capital flows that has resulted from integrated global financial markets. Increased capital mobility, greater exposure to exchange rate risk, increased openness to international trade and shift in the composition of exports from primary products towards manufactures and services are the major features witnessed in the EMEs in the past decade. Emergence of new financial institutions and products within a weak financial infrastructure acts as a source of additional vulnerability for them (Hoe Ee, 2001). Moreover, rapid advances in telecommunication and information technology have dramatically lowered transaction costs and reaction times for market participants, which have contributed to sharp increases in the volume and mobility of capital flows. All these factors, together, have amplified the vulnerability of the EMEs to financial crises, which has led to an increase in their frequency. Taking into account all the external factors described above, the task of designing a country's exchange rate policy, *i.e.*, the choice of appropriate exchange rate regime and development of a sound foreign exchange market has been challenging.

7.45 Against this backdrop, this section begins with a brief discussion on the theory of exchange rate determination followed by the evolving debate on the choice of exchange rate regime, especially in the context of recent financial crises. The Section then dwells on the evolution of the exchange rate management in India, highlighting that flexibility and

pragmatism are required in the management of exchange rate in developing countries, rather than adherence to strict theoretical rules. The role of the Reserve Bank in developing the foreign exchange market in India along with an analysis of its impact on market efficiency is also covered.

Exchange Rate Determination in an Open Economy Framework

7.46 Exchange rate economics was dominated by innovation and rapidly changing ideas during the period from mid-1970s to the early 1980s. During that period, there were major competing schools of exchange rate theory (the monetary and portfolio models) that attracted efforts at theoretical extension and a considerable amount of empirical work. However, as the empirical work refuted the contending theoretical approaches, the theories of exchange rate determination suffered a setback. The theory of exchange rate determination, therefore, still lacks models that are both theoretically interesting and empirically defensible (Krugman, 1993).

7.47 The earliest and simplest model of exchange rate determination, known as the purchasing power parity (PPP) theory, represented the application of "the law of one price". It states that arbitrage forces will lead to the equalisation of goods prices internationally once the prices are measured in the same currency. PPP theory provided a point of reference for the long-run exchange rate in many of the modern exchange rate theories. Empirical evidence showed that PPP performs better for those countries that are geographically close to each other and where trade linkages are high. Moreover, PPP holds better for traded goods compared to non-traded goods (Officer, 1986). Reasons for failure of PPP may be attributed to heterogeneity in the baskets of goods considered for construction of price indices in various countries, presence of transportation cost and other trade impediments like tariff, imperfect competition in goods market, and increase in the volume of global capital flows during the last few decades which led to sharp deviation from PPP.

7.48 The failure of the PPP theory to explain real world exchange rate behaviour gave rise to a set of monetary models which took into account the possibility of capital/bond market arbitrage apart from goods market arbitrage assumed in the PPP theory. In the monetary models, it was the money supply in relation to money demand in both home and foreign country, which determined the exchange rate. Among the various monetary models put forward, the most significant were the 'flexible price', 'sticky price' and 'real interest differential' models. A common starting point for all the three monetary models was the assumption of uncovered interest parity (UIP) condition.

7.49 The 'flexible price' monetary models (Frenkel, 1976; Mussa, 1976; Bilson, 1978) assumed that all prices in the economy are perfectly flexible both upwards and downwards in both short and long run. They also incorporated a role for inflationary expectations. In such models, countries with high monetary growth rates would have high inflationary expectations which could lead to a reduction in the demand to hold real money balances, increased expenditure on goods, a rise in domestic price level and a depreciating currency in order to maintain PPP. Empirical tests of the flexible price monetarist model provided weak results. One of the major deficiencies of the flexible price monetarist model was that it assumed that PPP holds continuously and that the prices were as flexible upwards and downwards as the exchange rates.

7.50 The 'sticky price' model, which was first elaborated by Dornbusch (1976), introduced the concept of exchange rate overshooting and provided an explanation for both exchange rate volatility and misalignment from the PPP. The basis underlying the model was that the prices in the goods market and wages in the labour market were determined in 'sticky price' markets and they only tended to change slowly over time in response to various shocks such as changes in the money supply. Prices were specially resistant to downward pressure. But the exchange rate, being determined in the flexible price market, could appreciate and depreciate immediately in response to new developments and shocks. In such circumstances, exchange rate changes were not matched by corresponding price changes and there could be persistent and prolonged departure from PPP. If real output was fixed, a monetary expansion in the short-run would lower the interest rates and cause the exchange rate to overshoot its long run depreciation, *i.e.*, the short-run exchange rate would fall below its long run equilibrium level. The phenomenon of overshooting of spot exchange rate explained the empirical evidence of large and prolonged deviation of the exchange rate from the PPP. The 'real interest differential model' combined the role of inflationary expectations of the flexible price monetary model with the sticky prices of Dornbusch model.

7.51 Among the various shortcomings, perhaps the most noticeable weakness of the monetary models of exchange rate determination was the absence of an explicit role for the current account to influence exchange rates. Furthermore, domestic and foreign bonds were regarded as perfect substitutes - they were regarded as equally risky so there was no role for risk perception to play a part in determination of exchange rates. This shortcoming of the monetary models was taken into account in portfolio balance models of exchange rate determination, which allowed for the possibility that international investors may regard domestic and foreign bonds as imperfect substitutes of each other. The portfolio balance models gave importance to the current account in determination of exchange rate over time. A current account surplus implied an accumulation of foreign assets and the result was a larger proportion of foreign bonds in investor's portfolio than they desired. Given the imperfect substitution between domestic and foreign bonds, this results in appreciation of the exchange rate. Although the portfolio balance model allowed for the departures from the uncovered interest parity (UIP) due to existence of a risk premium, there was no strong empirical evidence to support it as an alternative to the monetary models.

Choice of Exchange Rate Regime

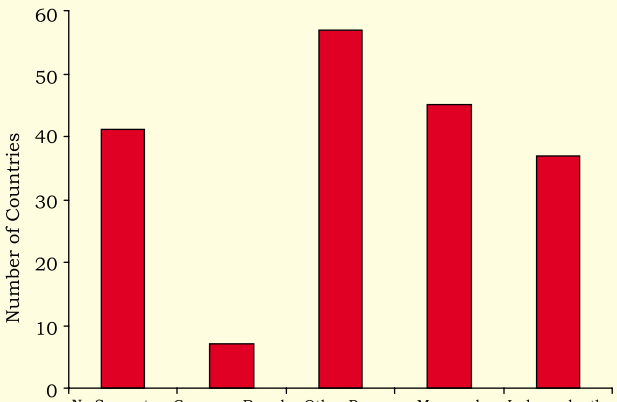
7.52 One of the most debated issues in the international economics is the choice of exchange rate regime. The early literature on the choice of exchange rate regime viewed that a fixed exchange rate regime would serve better for the smaller and more open economies. Given the sacrifice of monetary freedom, the protagonists of fixed exchange rate favoured this system for two main reasons, *viz*., (i) absence of unpredictable volatility, both from the perspective of short-term and long-term; and (ii) help in restraining domestic inflation pressure by pegging to a low inflation currency and providing a guide for private sector inflation expectations. According to its supporters, the most extreme forms of fixed exchange rate regimes, known as "super fixed" or "hard pegs", provide credibility, transparency, very low inflation and financial stability to the economy concerned. By reducing speculation and devaluation risk, hard pegs are believed to keep the interest rates lower and more stable compared to any other alternative regime. Currency board, dollarisation and monetary union are some of the examples of super fixed exchange rate regime.

7.53 Recent international experience suggests that in a world of global capital mobility, fixed exchange rates are difficult to sustain. It is interesting to note that all the EMEs, which were severely affected by recent crises, had either followed some kind of exchange rate peg or had substantially limited their exchange rate movement through various types of controls. However, international experience also suggests that it was not the relative fixity of the exchange rates alone which was responsible for the currency crises. Generally, other macroeconomic factors, *viz*., large fiscal deficits (Russia, Brazil) and weak financial systems (Korea, Thailand, Malaysia, Indonesia), were instrumental in setting off the crisis. Under these circumstances, attempts by the authorities to maintain their exchange rate peg aggravated the crisis. Clearly, therefore, changing the exchange rate regime alone cannot automatically correct other critical problems. In order to avoid these fundamental weaknesses, it was felt that EMEs should pursue a more sound, better managed and better supervised financial system and limit the exposure to foreign currency denominated external debt. Improvement in these key areas would tend to make the pegged exchange rate regimes less vulnerable and more tenable for countries with significant involvement in modern global financial markets.

7.54 The conventional wisdom suggests that for successful conduct of a pegged exchange rate regime, it is essential to fulfil the following conditions: (i) low degree of involvement with international capital markets; (ii) high share of trade with the country to which it is pegged; (iii) the shocks faced are similar to those facing the country to which it is pegged; (iv) willingness to give up monetary independence for its partner's monetary credibility; (v) extensive reliance on economic and financial system of its partner's currency; (vi) flexible and sustainable fiscal policy; (vii) flexible labour markets; and (viii) high international reserves (Mussa *et al*, 2000). Applying these criteria, countries for which pegged exchange rates seem to remain appropriate are small economies with a dominant trading partner that maintains a reasonably stable monetary policy.

7.55 International experience reveals that a large number of small countries have pegged their exchange rate regimes (Chart VII.1). Small Caribbean island economies, some small Central American countries and some Pacific island economies peg to the US dollar. African countries like Lesotho, Namibia and Swaziland peg to the South African Rand. Countries like Nepal and Bhutan peg their currency to the Indian rupee, while Brunei Darussalam pegs to the Singapore dollar. Developing countries that face

Chart VII.1: Exchange Rate Regimes



End-December 2002

Source : Annual Report on Exchange Arrangements and Exchange Restrictions, IMF.

difficulties in stabilising their economies from a situation of high inflation have also opted for pegged exchange rate systems and pursue exchange rate based stabilisation programme.

7.56 Beyond these specific groups, there are a significant number of countries for which some form of pegged exchange rate, tight band, crawling band or heavily managed float is deemed to be the relevant exchange rate regime. As against fixed and flexible exchange rates, the crawling band was seen by Williamson (1996) as a sensible, middle-of-the-road position, appropriate for most countries. Among the other forms of intermediate exchange rate regimes, Krugman (1991) provided the basic theory of target zones to describe a band that did not necessarily crawl. Cross-country experiences reveal that countries like Denmark, Egypt, Hungary (horizontal bands), Bolivia, Costa Rica, Nicaragua (crawling peg), Romania, Uruguay and Israel (crawling band) adopted various forms of intermediate exchange rate regimes. However, the viability of intermediate regimes in the context of open capital account is uncertain. The collapse of the Bretton Woods system, the repeated crises in the 1980s and the emerging market crises during the 1990s highlight the uncertainty of intermediate regimes especially for countries with open capital account. Under unrestricted international mobility of financial capital, all intermediate regimes, including actively managed float are accidents, waiting to happen and cannot survive for long (Buiter, 2000).

7.57 Advocates of floating exchange rate regime emphasised that it allowed monetary policy to be used to steer the domestic economy (Friedman, 1953). It was argued that it was much easier to change one price, namely the exchange rate, than to alter thousands or millions of individual prices, when an economy needed to enhance (or reduce) its international price competitiveness in the interest of balance of payments adjustment. Furthermore, given the impossible trinity[1], the best choice was to give up the fixed exchange rate and thus adopt a flexible one. International experience reveals that apart from the G-3 countries, a number of medium-sized industrial countries, *viz.*, Canada, Switzerland, Australia, New Zealand, Sweden and United Kingdom have also maintained floating exchange rate regimes. The main disadvantage of a free float is a tendency towards volatility that is not always due to macroeconomic fundamentals. This is especially so in emerging markets where the foreign exchange markets are relatively thin and dominated by a small number of players. In addition, financial markets may not be deep or broad enough to allow hedging at a reasonable cost.

7.58 After the Asian financial crisis, views were expressed that for small open economies, the only viable exchange rate regime was one of the corner solutions - either a hard currency peg like a currency board arrangement in the one extreme or allow market forces to freely determine the value of their currencies, on the other. The recent Argentinean crises gave a severe jolt to the theory of "hollowing of the middle". Even currency board type of arrangement of a fixed peg was found to be unviable. There are a number of difficulties associated with super-fixed systems including complete loss of monetary control on the part of central bank (Edwards, 2003).

7.59 In the recent period, growing dominance of intermediate regimes seriously challenged the new paradigm on ''two corner'' exchange rate regimes. Calvo and Reinhart (2000) and Levy-Yeyati and Sturzenegger (2000) have shown that many of those countries which had declared themselves as ''independent floaters'' in the IMF statistics were indeed heavily intervening in foreign exchange markets. Thus, in most cases ''floating'' means "managed floating". Studies by the IMF and several

[1] Following Mundell, impossible trinity refers to incompatibility between an independent monetary policy, a fixed exchange rate and an open capital account (see Chapter III).

experts also show that by far, the most common exchange rate regime adopted by countries, including industrial countries, is not a free float. Most countries have adopted intermediate regimes of various types, such as, managed floats with no pre-announced path, and independent floats with foreign exchange intervention moderating the rate of change and preventing undue fluctuations. This has also been true of industrial countries. Results of a recent study indicate that for countries at a relatively early stage of financial development and integration, fixed or relatively rigid schemes appear to offer some anti-inflation credibility without compromising growth objectives. As countries develop economically and institutionally, there appear to be considerable benefits to more flexible regimes (Rogoff *et al.*, 2003).

7.60 Some stylized facts regarding the foreign exchange markets in the EMEs are noteworthy. Most EMEs have smaller and localised foreign exchange markets where nominal domestic currency values are generally expected to show a depreciating trend, since relative inflation rates are generally higher than those of major industrial countries. In this situation, there is a common tendency among market participants to hold long positions in foreign currencies and to hold back sales when expectations are adverse and currencies are depreciating. Another feature, very common to the EMEs, is the tendency of importers/exporters and other end-users to look at exchange rate movements as a source of return without adopting appropriate risk management strategies. This, at times, creates severely uneven supply-demand conditions, often based on ''news and views''. The day-to-day exchange rate movements are not aligned with the so-called 'fundamentals' or country's capacity to meet its payments obligations, including debt service. This leads to adverse expectations, which tend to be self-fulfilling in nature, given their effect on ''leads and lags'' in payments and receipts. Often, a self-sustaining triangle develops comprising the supply-demand mismatch, increased inter-bank activity to take advantage, and accentuated volatility triggered by negative sentiments. The consequent volatility that sets in may not be in tune with the fundamentals. The situation calls for a quick intervention/response by the authorities. Given the ''bandwagon'' effect of any adverse movement and the herd behaviour of market participants, the situation can lead to further buying or hedging activity among non-bank participants. The ''Daily Earnings At Risk'' (DEAR) strategies of risk management tend to reinforce herd behaviour (Jalan, 2001). In thin and underdeveloped markets dominated by a few leading operators, there is a natural tendency to do what everyone else is doing in the event of any adverse development rather than taking a contra position.

7.61 The reason why intervention by most central banks in foreign exchange markets becomes necessary from time to time is primarily because of the importance of capital flows in determining exchange rate movements as against trade deficits and economic growth, which were important in the earlier days. Second, unlike trade flows, capital flows in ''gross'' terms, which affect exchange rate can be several times higher than ''net'' flows on any day. Therefore, herding becomes unavoidable (Jalan, 2003b).

7.62 Capital movements have rendered exchange rates significantly more volatile than before (Mohan, 2003). The volatility in capital flows was again highlighted in the recent period during the East Asian crisis. Net private capital flows to EMEs, for instance, fell from US $ 227 billion in 1996 to a mere US $ 43 billion in 2001. The volatility in such flows is better captured through movements in flows in the form of bank lending and other debt flows. Such flows indicated a sharp turnaround from an inflow of US $ 67 billion in 1995 to an outflow of US $ 115 billion in 2000 (see Chapter VI for details). Since the 1980s, vicissitudes of capital movements have shown up in volatility in exchange rate movements with major currencies moving far out of alignment of underlying purchasing power parities. Of late, it is capital flows that seem to move exchange rates and account for much of their volatility. Instead of the real factors underlying trade competitiveness, it is expectations and reactions to news which drive capital flows and exchange rates, often out of alignment with fundamentals. Capital flows have been observed to cause overshooting of exchange rates as market participants act in concert while pricing information. Foreign exchange markets are prone to bandwagon effects. In this context, it would be desirable to take note of the balance sheet approach, which identifies financial inter-linkages, imbalances, vulnerabilities and risks in the economy. It focuses on the risks created by maturity, currency and capital structure mismatches. This framework draws attention to the vulnerabilities created by debt among residents, particularly those denominated in foreign currency, and it helps to explain how problems in one sector can spill over into other sectors eventually triggering balance of payments crisis (see Chapter VI).

7.63 For the majority of developing countries which continue to depend on export performance as a key to the health of their balance of payments, exchange rate volatility has had significant real effects in terms of fluctuations in employment and output and the distribution of activity between tradables and non-tradables (Mohan, 2003). In the fiercely competitive trading environment where countries seek to expand market shares aggressively by paring down margins, it has been argued, even a small change in exchange rates can develop into significant and persistent real effects. The impact of greater exchange rate volatility has been significantly different for reserve currency countries and for developing countries. For the former, mature and well-developed financial markets have absorbed the risks associated with large exchange rate fluctuations with negligible spillover on to real activity. Consequently, the central bank does not have to take care of these risks through its monetary policy operations. On the other hand, for the majority of developing countries, which are labour-intensive exporters, exchange rate volatility has had significant employment, output and distributional consequences, which can be large and persistent (Mohan, 2003).

7.64 The volatility and misalignment in the G-3 exchange rates, combined with inflexible exchange rate regimes of certain EMEs, appear to have played a role in the build-up to the Argentine and Asian crises and the associated large losses in output (IMF, 2003a). More generally, the volatility in the real effective exchange rate of the developing countries could be ascribed to the volatility of the major currencies. Empirical studies point towards costly geographical reorientation of external trade since relative competitiveness *vis-à-vis* different partner countries undergoes changes with large movement in major exchange rates. It also increases risk to investment across different regions. Furthermore, large swings in the G-3 exchange rates could require costly hedging products for developing countries lacking sophisticated foreign currency derivative products and could amplify debt-servicing with disruptions to fiscal budgets.

7.65 Central banks all over the world are, therefore, concerned about development of foreign exchange market in order to allow market participants to manage their own risks *i.e.,* micro risks. As the market develops, the concern of the central bank shifts primarily to managing the macro risk.

7.66 Against this backdrop, countries use both monetary policy adjustments and outright intervention in the form of sales/purchases of foreign exchange to influence exchange rate. The effectiveness of foreign exchange intervention crucially depends on whether the operation is sterilised or non-sterilised. Since sterilised interventions leave money supply unchanged, empirical research towards seeking to find a link between sterilised intervention and the exchange rates presents a mixed bag. Studies by Loopesko (1984), Obstfeld *et al.,* (1983), Obstfeld (1988), Taya (1983) and Weber (1986) show no or weak evidence in favour of effectiveness of sterilised foreign exchange intervention. On the other hand, Dominguez and Frenkel (1993) provide strong evidence towards working of sterilised intervention through portfolio balance channel. Recent findings by Fatum and Huchison (2003) also suggest that sterilised intervention is successful in influencing the exchange rate in the short-run.

7.67 An analysis of the complexities, challenges and vulnerabilities faced by the EMEs in the conduct of exchange rate policy reveals that the choice of a particular exchange rate regime alone cannot meet all the requirements. Nonetheless, "the debate on appropriate policies relating to foreign exchange markets has now converged around some generally accepted views: (i) exchange rates should be flexible and not fixed or pegged; (ii) countries should be able to intervene or manage exchange rates - to at least some degree - if movements are believed to be destablising in the short run; and (iii) reserves should at least be sufficient to take care of fluctuations in capital flows and liquidity at risk" (Jalan, 2003b).

7.68 In a similar vein, succinct observations made by Mohan (2003) on the exchange rate regime are noteworthy: "the experience with capital flows has important lessons for the choice of the exchange rate regime. The advocacy for corner solutions - a fixed peg *a la* the currency board without monetary policy independence or a freely floating exchange rate retaining discretionary conduct of monetary policy - is distinctly on the decline. The weight of experience seems to clearly be in favour of intermediate regimes with country-specific features, no targets for the level of the exchange rate, exchange market interventions to ensure orderly rate movements, and a combination of interest rates and exchange rate interventions to fight extreme market turbulence. In general, EMEs have accumulated massive foreign exchange reserves as a circuit-breaker for situations where unidirectional expectations become self-fulfilling. It is a combination of these strategies which will guide

monetary authorities through the impossible trinity of a fixed exchange rate, open capital account and an independent monetary policy."

7.69 The emerging consensus is that for successful conduct of exchange rate policy, it is essential for countries to pursue sound and credible macroeconomic policies so as to avoid the build-up of major macro imbalances in the economy. Second, it is essential for EMEs to improve the flexibility of their product and factor markets in order to cope up and adjust to shocks arising from the volatility of currency markets and swings in the terms of trade in world product markets. Third, it is crucial for EMEs to develop and strengthen their financial systems in order to enhance their robustness to shocks. In addition, a sound and efficient banking system together with deep and liquid capital markets contribute to the efficient intermediation of financial flows. This could help prevent the emergence of vulnerabilities in the financial system by minimising unsound lending practices that lead to the build-up of excessive leveraging in the corporate sector and exposure to foreign borrowings. Fourth, countries would need to build regulatory and supervisory capabilities to keep pace with financial innovations and the emergence of new financial institutions' activities, and new products and services, which have complicated the conduct of exchange rate policy. Fifth, policy makers need to promote greater disclosure and transparency.

7.70 The choice of exchange rate regime is likely to be of second order importance to the development of good fiscal, financial, and monetary institutions in producing macroeconomic success in emerging market countries. Less attention should be focused on the general question whether a floating or a fixed exchange rate is preferable, and more on these deeper institutional arrangements. Focus on institutional reforms rather than on the exchange rate regime would make the emerging market countries healthier and less prone to crises than we have seen in recent years (Calvo and Mishkin, 2003).

Exchange Rate Management: The Indian Experience

7.71 Against the backdrop of international experience, it would be useful to review the management of the exchange rate in India in a historical perspective. India's exchange rate policy has evolved in tandem with international and domestic developments. The period after Independence in 1947 was followed by a fixed exchange rate regime where the Indian rupee was pegged to the pound sterling on account of historic links with Britain and this was in line with the Bretton Woods System prevailing at that time. A major event was the devaluation of the Indian rupee by 36.5 per cent on June 6, 1966. With the breakdown of Bretton Woods system in the early 1970s and the consequent switch towards a system of managed exchange rates, and with the declining share of the UK in India's trade, the Indian rupee, effective September 1975, was delinked from the pound sterling in order to overcome the weaknesses of pegging to a single currency. Even after the rupee was delinked from the pound sterling the role of the exchange rate remained muted for quite sometime given the widespread rationing of foreign exchange through an elaborate system of licensing, other quantitative restrictions and exchange control. During the period of 1975 to 1992, the exchange rate of rupee was officially determined by the Reserve Bank within a nominal band of +/- 5 per cent of the weighted basket of currencies of India's major trading partners. The Reserve Bank performed a market-clearing role on a day-to-day basis which introduced high variability in the size of reserves. The periodic adjustments in the exchange rate were, however, not enough to maintain external competitiveness as competitor countries had undertaken significant adjustments in their exchange rates despite their lower inflation than in India (Rangarajan, 1993). The exchange rate regime of this period can be best characterised as an adjustable nominal peg with a band, with the nominal exchange rate being the operating variable to achieve the intermediate target of a medium-term equilibrium path of the real effective exchange rate (REER).

Addressing the Balance of Payments Crisis of 1991

7.72 In the beginning of the 1990s, the significant rise in oil prices and suspension of remittances from the Gulf region in the wake of the Gulf crisis led to severe problems in the balance of payments in India. The problem was exacerbated with several exogenous developments like disruption of trade with the break-up of erstwhile Eastern Bloc, recessionary conditions in industrialised countries and restrictions on exposure of international banks to developing countries to comply with Basel norms. With drying up of access to commercial banks and short-term credit, financing of the current account deficit became unsustainable leading to a crisis situation. India's foreign currency assets depleted rapidly from US $ 3.1 billion in August 1990 to US $ 975 million on July 12, 1991. A conscious decision was taken to honour all debt without seeking rescheduling and

several steps were taken to tide over the crisis: (i) a part of gold reserves was sent abroad to get some immediate liquidity; (ii) non-essential imports were tightened by a variety of price based and quantitative measures; (iii) the IMF, multilateral and bilateral donors were approached; (iv) macroeconomic stabilisation programme was put in place; (v) India Development Bonds (IDBs) were floated in October 1991 to mobilise medium-term funds from non-resident Indians which yielded US $ 1.6 billion; and (vi) credible commitments were made to bring about structural reforms.

7.73 A two-step downward adjustment of 18-19 per cent in the exchange rate of the Indian rupee was made on July 1 and 3, 1991 with a view to placing it at an appropriate level in line with the inflation differential with major trading partners so as to maintain the competitiveness of exports. This provided the necessary impetus for a move towards greater exchange rate flexibility. Consequently, following the recommendations of the High Level Committee on Balance of payments (Chairman: C. Rangarajan), the Liberalised Exchange Rate Management System (LERMS) involving dual exchange rate system was instituted in March 1992 in conjunction with other measures of liberalisation in the areas of trade, industry and foreign investment. Under the LERMS, 40 per cent of exchange earnings had to be surrendered at an official rate determined by the Reserve Bank, which in turn was obliged to sell foreign exchange only for import of certain essential commodities such as oil, fertiliser and life saving drugs besides the Government's debt servicing. The balance 60 per cent of exchange earnings was to be converted at rates determined by the market. The LERMS was essentially a transitional mechanism and a downward adjustment in the official exchange rate took place in early December 1992 and ultimate convergence of the dual rates was made effective from March 1, 1993. The unification of the exchange rate of the Indian rupee was an important step towards current account convertibility, which was finally achieved in August 1994 by accepting Article VIII of the Articles of Agreement of the IMF. On unification, the exchange rate of the Indian rupee became market determined and its downward adjustment both against the US dollar and also against a trade-weighted basket nullified the impact of the prevailing inflation differential.

7.74 The experience with the market determined exchange rate system has been satisfactory. The foreign exchange market was characterised by orderly conditions for most of the period, excepting a few episodes of volatility. During these episodes, the Reserve Bank undertook monetary and other measures supported by sales of foreign exchange in the market to ensure orderly conditions in the market. These episodes are discussed in the following paragraphs.

7.75 With the gradual opening of current and capital account transactions in the 1990s, the increasing volume of capital flows had a direct bearing on the stability of the exchange rate. There were intermittent periods of excessive capital inflows followed by episodes of ebbing and subsequent recovery. From the viewpoint of examining the impact of external transactions on the exchange rate stability, the period starting from March 1993 (when the exchange rate became market determined) could be divided into four sub-periods as detailed below.

March 1993-August 1995

7.76 Reflecting the positive investor confidence, the Indian economy experienced surges in capital inflows during 1993-94, 1994-95 and the first half of 1995-96, which, coupled with robust export growth, exerted upward pressures on the exchange rate. Large capital flows were sterilised through timely interventions by the Reserve Bank. In the process, the nominal exchange rate of the Indian rupee *vis-à-vis* the US dollar remained virtually unchanged at around Rs.31.37 per US dollar over an extended period from March 1993 to August 1995.

September 1995-December 1996

7.77 The rupee came under pressure for the first time in August 1995 and the trend continued in phases till February 1996. The pressure on the rupee in August 1995 was brought about by a sudden and sharp reversal of market sentiment and expectations. Slowing down of the capital inflows in the wake of the Mexican crisis, a widening of the current account deficit on account of resurgence of growth in the real sector and the rise of US dollar against other major currencies were the main factors contributing to this phenomenon. The exchange rate of the Indian rupee depreciated by nine per cent during the period August 1995 to October 1995 before stabilising in February 1996. In response to the upheavals, the Reserve Bank intervened in the market to signal that the fundamentals were in place and to ensure that market correction of the overvalued exchange rate was

orderly and calibrated. The interventions in the foreign exchange market were supported by monetary tightening to prevent speculative attacks. These decisive and timely measures brought stability to the market lasting till mid-January 1996. In the first week of February 1996, another bout of uncertainty led the rupee to shoot up to Rs.37.95 per US dollar. Interventions by the Reserve Bank along with measures to encourage faster realisation of export proceeds and to prevent an acceleration of import payments, however, succeeded in restoring orderly conditions and the rupee traded around Rs.34-35 per US dollar over the period March-June 1996. During the second half of 1996, the rupee remained range bound.

1997-2001

7.78 The foreign exchange market since 1997 had to cope with a number of adverse internal as well as external developments. Important internal developments included the imposition of economic sanctions in the aftermath of nuclear tests during May 1998 and the border conflict during May-June 1999. External developments included, *inter alia*, the contagion due to the Asian financial crisis, the Russian crisis during 1997-98 and the sharp increase in international crude oil prices in 1999-2000. Movements in interest rates in the industrialised countries as well as the cross-currency movements of the US dollar *vis-à-vis* other major international currencies were some of the other external developments impacting the foreign exchange market. These developments created considerable degree of uncertainty in the foreign exchange market leading to excess demand for US dollar. The Reserve Bank responded promptly through monetary and other measures like variations in the Bank Rate, the repo rate, cash reserve requirements, refinance to banks, surcharge on import finance and minimum interest rates on overdue export bills to curb destabilising speculative activities during these episodes of volatility while allowing an orderly correction in the value of the rupee.

7.79 India was successful in containing the contagion effect of the Asian crisis due to swift policy responses. Certain characteristics of the economy and safeguards developed over a period of time also helped in limiting the contagion. During the period of crisis, India had low current account deficit, comfortable foreign exchange reserves amounting to import cover of over seven months, a market determined exchange rate, low level of short-term debt, and absence of asset price inflation or credit boom. These positive features were the result of prudent policies pursued over the years notably, cap on external commercial borrowings with restrictions on end-use, low exposure of banks to real estate and stock market, insulation from large intermediation of overseas capital by the banking sector, close monitoring of off-balance sheet items and tight legislative, regulatory and prudential control over non-bank entities.

7.80 Uncertainty in the foreign exchange market surfaced again in May 2000 reflecting hardening of international oil prices, successive interest rate increases in industrial countries and the sharp reversals of portfolio flows. This resulted in widening of the excess demand gap in the spot segment of merchant transactions and compensating activity built up in the inter-bank segment. Tight monetary measures adopted during May-June 2000 coupled with inflows (US $ 5.5 billion) in respect of the India Millennium Deposits (IMDs) during October-November 2000 eased the market pressures. Financing through IMDs was resorted to as a pre-emptive step in the face of hardening of world petroleum prices and the consequent possible depletion of India's foreign exchange reserves. The orderly conditions witnessed in the foreign exchange market since November 2000 continued thereafter. Accordingly, measures undertaken earlier such as the stipulation of minimum interest rate of 25 per cent on overdue export bills and interest rate surcharge of 50 per cent on import finance were withdrawn in January 2001.

7.81 In the aftermath of September 11, 2001 incident in the US, once again pressure was felt in the foreign exchange market as the Indian rupee depreciated against the US dollar, but the Reserve Bank tackled the situation through quick responses in terms of a package of measures and liquidity operations. These measures included: (i) a reiteration by the Reserve Bank to keeping interest rates stable with adequate liquidity; (ii) assurance to sell foreign exchange to meet any unusual supply-demand gap; (iii) opening a purchase window for select Government securities on an auction basis; (iv) relaxation in FII investment limits upto the sectoral cap/statutory ceiling; (v) a special financial package for large value exports of six select products; and, (vi) reduction in interest rates on export credit by one percentage point.

Table 7.7: Movement of Currencies against US dollar @

Country	Currency per US $						Appreciation (+)/Depreciation (-) against US dollar (per cent)			
	1993	1997	2000	2001	2002	2003	2003 over 1997	2003 over 2000	2003 over 2001	2003 over 2002
1	2	3	4	5	6	7	8	9	10	11
Chinese Yuan	5.80	8.28	8.28	8.28	8.28	8.28	0.0	0.0	0.0	0.0
Euro	..	..	1.07	1.13	0.95	0.81	..	32.5	39.9	17.6
Hong Kong Dollar	7.73	7.75	7.80	7.80	7.80	7.76	-0.2	0.4	0.4	0.4
Indian Rupee	31.38	39.27	46.75	48.18	48.03	45.61	-13.9	2.5	5.6	5.3
Indonesian Rupiah	2,110.00	4,650.00	9,595.00	10,400.00	8,940.00	8,478.00	-45.2	13.2	22.7	5.4
Japanese Yen	111.85	129.95	114.90	131.80	119.90	107.22	21.2	7.2	22.9	11.8
Korean Won	808.10	1,695.00	1,264.50	1,313.50	1,186.20	1,197.40	41.6	5.6	9.7	-0.9
Malaysian Ringgit	2.70	3.89	3.80	3.80	3.80	3.80	2.4	0.0	0.0	0.0
Mexican Peso	3.11	8.08	9.57	9.14	10.31	11.23	-28.0	-14.8	-18.6	-8.2
Philippines Peso	27.70	39.98	50.00	51.40	53.10	55.50	-28.0	-9.9	-7.4	-4.3
Pound Sterling	0.68	0.60	0.67	0.69	0.62	0.57	6.1	17.6	21.0	8.9
Singapore Dollar	1.61	1.68	1.73	1.85	1.74	1.70	-1.5	1.8	8.9	2.1
Thailand Baht	25.54	47.25	43.27	44.22	43.15	39.65	19.2	9.1	11.5	8.8

@ : As at end-December. .. : Not Available.

Source : International Financial Statistics, IMF, 2003; The Economist.

2002 Onwards

7.82 Except for a brief period of instability on account of border tensions in May 2002, the rupee generally exhibited appreciating trend against the US dollar during 2002-03 and 2003-04 (up to January 20, 2004) reflecting sustained excess supply position. During this period, the Reserve Bank has been absorbing excess supplies in the market. In fact, since 2001, most of the currencies worldwide, except for Chinese yuan, Mexican peso and Philippines peso have been appreciating against the US dollar (Table 7.7). The weakness of US dollar has been widespread against all the major as well as emerging market currencies. Reflecting cross-currency movements, the Indian rupee depreciated against other key currencies such as euro, yen and pound sterling (Table 7.8).

Table 7.8: Movement of Rupee against Other Foreign Currencies@

Country	Rupees per foreign currency						Appreciation (+)/Depreciation (-) against Rupee (per cent)			
	1993	1997	2000	2001	2002	2003	2003 over 1997	2003 over 2000	2003 over 2001	2003 over 2002
1	2	3	4	5	6	7	8	9	10	11
Chinese Yuan	5.41	4.74	5.65	5.82	5.80	5.51	-13.9	2.5	5.6	5.3
Euro	..	..	43.50	42.46	50.37	56.23	..	-22.6	-24.5	-10.4
Hong Kong Dollar	4.06	5.07	6.00	6.18	6.16	5.87	-13.7	2.1	5.2	4.8
Indonesian Rupiah *	1.49	0.84	0.49	0.46	0.54	0.54	57.0	-9.4	-13.9	-0.1
Japanese Yen *	28.06	30.23	40.69	36.56	40.06	42.54	-28.9	-4.4	-14.1	-5.8
Korean Won *	3.88	2.32	3.70	3.67	4.05	3.81	-39.2	-2.9	-3.7	6.3
Malaysian Ringgit	11.62	10.09	12.30	12.68	12.64	12.00	-15.9	2.5	5.6	5.3
Mexican Peso	10.10	4.86	4.88	5.27	4.66	4.06	19.6	20.2	29.7	14.7
Philippines Peso	1.13	0.98	0.94	0.94	0.90	0.82	19.6	13.8	14.1	10.1
Pound Sterling	46.48	64.96	69.76	69.88	77.41	80.05	-18.9	-12.9	-12.7	-3.3
Singapore Dollar	19.51	23.44	27.00	26.03	27.66	26.82	-12.6	0.7	-3.0	3.1
Thailand Baht	1.23	0.83	1.08	1.09	1.11	1.15	-27.7	-6.1	-5.3	-3.2

@ : As at end-December. .. : Not Available.

* : Rs per 100 yen, 100 won & 100 rupiah respectively.

Source : International Financial Statistics, IMF, 2003; The Economist.

Table 7.9: REER and NEER of Select Asian Countries

(Index : 1995=100)

Country	1990	1993	1995	1996	1997	1998	1999	2000	2001	2002
1	2	3	4	5	6	7	8	9	10	11
Real Effective Exchange Rate (REER)										
China	117.0	82.6	100.0	109.7	116.9	119.2	115.3	118.2	123.4	121.4
India	**138.5**	**97.8**	**100.0**	**101.1**	**103.5**	**95.6**	**94.6**	**98.5**	**99.8**	**95.7**
Japan	68.4	89.5	100.0	85.2	81.1	75.7	86.4	93.3	83.2	76.6
Malaysia	98.7	103.7	100.0	104.4	103.2	82.0	84.3	86.4	91.2	91.3
Philippines	84.2	93.0	100.0	109.3	108.7	88.6	96.2	89.7	85.3	85.6
Singapore	89.1	94.7	100.0	103.5	105.4	101.6	95.1	95.2	96.0	93.8
Nominal Effective Exchange Rate (NEER)										
China	173.8	111.8	100.0	104.2	111.1	116.2	113.7	116.8	122.0	121.0
India	**199.6**	**114.0**	**100.0**	**98.5**	**98.6**	**87.2**	**84.6**	**84.1**	**83.5**	**78.4**
Japan	64.7	88.3	100.0	86.8	81.7	76.5	89.4	99.5	89.8	85.2
Malaysia	90.7	100.8	100.0	103.1	100.3	77.1	78.0	80.0	84.7	84.0
Philippines	94.5	94.5	100.0	102.1	98.4	74.8	76.7	69.8	63.6	62.5
Singapore	84.9	93.4	100.0	104.7	107.3	106.7	101.2	101.6	103.0	102.1

Note : Rise in index implies appreciation.

Source : International Financial Statistics, IMF 2003; For India, Reserve Bank of India and data pertain to 5 country trade-based index on financial year basis.

7.83 The movements in cross currency exchange rates can be better analysed through nominal and real effective exchange rate indices. The index of real effective exchange rate (REER) attempts to capture weighted variations in the nominal exchange rate with the economy's major trading partners adjusted for inflation differentials. Accordingly, variations in the REER provide a measure of external price competitiveness for local exports. Several caveats are in order: first, employing the REER as an indicator of competitiveness is best done in a world with no barriers to trade or capital flows; second, there is certain arbitrariness with respect to selection of the base year, weights and prices. Hence, the use of REER could be best suited to track the movement of currency over a period of time, rather than exchange rate levels at any particular point of time. The REER of India has been relatively stable compared to other key Asian countries (Table 7.9).

7.84 As noted above, an important aspect of policy response to various episodes of volatility has been monetary tightening. This raises the issue of its efficacy. Econometric evidence in the Indian context indicates that monetary policy tightening measures have been successful in restoring orderly conditions in the foreign exchange market (Pattanaik and Mitra, 2002; Pattnaik, Kapur and Dhal, 2003). In a vector autoregression (VAR) framework, both these studies find that increase in interest rates had the expected effect of strengthening the exchange rate in the short-run; over time, however, the effect peters out, consistent with the theory. Furthermore, empirical assessment suggests that intervention operations of the Reserve Bank have been effective in containing exchange rate volatility of the rupee, even though the degree of influence may not appear to be very strong (Pattanaik and Sahoo, 2001).

7.85 The above analysis brings out the Reserve Bank's endeavour to manage volatility in the foreign exchange market. The need to focus on managing volatility is borne out by empirical analysis which indicates that heightened volatility in the foreign exchange markets leads to a depreciating pressure on the rupee (Box VII.1).

7.86 The message that comes out from this discussion of various episodes of volatility of exchange rate of the rupee and the policy responses thereto is clear: flexibility and pragmatism are the order of the day in exchange rate policy in developing countries, rather than adherence to strict theoretical rules. It also underscores the need for central banks to keep instruments/policies in hand for use in difficult situations.

7.87 The recent experience has highlighted the need for developing countries to keep a continuous vigil on market developments, and the importance of building adequate safety nets that can withstand the effects of unexpected shocks and market uncertainties. Against this background, India's exchange rate policy of focusing on managing volatility with no fixed rate target while allowing the underlying demand and supply conditions to determine the exchange rate movements over a period in an orderly way has stood the test of time. The Reserve Bank continues to follow the same

Box VII.1

Cross-Currency Impact on Volatility of the Indian Rupee

Using daily data on the exchange rate during the period January 1995 to October 2003, an exercise was undertaken to examine the impact of time varying cross-currency volatility on the Indian Rupee using exponential GARCH (EGARCH) model. The sample standard deviation or variance which measures unconditional volatility was the highest for Japanese yen-US dollar pair followed by Indian rupee-US dollar pair, while the same for Pound sterling and euro area currencies were comparatively low. The bi-variate correlation between the Indian rupee and the US dollar and other cross currency exchange rates in respect of Pound sterling, Japanese yen, Deutsche mark, French franc and Singapore dollar against the US dollar indicated that all major cross-exchange rates have significant effect on volatility of the Indian rupee with a lag of a few days. The effects of Japanese yen, Pound sterling and Singapore dollar turned out to be sharper than that of Deutsche mark and French franc. The conditional volatility term was low but statistically significant in the mean or return equation, implying successful management of volatility in the exchange rate by the Reserve Bank. This provides some evidence in support of risk and return trade-off hypothesis. For every 10 per cent increase in volatility, the exchange rate depreciates by one per cent. The estimated model suggests a significant asymmetry in the volatility response due to market pressure, underscoring the importance of intervention by the central bank to manage the volatility. The experience of managing the exchange rate during the crisis period clearly points out that in adverse circumstances, the need for intervention by the central bank is felt more by the market than otherwise.

approach of watchfulness, caution and flexibility in regard to foreign exchange market. It co-ordinates its market operations carefully, particularly in regard to the foreign exchange market with appropriate monetary, regulatory and other measures as considered necessary from time to time. The conduct of exchange rate policy in India is guided currently by three major purposes. First, to maintain orderly conditions in the foreign exchange market by providing foreign exchange as considered necessary from time to time, and to prevent the emergence of destabilising and self-fulfilling speculative activities. Second, to help maintain an adequate level of foreign exchange reserves. Third, to help eliminate market constraints with a view to facilitating the development of a healthy foreign exchange market. International research on viable exchange rate strategies in emerging markets has also lent considerable support to the exchange rate policy followed by India. A leading global news agency, in an international journal, has recently described India's currency model as being "ideal" for Asia (Jalan, 2003b).

Developing the Indian Foreign Exchange Market

7.88 The Indian market is not yet very deep and broad, and is characterised by uneven flow of demand and supply over different periods. The market is also characterised by a few major players, and lumpy public sector demands, particularly on account of payments for oil imports and servicing of public debt. In this situation, the Reserve Bank has been prepared to make sales and purchases of foreign currency in order to even out lumpy demand and supply in the relatively thin foreign exchange market and to smoothen jerky movements. However, such interventions are not governed by a predetermined target or band around the exchange rate.

7.89 With the institution of the market determined exchange rate in March 1993 and large capital inflows during 1993-95, the Reserve Bank has undertaken several measures to widen and deepen the foreign exchange market (Box VII.2). At present, there are 92 banks authorised to deal in foreign exchange, referred to as Authorised Dealers (ADs). Of these, most foreign banks and bigger Indian banks actively quote two-way prices. The banks deal among themselves directly or through the foreign exchange brokers presently numbering 47. Besides banks, term lending institutions have been given restricted dealing licences. Foreign Exchange Dealers Association of India (FEDAI) sets ground rules for fixation of commercial and other charges and involves itself in matters of mutual interest of ADs. The market trades freely in spot and forward exchange contracts, and to a limited extent in derivatives. The efficiency/liquidity of the market is often gauged in terms of bid/offer spreads. Wider spreads are an indication of an illiquid or a one-way market. In India, the normal spot market quote has a spread of 0.25 to 0.50 paise while swap quotes are available at 1 to 2 paise spread.

7.90 The total turnover in the foreign exchange market has been showing an increasing trend over the years. The average daily total turnover (merchant plus inter-bank) increased sharply to US $ 8.0 billion in 2003-04 (up to December) from US $ 1.9 billion in 1990-91. The average daily merchant turnover increased from a meagre US $ 0.2 billion in 1990-91

Box VII.2

Measures Undertaken to Develop the Indian Foreign Exchange Market

The Indian foreign exchange market has come a long way since the period prior to 1978 when banks were required to maintain square position at all points of time. The important measures undertaken to broaden and deepen the foreign exchange market are as follows:

General

- March 1992: The exchange rate of rupees was partially floated in March 1992 with the introduction of LERMS.
- March 1993: Unified exchange rate was introduced.
- August 1993: Direct quotation system was introduced
- July 1995: In order to ensure that the exchange rate of the rupee reflected fully the demand supply situation and in furtherance of the move towards eliminating transactions through reserves, it was decided to route government debt service payment (civil) through the market.
- October 1995: With a view to minimising the influence on the process of rate formation, the Reserve Bank discontinued quoting its buying and selling rate.

Relaxation for Banks

- September 1995: As against overnight limit of Rs.15 crore, banks were given freedom to fix their own open exchange position limit and apply to the Reserve Bank for approval. The revised limits became operative from January 1996.
- April 1996: Depending upon the asset liability profile, dealing expertise and such other relevant factors, the ADs were accorded freedom to fix their own gap limits for more efficient management of their assets and liabilities subject to the Reserve Bank approval. The banks which are permitted higher limits should be in a position to mark to market their gaps on a daily basis using value at risk models.
- April 1996: The banks which had put in place adequate risk management systems were permitted to freely trade in the overseas markets, subject to the overall position/gap discipline.
- October 1996: Banks were permitted to provide foreign currency denominated loans to their customers out of the pool of FCNR(B) deposits.
- April 1997: Cash reserve requirements on inter-bank borrowings were removed.
- April 1997: The Reserve Bank permitted banks to borrow and invest in the overseas markets. At present, banks are permitted to borrow up to 25 per cent of Tier I capital and invest up to any amount .

Relaxation for Corporates

- April 1992: EEFC scheme was introduced. Currently, exchange earners in select categories are permitted to retain 100 per cent of foreign exchange receipts in foreign currency accounts, while all others are permitted to retain 50 per cent.
- September 1996: Corporates were accorded greater freedom to undertake active hedging. They were given freedom to choose the currency of hedge irrespective of the currency of the exposure.
- September 1996: Corporates were given complete freedom to book and cancel cross currency options.

Besides, several measures have been undertaken to develop the forward market. The participants in the forward market have increased considerably. Several instruments have been introduced to hedge exposures.

to US $ 1.8 billion in 2003-04. The average inter-bank turnover also increased from US $ 1.7 billion in 1990-91 to US $ 6.2 billion in 2003-04. Reflecting these trends, the inter-bank to merchant turnover ratio has declined from 8.5 in 1990-91 to 3.4 in 2003-04.

7.91 With many countries switching over from fixed exchange rate regimes to flexible exchange rate regimes, management of foreign currency exposure has assumed a critical importance. Unchanged nominal exchange rate amounts to giving implicit or explicit exchange guarantee to market players which may prevent them from taking cover for their exposures. Experience suggests that large unhedged exposures of the corporates and a possible sudden rush for covering exposures could give rise to destabilising expectations, which may, at times result in self-fulfilling corrections or 'overshooting'. In the aftermath of the Asian crisis, the Reserve Bank has been expressing concern over unhedged foreign currency borrowings by corporates. In recent period, a large portion of the corporate foreign currency commitments has been found to be kept unhedged. This could impact the overall financial status of the corporate balance sheets, possibly impacting the quality of banks' assets in some cases. The Reserve Bank felt that it was desirable for banks which have large exposures to such corporates to put in place a system for monitoring such unhedged external exposures. Over a period, considerable flexibility has been given to the corporates, banks, and non-residents to hedge their foreign exchange exposure in the market (Box VII.3)

Box VII.3

Hedging for Foreign Currency Exposure: Current Position

Hedging Facilities for Residents

- March 1992: Residents in India were permitted to enter into a forward contract with an authorised dealer (AD) to hedge an exposure to exchange risk in respect of a transaction for which sale and/or purchase of foreign exchange is permitted subject to certain terms and conditions. Currently, forward contracts booked in respect of foreign currency exposures of residents falling due within one year may be freely cancelled and rebooked, among other stipulations.
- September 1996: Residents in India were permitted to enter into a foreign currency option contract with an AD in India to hedge foreign exchange exposure arising out of his trade, provided that in respect of cost effective risk reduction strategies like range forwards and ratio-range forwards, there is no net inflow of premium. Cross currency options should be written on a fully covered back-to-back basis. At present, the cover transaction may be undertaken with a bank outside India, an off-shore banking unit situated in a Special Economic Zone or an internationally recognised option exchange or another AD in India.
- April 1997: Residents who owe a foreign exchange or rupee liability, may enter into a contract for foreign currency-rupee swap with an AD in India to hedge long term exposure under certain terms and conditions.
- October 1997: Residents who have borrowed foreign exchange were permitted to enter into an interest rate swap or currency swap or coupon swap or foreign currency option or interest rate cap or collar (purchases) or forward rate agreement (FRA) contract with an AD in India or with a branch outside India of an AD for hedging loan exposure and unwinding from such hedges. The contract, however, should not involve the rupee and maturity of the hedge should not exceed the unexpired maturity of the underlying loan besides other conditions.
- September 1998: Residents in India, engaged in import and export trade, may hedge the price risk of all commodities except crude oil and petroleum products. Hedging of price risk on these products was also permitted with effect from September 2000 in the international commodity exchanges/ markets.
- April 2003: ADs were permitted to enter into forward contracts with residents in respect of transactions denominated in foreign currency but settled in Indian rupees. These contracts shall be held till maturity and cash settlement would be made on the maturity date by cancellation of the contracts.
- July 2003: Foreign currency-rupee options were introduced. ADs were permitted to offer the product on back to back basis or run an option book as per the specified terms and conditions.
- December 2003: Residents having overseas direct investments were permitted to hedge the exposure under certain terms and conditions.

Hedging Facilities for Authorised Dealers (ADs)

- January 1997: ADs were permitted to use certain instruments like interest rate swaps, currency swaps, and forward rate agreements to hedge their assets-liability portfolio based on appropriate policy as approved by their top management.
- April 1997: A beginning for rupee based derivatives was made in India and banks were permitted to offer dollar-rupee swaps to corporates to actively manage their foreign exchange exposures. Currently no limits are placed on the ADs for undertaking swaps to facilitate corporates to hedge their foreign exchange exposures; a limit of US $ 50 million per AD is, however, fixed for net supply in the market on account of swaps enabling corporates to move from rupee to foreign currency liability.
- October 1999: ADs may also purchase call or put options to hedge their cross currency proprietary trading positions. The value and maturity of the hedge should not exceed that of the underlying instrument.
- October 2002: Authorised banks were permitted to enter into forward contracts with their constituents (exporters of gold products, jewellery manufacturers, trading houses, *etc.*) in respect of the underlying sale, purchase and loan transactions in gold.
- November 2002: Banks, which are allowed to enter into forward gold contracts in India were allowed to cover their price risk by hedging abroad in a similar manner.
- November 2002: Foreign banks were allowed to hedge the entire Tier I capital held by them in Indian books. The capital funds should be available in India to meet local regulatory and CRAR requirements. The forward contract should be for tenor of one year or more and may be rolled over on maturity. Foreign banks were permitted to hedge their Tier II capital in the form of Head Office borrowing as subordinated debt, by keeping it swapped into Indian rupees at all times.

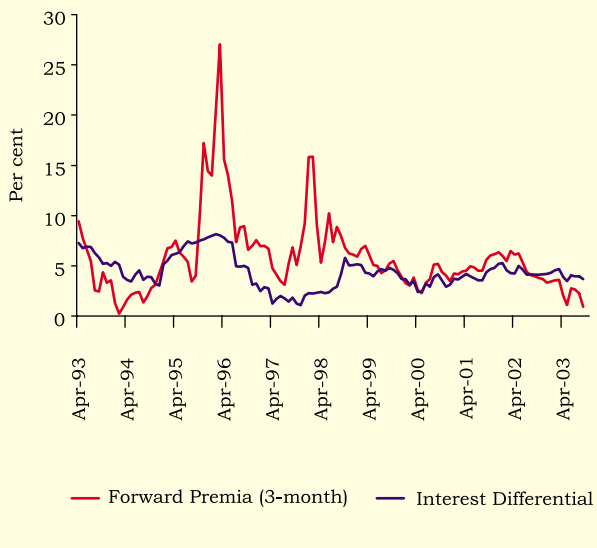
Hedging Facilities for Non-Residents

- October 1997: ADs were allowed to enter into forward/option contracts with NRIs to hedge (i) the amount of dividend due on shares held in an Indian company; (ii) the amount of investment made under portfolio scheme in accordance with the relevant provisions for the purpose; and (iii) the balances held in the Foreign Currency Non-Resident (FCNR) account or the Non-Resident External Rupee (NRE) account.
- November 2002: Earlier, designated branches of ADs maintaining accounts of FIIs could provide forward cover under certain terms and conditions and limits. Currently, ADs can provide forward/option contracts to FIIs with rupee as one of the currencies to such customers on the basis of their declaration of the market value of their entire investment in equity and/or debt in India as on a particular date. The cost of hedge is to be met out of repatriable funds and /or inward remittance through normal banking channel. If the hedge becomes naked, the hedge may be allowed to continue to the original maturity.
- October 2003: Earlier, entities with foreign direct investment in India had to approach the Reserve Bank for case by case approval to hedge their investment. This has now been delegated to ADs who may enter into forward/option contracts with residents outside India to hedge the foreign direct investments made in India subject to verification of the exposure in India. All foreign exchange derivative contracts permissible for a person resident outside India once cancelled, are not eligible to be rebooked.

Foreign Exchange Market Efficiency: Interest Parity Conditions

7.92 As noted above, a number of steps have been taken to develop the Indian foreign exchange market. These measures are expected to increase the foreign exchange market efficiency. In recent months, however, forward premia in India have trailed below the interest differentials, renewing interest in foreign exchange market efficiency (Chart VII.2). In an efficient speculative market, prices should fully reflect all available information, leaving no scope for excess returns from speculation. Foreign exchange market efficiency is usually examined through analysis of the twin parity conditions - covered and uncovered parity. According to covered interest parity (CIP) condition, forward premia/discount should equal interest rate differentials between home currency and foreign currency assets. According to uncovered interest parity (UIP) condition, the currency with a higher interest rate is expected to depreciate. The interest parity hypotheses are important from a policy perspective, especially in the context of the effectiveness of sterilised foreign exchange market intervention by central banks as well as that of interest rate defence of the exchange rate. Intervention as well as interest rate defence are effective only if there are policy-exploitable deviations from the UIP (Isard, 1995; Flood and Rose, 2002). Analysis of these parity conditions provides a measurement of the extent of the market integration and efficiency.

Chart VII.2 : Forward Premia



7.93 Available empirical evidence in regard to advanced economies suggests that CIP generally holds for assets of similar maturity and similar risk profile although profitable arbitrage opportunities appear for longer maturities (Sarno and Taylor, 2002). As regards UIP, empirical evidence overwhelmingly rejects UIP.[2] The failure of UIP has been attributed, *inter alia*, to a number of factors such as time-varying risk premium, deviations from rational expectations (since tests of UIP involve a joint test of efficient market hypothesis and rational expectations) and transaction costs. UIP failure could also be due to its implicit assumption that any variable affects exchange rate only indirectly through interest rates. In practice, many macroeconomic developments get reflected directly in exchange rates without appearing to affect interest rates and there is a need to augment the simple UIP with these macroeconomic determinants of the exchange rate (Wadhwani, 1999).

7.94 An empirical examination of these parity conditions for India is undertaken using monthly data over the period April 1993 to September 2003. The exercise focuses on 3-month forward premia. Interest differential between domestic and foreign interest rates is measured using instruments of comparable maturity and risk, *viz.*, 3-month Treasury bill yields for India and the US. As regards CIP, forward premia is found to be positively related to contemporaneous interest differential as expected.[3] Rolling estimates suggest that the coefficient on interest differential has been more stable in the recent 3-4 years indicative of growing integration with external markets (Chart VII.3).

7.95 The UIP is a joint hypothesis of rational expectations and market efficiency. In the absence of data on expected exchange rate, the usual approach

[2] The coefficient on interest rate differential is not only significantly less than the expected unity but also frequently negative; the negative coefficient suggests that increased interest differential will lead to an appreciation, contrary to the expected depreciation.

[3] FP = 1.66 + 0.96 INTDIF
(0.8) (1.9)*
$\bar{R}^2$ = 0.15 DW = 0.33
The figures in brackets are t-values; in view of moving average errors induced by the use of overlapping data, the standard errors are based on Newley-West corrections. * denotes significance at 10 per cent level. FP is 3-month forward premium; INTDIF is differential between yields on 3-month treasury bills in India and the US. Data are monthly averages. The *a priori* hypothesis of the coefficient being unity over the whole sample period cannot be rejected. The residuals are correlated, *i.e.,* fitted residuals themselves represent substantial arbitrage opportunities.

Chart VII.3 : Covered Interest Parity

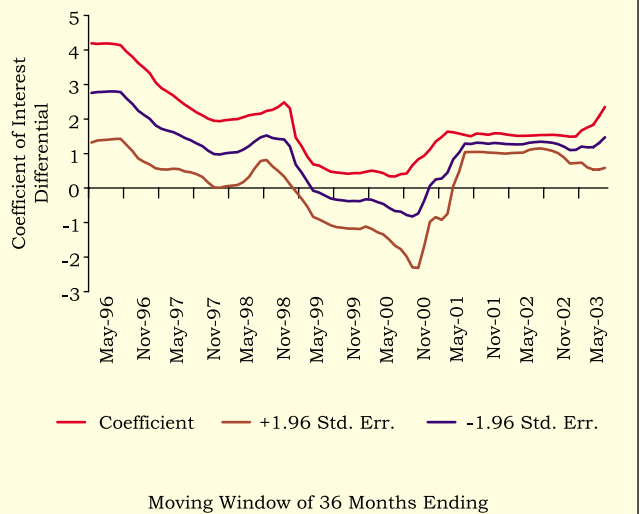
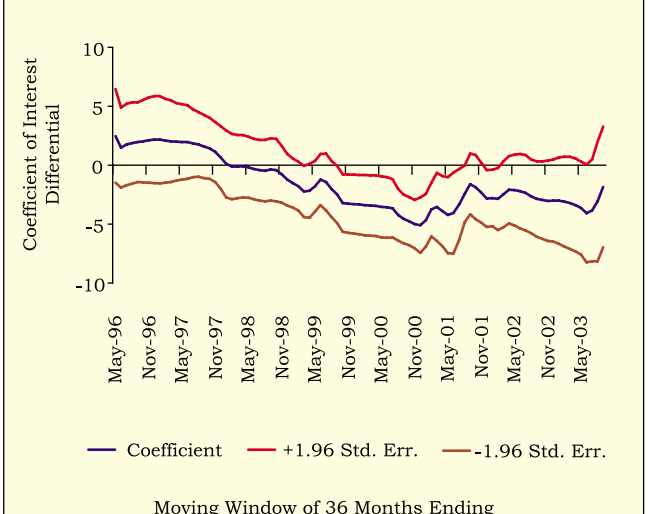


Chart VII.4 : Uncovered Interest Parity



is to assume that expectations are rational and the expected exchange rate is replaced by actual exchange rate. With actual exchange rate as the dependent variable, the coefficient of interest differential turns out to be positive but insignificant as against *a priori* expectations of unity.[4] The recursive estimates show that the point estimate is mostly negative and even statistically significant during some periods (Chart VII.4). This finding is in line with the overwhelming international evidence. The residuals in all the estimated equations turn out to be serially correlated, again indicative of market inefficiency. The failure to reject the null hypothesis could reflect the use of actual depreciation *vis-à-vis* expected depreciation as well as the endogeneity between interest rates and exchange rates. The results, however, do not change even when model-based expected exchange rate and instrument variables are used (Pattnaik, Kapur and Dhal, 2003). Broadly, the results are in line with the international evidence.

7.96 Another testable implication of UIP is that there should not be any systematic excess returns in an efficient foreign exchange market, *i.e.*, expected excess returns (interest rate differential less capital gains/losses from exchange rate movements) should be a white noise process. Over the sample period, the excess return measure is not statistically significant and is also found to be stationary. This indicates no systematic and predictable excess returns in the Indian foreign exchange market.

7.97 Overall, the empirical evidence shows that over the medium-term, forward premia and interest differentials move together; in the short-run, deviations from CIP arise due to demand-supply mismatches. In the Indian context, the measures that have been taken to enhance the depth of the foreign exchange market are expected to impart greater efficiency to the foreign exchange market by integrating domestic financial markets with international financial markets. Absence of sustained predictable excess returns supports market efficiency. Short-run deviations from UIP indicate that sterilised foreign exchange market intervention and monetary tightening can be effective in ensuring orderly conditions.

7.98 To sum up, the choice of an exchange rate regime is a complex issue. The weight of experience, however, seems to be clearly in favour of intermediate regimes with country-specific features with advocates of corner solutions on a decline. The choice of the

[4] DEXCH3 = 2.94 + 0.37 INTDIF{-3}
(0.6) (0.3)
$\bar{R}^2$ = -0.001 DW = 0.48
The figures in brackets are t-values, with standard errors based on Newley-West corrections. DEXCH3 is (annualised) depreciation of the Indian rupee *vis-à-vis* the US dollar; INTDIF is differential between yields on 3-month treasury bills in India and the US. Data are monthly averages. The weak explanatory power of the equation is a feature of the UIP literature (Wadhwani, 1999).

exchange rate regimes in developing countries reveals a preference for flexible exchange rates along with interventions to ensure orderly market activity, but without targeting any level of the exchange rate. It is also believed that reserves should at least be sufficient to take care of fluctuations in capital flows and liquidity at risk. This would act as a circuit breaker for situations when unidirectional expectations become self-fulfilling.

7.99 For the majority of developing countries, which are labour-intensive exporters, exchange rate volatility has had significant employment, output and distributional consequences, which can be large and persistent. India's exchange rate policy of focusing on managing volatility with no fixed rate target, while allowing the underlying demand and supply conditions to determine the exchange rate movements over a period in an orderly way, has stood the test of time. It needs to be recognised that most developing countries are engaged in the process of development and integration of financial markets. Consequently, signals from the market get blurred by the degree of management which is unavoidable in this transition.

III. EXTERNAL DEBT MANAGEMENT

7.100 The growing volume of international capital flows consequent upon capital account liberalisation has increased the vulnerability of economies, making it imperative to monitor the debt related indicators. Monitoring short-term debt along with debt of the private sector have been emphasised in the aftermath of the Asian crisis. It is increasingly felt that sound debt management practices that include risk management are necessary to avoid a build-up of unmanageable debt profiles. In its absence, the macroeconomic consequences and the output losses and costs of a sovereign default could be severe.

7.101 The build-up of debt in the developing countries during the 1970s emanating from the two oil shocks unfolded its effects in the 1980s with rise in interest rates. In the decade of 1990s, a series of financial crises in Mexico (1994), East Asia (1997), Brazil (1998), Russia (1998), Turkey (2001) and Argentina (2001) led to a reassessment of the policies towards management of external debt. The crises demonstrated that the major objective of sound debt management policy could be to achieve or maintain debt sustainability, while meeting key economic development goals. In order to assess the sustainability of debt, a number of parameters, *viz.*, the outstanding level of debt along with the nature of indebtedness of the country in terms of concessionality, maturity and share of public and private sector debt in total debt needs to be taken into account.

7.102 An analysis of the outstanding level of indebtedness of the top 15 debtor countries indicates that during the 1990s, external debt nearly trebled for Korea, China, Malaysia and Russian Federation and almost doubled for Argentina, Brazil, Chile, Colombia, Indonesia and Turkey. In Mexico and Poland, external debt during the same period rose by 52 and 28 per cent, respectively; in the case of India, the rise was modest at 18 per cent (World Bank, 2003) (Table 7.10).

7.103 Concessional debt as a percentage of total debt has declined sharply for almost all the 15 countries between 1980 and 2001 pointing towards increasing importance of external borrowings from private sources at commercial terms. Although the proportion of concessionality in India's debt has also declined, it still remains the highest among the top indebted nations. Most of the total external debt incurred by each of the top 15 debtor countries is public and public guaranteed debt (PPG). This is highest for India followed by Argentina and the Russian Federation. While the proportion of PPG to total debt has declined for most of the countries, it has increased for countries like Argentina and Philippines during the period 1980-2001 (Table 7.11).

Table 7.10: Total External Debt Outstanding

(US $ billion)

Country	1970	1980	1990	1997	1998	2000	2001
1	2	3	4	5	6	7	8
Argentina	5.8	27.2	62.2	128.4	141.5	145.9	136.7
Brazil	5.7	71.5	120.0	198.0	241.0	238.8	226.4
Chile	3.0	12.1	19.2	22.8	30.2	37.0	38.4
China	..	..	55.3	146.7	144.0	145.7	170.1
Colombia	2.2	6.9	17.2	31.9	33.1	33.9	36.7
India	**8.4**	**20.7**	**83.8**	**93.5**	**96.9**	**101.1**	**98.8**
Indonesia	4.5	20.9	69.9	136.2	151.2	144.1	135.7
Korea, Rep.	2.6	29.5	35.0	137.1	139.3	128.4	110.1
Malaysia	0.5	6.6	15.3	47.2	42.4	41.8	43.4
Mexico	7.0	57.4	104.4	148.7	159.9	158.5	158.3
Philippines	2.2	17.4	30.6	45.7	48.3	50.4	52.4
Poland	..	..	49.4	40.4	55.5	63.3	62.4
Russian Federation	..	..	59.3	128.1	178.3	160.1	152.6
Thailand	1.0	8.3	28.1	109.7	104.9	79.7	67.4
Turkey	2.7	19.1	49.4	84.8	97.1	118.3	115.1

.. : Not Available

Source: Global Development Finance, World Bank, 2003. For India, Reserve Bank of India.

Table 7.11: Nature of Indebtedness

(Per cent)

Country	Concessional to Total Debt Ratio				PPG@ to Total Debt			
	1980	1990	2000	2001	1980	1990	2000	2001
1	2	3	4	5	6	7	8	9
Argentina	1.3	0.8	1.2	1.0	37.5	75.3	77.1	75.1
Brazil	2.5	2.5	0.9	1.2	57.9	73.2	39.1	41.3
Chile	5.6	1.9	1.0	0.9	38.9	54.2	14.1	14.5
China	..	17.6	19.0	15.4	..	82.3	65.1	53.9
Colombia	14.2	5.7	2.8	2.4	58.9	85.2	61.3	59.3
India	**74.2**	**45.9**	**35.5**	**36.0**	**87.5**	**84.9**	**83.9**	**85.0**
Indonesia	36.4	26.4	21.0	20.7	71.7	68.7	48.2	50.4
Korea, Rep.	9.5	12.6	1.2	0.3	54.0	53.7	33.6	30.6
Malaysia	8.6	14.6	7.0	7.3	60.6	75.6	45.7	55.5
Mexico	0.5	0.8	0.7	0.7	59.1	72.7	56.6	54.5
Philippines	5.5	20.0	24.9	21.3	36.5	78.6	67.0	65.3
Poland	..	7.7	10.7	9.9	..	79.5	48.7	39.8
Russian Federation	..	0.0	0.0	0.0	..	80.1	69.4	66.8
Thailand	10.0	15.2	11.5	12.6	47.5	44.4	36.9	39.2
Turkey	20.4	15.1	4.3	3.5	78.6	78.6	48.5	48.6

@ : Public and publicly guaranteed debt. .. : Not Available

Source: Global Development Finance, World Bank, 2003. For India, Reserve Bank of India.

7.104 While indebtedness is useful as an indicator of the level of debt burden of a country, it is the debt servicing capacity of the country that is critical. It determines not only the country's ability to meet its debt obligations, but also its chance of default. Difficulties in servicing of debt may arise from liquidity as well as insolvency problems. Accordingly, the sustainable level for a country's external debt is determined in terms of a set of solvency and liquidity indicators.

7.105 From a national perspective, solvency can be defined as the country's ability to discharge its external obligations on a continuing basis. In order to remain solvent, the debtor country's economy in the first place must be able to do without an amount of domestic income and savings equivalent to the debt service. Second, the debtor country must be in a position to convert such segregated savings into the required foreign exchange. If the debt servicing is increasing, there must be an increase in both the capacity to save and the capacity to transfer savings. The analysis of debt servicing capacity of a country over time, therefore, requires an examination of the performance of debtor countries in generating income and savings and increasing foreign trade. Not surprisingly, ratio of external debt to exports, external debt to national income, debt service ratio and interest service ratio have evolved as some of the most common solvency indicators.

7.106 Debt to exports ratio can be measured as an indicator of solvency, since an increasing debt to exports ratio indicates that the country may have problems meeting its debt obligations in future. While for most of the Latin American countries, the ratio of total debt to current receipts has remained high during the 1990s, the ratio has declined sharply for countries like India, China, Mexico and Philippines indicating an improvement in debt-servicing capacity. Furthermore, the debt to national income ratio provides some indication of the potential to service external debt by switching resources from production of domestic goods to the production of exports. Although, India and China have maintained a low debt to output ratio, the same has been very high for many of the EMEs. Indonesia has the highest debt to output ratio followed by Turkey, Philippines, Thailand and Chile (Table 7.12).

7.107 In terms of other solvency indicators, the ratio of debt-service payments to exports of goods and services indicates how much of a country's export revenue will be used up in servicing its debt. The Latin American countries have very high debt service ratios,

Table 7.12: Solvency Indicators: Debt to Current Receipts and National Income Ratios

(Per cent)

Country	External Debt to Current Receipts Ratio@				External Debt to National Income Ratio			
	1980	1990	2000	2001	1980	1990	2000	2001
1	2	3	4	5	6	7	8	9
Argentina	242.4	373.7	377.6	373.7	35.6	46.0	52.7	52.5
Brazil	306.6	325.5	345.1	314.4	31.5	26.5	41.5	46.9
Chile	192.5	179.6	150.7	162.6	45.5	67.3	50.6	60.0
China	..	91.4	49.8	54.9	..	15.2	13.7	15.0
Colombia	117.1	181.0	187.9	210.6	20.9	45.1	42.2	46.2
India	**141.7**	**328.9**	**127.5**	**121.6**	**11.4**	**28.7**	**22.4**	**21.0**
Indonesia	..	233.9	194.0	205.9	28.0	64.0	102.0	97.2
Korea, Rep.	133.7	45.6	60.3	58.5	47.8	13.8	28.0	26.1
Malaysia	44.6	44.4	36.5	41.6	27.5	36.4	52.7	54.4
Mexico	232.4	191.4	82.2	85.5	30.4	41.1	28.0	26.2
Philippines	212.4	230.1	102.4	125.1	53.7	69.4	63.8	69.2
Poland	..	251.3	128.6	113.5	..	88.8	40.5	35.7
Russian Federation	..	..	133.1	128.0	..	10.3	64.3	50.9
Thailand	96.8	89.8	92.7	84.2	25.9	33.3	67.1	60.4
Turkey	333.1	196.1	202.0	205.7	26.6	32.5	58.9	78.8

@ : Current receipts include exports of goods and services (including workers' remittances). .. : Not Available.

Source : Global Development Finance, World Bank, 2003. For India, Reserve Bank of India.

reflecting heavy burden of amortisation and interest payments. The ratio became very high for India in the early 1990s, when its external debt became unsustainable and the country faced a severe balance of payments crisis. The debt service ratio for India has steadily improved thereafter. Furthermore, the ratio of average interest payments to export earnings indicates terms of external indebtedness and thus the debt burden. While this ratio has declined for most of the top 15 debtor countries since 1990 indicating thereby a reduction in the burden on interest payments, it has increased for countries like Argentina and Brazil reflecting stringent terms of debt contracts (Table 7.13).

7.108 Apart from the solvency factor, the other factor that has acquired greater bearing on debt servicing capacity of a country in the aftermath of the Asian financial crisis is the liquidity position of the country. Liquidity problems arise when there is a shortage of liquid assets to discharge immediate external obligations and could be independent of solvency problem. Liquidity problems can be triggered by a sharp drop in export earnings or an increase in interest rates or an increase in prices for imports. The currency and interest rate composition of debt, the maturity structure of debt, and the availability of assets to pay debts are all important determinants of the vulnerability of the economy to external liquidity crisis. The ratio of short term debt to total outstanding debt and the ratio of international reserves to short term debt

Table 7.13: Solvency Indicators: Debt and Interest Service Ratios

(Per cent)

	Debt Service Ratio				Interest Service Ratio			
Country	1980	1990	2000	2001	1980	1990	2000	2001
1	2	3	4	5	6	7	8	9
Argentina	37.3	37.0	70.8	66.3	20.8	16.3	30.1	29.9
Brazil	63.3	22.2	93.6	75.4	33.9	6.1	24.7	23.6
Chile	43.1	25.9	25.1	28.1	19.0	16.7	9.1	8.3
China	..	11.7	9.3	7.8	..	5.4	2.4	2.5
Colombia	16.0	40.9	28.3	36.1	11.6	17.9	12.2	15.3
India	**9.8**	**35.3**	**17.2**	**13.9**	**4.4**	**15.5**	**6.6**	**5.4**
Indonesia	..	33.3	22.5	23.6	..	13.3	9.9	8.9
Korea, Rep.	20.2	10.8	10.9	13.8	13.0	3.4	2.7	2.8
Malaysia	6.3	12.6	5.6	6.0	4.0	3.4	2.0	2.1
Mexico	44.4	20.7	30.3	26.1	24.6	13.4	7.0	6.9
Philippines	26.6	27.0	13.7	18.6	18.2	13.3	5.5	6.7
Poland	..	4.9	20.8	28.0	..	1.7	5.2	5.0
Russian Federation	..	..	9.8	14.5	..	..	4.7	6.6
Thailand	18.9	16.9	16.3	25.1	9.5	6.5	5.6	4.1
Turkey	28.0	29.4	35.4	40.0	14.9	13.5	11.7	11.1

.. : Not Available

Source : Global Development Finance, World Bank, 2003. For India, Reserve Bank of India.

Table 7.14: Liquidity Indicators: Short-Term Debt Ratios

(Per cent)

	Short-Term Debt to Total Debt Ratio				Short-Term Debt to Reserves@ Ratio			
Country	1980	1990	2000	2001	1980	1990	2000	2001
1	2	3	4	5	6	7	8	9
Argentina	38.2	16.8	19.4	14.6	154.5	228.1	112.6	137.4
Brazil	18.9	19.8	13.0	12.5	234.7	318.7	95.3	79.1
Chile	21.2	17.6	6.8	6.7	82.0	55.7	16.8	17.8
China	..	16.8	9.0	25.8	..	31.5	7.8	20.4
Colombia	33.7	8.4	8.5	10.2	48.4	31.1	32.2	36.8
India	**6.1**	**10.2**	**3.6**	**2.8**	**18.3**	**365.4**	**9.2**	**5.4**
Indonesia	13.3	15.9	15.7	16.1	51.5	149.3	79.4	80.0
Korea	35.8	30.9	31.5	31.9	361.1	73.0	42.1	34.2
Malaysia	20.5	12.4	11.1	11.8	30.9	19.5	15.7	16.7
Mexico	28.2	15.4	11.9	11.4	546.1	163.1	53.3	40.2
Philippines	43.4	14.5	11.8	11.6	265.5	479.1	45.6	45.0
Poland	..	19.4	11.2	11.2	..	213.6	26.7	27.2
Russian Federation	..	19.9	9.8	13.7	..	..	64.4	64.4
Thailand	27.8	29.6	18.7	19.6	147.6	62.6	46.5	40.9
Turkey	13.1	19.2	24.4	14.2	232.2	157.0	128.6	86.6

.. : Not Available @ : Excluding Gold

Source: Global Development Finance, World Bank, 2003. For India, Reserve Bank of India.

are the two most common indicators of liquidity. In 2001, both the ratios were the lowest for India (Table 7.14).

7.109 The East Asian crisis also highlighted the need for monitoring the level of private non-guaranteed (PNG) debt. Accurate data on PNG debt burden is important as it includes various financial instruments including inter-company loans, bonds, debentures and notes, money market instruments, financial derivatives, trade credits, loans for projects, financial leases, repurchase agreements, and foreign currency deposits held by non-residents. In the context of the East Asian countries, it has been argued that high levels of short-term debt owed by private financial institutions and non-financial corporations were directed into speculative activities, over-extended industries, over-ambitious infrastructure projects and inefficient government monopolies. There is, thus, an imperative need for monitoring various components of short-term debt, *viz*., (i) inter-company debt between direct investors and subsidiaries, branches and associates; (ii) buyers and suppliers credits; (iii) money market instruments; (iv) loans from foreign financial institutions for normal inter-bank transactions and other commercial purposes; and (v) foreign currency deposits held by residents. A cross-country comparison of the currency composition of long term debt suggests that most of the debt is invoiced in the US dollar (Table 7.15).

Table 7.15: Currency Composition of Long-Term Debt: 2001

(Per cent)

Country	US Dollar	Euro	Japanese Yen	Pound Sterling	Swiss Franc	Multiple currency	Special Drawing Rights	All other currencies
All developing countries	61.8	12.9	9.9	0.9	0.4	6.7	0.4	7.1
Argentina	67.2	25.2	4.1	0.4	0.4	2.7	0.0	0.0
Brazil	70.9	13.4	8.8	0.9	0.3	5.6	0.0	0.1
Chile	89.1	1.4	3.9	0.2	0.0	5.3	0.0	0.1
China	74.1	4.7	14.5	0.1	0.1	6.0	0.0	0.5
India	**70.4**	**5.6**	**11.2**	**3.6**	**0.3**	**8.0**	**0.3**	**0.6**
Indonesia	57.1	7.6	28.1	0.9	0.6	4.7	0.3	0.7
Malaysia	71.1	0.3	22.6	0.5	0.0	5.4	0.0	0.1
Mexico	89.3	1.1	5.8	0.2	0.0	3.2	0.0	0.4
Philippines	48.2	3.9	34.0	0.1	0.1	13.0	0.4	0.2
Thailand	48.5	1.7	44.2	0.1	0.0	5.3	0.0	0.3

Source : Global Development Finance, World Bank, 2003.

External Debt: An Indian Perspective

7.110 In the 1980s, with the increased requirement of external resources to finance the widening current account deficit and the decline in access to concessional sources of finance, India had taken recourse to commercial loans especially the short-term borrowings. Under exceptional circumstances, the country also accessed funding facilities from the IMF in the early 1980s. The growth of external debt was particularly noticeable during the second-half of the 1980s and the share of commercial debt in total external debt increased from 15 per cent in 1981 to 40 per cent in 1991. As a consequence of the increase in commercial debt, debt servicing as a proportion of current receipts increased from 10.2 per cent in 1980-81 to 35.3 per cent in 1990-91. The overhang of large external debt, particularly the short-term debt was one of the important triggering factors in the balance of payments crisis in 1991.

7.111 India, however, remained resolute not to default on its external obligations. Notwithstanding the downgrading of India's credit rating, conventional as well as unconventional ways were adopted to mobilise external finance (see para 7.72). The severe balance of payments crisis of 1990-91 necessitated a fresh look at the debt management strategy to evolve new guidelines. The approach to the external debt management that was adopted in India in the 1990s was based broadly on the recommendations of the Rangarajan Committee (1993). Following these recommendations, the strategy has been guided by: (i) the continuation of an annual cap, minimum maturity restrictions and prioritising the use of ECBs; (ii) LIBOR based ceilings on interest rates and minimum maturity requirements on NRI deposits to discourage the volatile component of such deposits; (iii) containment of short-term debt together with controls to prevent its undue increase in future; (iv) retiring/ restructuring/ refinancing of more expensive external debt; (v) measures to encourage non-debt creating financial flows such as foreign direct and portfolio investments; (vi) incentives and schemes to promote exports and other current receipts; and (vii) conscious build-up of foreign exchange reserves to provide effective insurance against external sector uncertainties.

7.112 An important aspect of external debt management in India since the 1990s has been control over short-term component. On a critical review of the policies on short-term debt and its role in precipitating the 1991 payments difficulties, the High Level Committee on Balance of Payments had noted that the problem was created by use of short term credit as a means of protecting foreign exchange reserves rather than financing trade requirements. The Committee provided the following policy guidelines for short-term debt in India: (i) short-term debt should be permitted only for trade related purposes under normal terms; (ii) recourse to short-term debt should not be taken as instrument for protecting the reserves; (iii) no roll over beyond six months should be agreed in regard to any short-term facilities without careful consideration of the implications; (iv) any short-term debt not governed by the above considerations should be specifically approved by the Reserve Bank; and (v) the Reserve Bank should set up a monitoring system for the stock of short-term debt.

7.113 The success of India's debt management policy is reflected in a gradual and steady improvement in the debt sustainability indicators during the 1990s (Table 7.16). While the ratio of concessional debt to total debt is the highest in India, the short-term debt as a per cent of total debt as well as foreign exchange reserves are the lowest for India among the top 15 debtor countries in the world. It is noteworthy that in terms of indebtedness classification, the World Bank has classified India as a less-indebted country since 1999.

7.114 The cautious approach to short-term debt in India has been vindicated during the crisis in East Asia. The need for compilation of short-term debt on residual/remaining maturity basis was also highlighted by the East Asian crisis. Even by residual maturity basis, India's short-term debt remains modest (Table 7.17).

Table 7.16: Indicators of Debt Sustainability for India

(Per cent)

Year	Solvency Indicators			Liquidity Indicators	
	DSR	ISR	DGDP	STD/TD	STD/FER
1	2	3	4	5	6
1990-91	35.3	15.5	28.7	10.2	146.5
1991-92	30.2	13.0	38.7	8.3	76.7
1992-93	27.5	12.5	37.5	7.0	64.5
1993-94	25.4	10.5	33.8	3.9	18.8
1994-95	26.2	9.7	30.8	4.3	16.9
1995-96	24.3	8.8	27.0	5.4	23.2
1996-97	21.2	7.3	24.5	7.2	25.5
1997-98	19.0	7.5	24.3	5.4	17.2
1998-99	17.8	7.8	23.6	4.4	13.2
1999-00	16.2	7.3	22.1	4.0	10.3
2000-01	17.2	6.6	22.4	3.6	8.6
2001-02	13.9	5.4	21.0	2.8	5.1
2002-03	14.7	4.1	20.3	4.4	6.1

Note : DSR = Debt Service Ratio
ISR = Interest Service Ratio
DGDP = Debt to Gross Domestic Product Ratio
STD = Short-Term Debt
TD = Total Debt
FER = Foreign Exchange Reserves.
Source : Reserve Bank of India

Table 7.18: External Indebtedness of India (Debt Outstanding in US $ billion)

End-March	Multil-ateral	Bilat-eral	IMF	Trade Credit	ECB	NRI	Rupee Debt	STD	Total
1	2	3	4	5	6	7	8	9	10
1989-90	19.2	13.6	1.5	4.7	9.3	9.1	11.0	7.5	75.9
1990-91	20.9	14.2	2.6	4.3	10.2	10.2	12.8	8.5	83.8
1991-92	23.1	15.5	3.5	4.0	11.7	10.1	10.4	7.1	85.3
1992-93	25.0	16.2	4.8	4.3	11.6	11.1	10.6	6.3	90.0
1993-94	26.3	17.5	5.0	5.2	12.4	12.7	10.1	3.6	92.7
1994-95	28.5	20.3	4.3	6.6	13.0	12.4	9.6	4.3	99.0
1995-96	28.6	19.2	2.4	5.4	13.9	11.0	8.2	5.0	93.7
1996-97	29.2	17.5	1.3	5.9	14.3	11.0	7.5	6.7	93.5
1997-98	29.6	17.0	0.7	6.5	17.0	11.9	5.9	5.0	93.5
1998-99	30.5	17.5	0.3	6.8	21.0	11.8	4.7	4.3	96.9
1999-00	31.4	18.2	0.03	6.8	19.9	13.6	4.4	3.9	98.3
2000-01	31.1	16.0	0.0	5.9	24.2	16.6	3.7	3.6	101.1
2001-02	31.9	15.3	0.0	5.4	23.3	17.2	3.0	2.7	98.8
2002-03	30.0	16.8	0.0	5.0	22.4	23.2	2.8	4.6	104.7

Note : ECB = External Commercial Borrowings;
NRI = Non-resident Indian Deposits;
STD = Short-Term Debt;
IMF = International Monetary Fund.
Source : Reserve Bank of India

7.115 In India, multilateral and bilateral debt constitute the largest component of external debt. Apart from multilateral and bilateral debt, external commercial borrowings and NRI deposits are the other two major components in India's total external debt (Table 7.18).

7.116 Four basic facts emerge from the changing profile of India's external debt. First, the level of debt has been relatively stable in the last decade, showing only a modest increase. Second, the debt portfolio is characterised by high share of concessional and low share of short-term debt. Third, there has been a sustained improvement in key indicators of external indebtedness position of the country. Finally, compared to other emerging economies, India's indebtedness position is relatively comfortable and has improved over time.

Table 7.17: India's Short Term External Debt by Residual Maturity

(US $ million)

Item	1998	1999	2000	2001	2002
1	2	3	4	5	6
1. Short-term debt by original maturity	5,046 (5.4)	4,274 (4.4)	3,936 (4.0)	3,628 (3.6)	2,745 (2.8)
2. Long-term debt obligation maturing within one year	6,723 (7.2)	7,059 (7.3)	8,359 (8.5)	6,767 (6.7)	11,465 (11.6)
3. Short-term debt by residual maturity (1+2)	11,769 (12.6)	11,333 (11.7)	12,295 (12.5)	10,395 (10.3)	14,210 (14.4)

Note : Figures in the bracket represent per cent to total external debt.
Source : India's External Debt: A Status Report, June 2003.

7.117 A perceptible improvement in overall debt scenario has been brought out in India by policy reforms incorporating, *inter alia*, the management of current account deficit within sustainable limits; a distinct shift in the policy preference in favour of equity as against debt in the matter of capital inflows; and tight monitoring of short-term flows which are permitted only for trade related purposes. Moreover, the market determined exchange rate has helped in avoiding the excessive risk-taking that occurred in some of the East Asian countries which followed a policy of either a fixed or a predictable exchange rate regime. A transparent policy on external commercial borrowings with the stated objectives of prudent debt management aimed at lengthening of maturity while keeping a ceiling on approvals and

restrictions on end-use in the form of investments in stock markets/real estate turned out to be useful. This, combined with the policy efforts aimed at achieving a commensurate growth in current receipts to service the existing debt also helped in the management of external debt.

IV. CONCLUDING OBSERVATIONS

7.118 The level of foreign exchange reserves held by any country is really a consequence of the exchange rate policy being pursued. The accumulation of reserves is also a reflection of imbalances in the current account in some countries. Based on various indicators of the adequacy of reserve, India's reserves holdings are comfortable. The Asian financial crisis not only highlighted the need for maintaining adequate level of foreign exchange reserves, but also underlined the need for prudent management of a country's reserves assets. Sound practices in the areas of risk management and liquidity management have attracted increased emphasis in recent times. Benchmarking the reserve management practices followed in India against some of the major countries reveals that the reserve management operations in India are comparable to major reserve holding countries.

7.119 Conventionally, trade flows were deemed to be the key determinants of exchange rate movements. In more recent times, the importance of capital flows in determining the day-to-day exchange rate movements has increased considerably. Capital flows have been observed to cause overshooting of exchange rates as market participants act in concert with pricing information. Capital flows have implications for the conduct of domestic monetary policy and exchange rate management. The important message that comes out from the analysis of various episodes of volatility and the policy response is that flexibility and pragmatism are needed in exchange rate policy in developing countries, rather than adherence to strict theoretical rules. There is a need for central banks to keep instruments/policies in hand for use in difficult situations.

7.120 In the face of large capital flows, considerations of maintaining a competitive exchange rate, on the one hand, and controlling inflation, on the other, create conflicting objectives for a central bank. In such situations, central banks need to take a very cautious path while handling large capital inflows and the promptness of the central bank could be judged by effectiveness with which it resolves such conflicting policy objectives without any loss of inflows while keeping inflation within manageable limits. India's exchange rate policy with focus on managing volatility with no fixed rate target while allowing the underlying demand and supply conditions to determine the exchange rate movements over a period in an orderly way has stood the test of time.

7.121 Central banks all over the world are concerned over development of markets in order to allow market participants to manage their own risk - micro risks. As the market develops, the concern of the central bank is limited to manage the macro risk. Over the last few years, several measures have been taken to deepen and widen the foreign exchange market in India so as to provide the market participants the necessary support to undertake foreign exchange transactions with reduced uncertainty. The empirical evidence shows that over the medium-term, forward premia and interest differentials in India move together. Short-run deviations from uncovered interest parity condition indicate that sterilised foreign exchange market intervention and monetary tightening can be effective in ensuring orderly conditions.

7.122 The improvement in India's external debt position since 1991-92 is attributable to a conscious debt management policy that focussed on high growth rate of current receipts, keeping the maturity structure as well as the total amount of commercial debt under manageable limits, limiting short-term debt and encouraging non-debt creating flows. The strategy that was actively put in place in the early 1990s has paid dividends to sustained improvement in external indebtedness position of the country.

VIII APPROACH TO CAPITAL ACCOUNT CONVERTIBILITY

Introduction

8.1 The decade of the 1990s witnessed a spate of financial crises in several countries across the world with risks emanating mainly from the capital account of balance of payments. Consequently, the capital account has come to receive increasing attention in policymaking. The crises of the 1990s underscored the inadequacy of erstwhile theories in explaining the sharp volatility in capital flows. The benefits and costs of an open capital account appear more ambiguous now than what many researchers and policy makers had perceived earlier. Moreover, the international financial community is hard put to provide a conclusive set of prescriptions for containing the ill-effects of such capital movements, particularly during episodes of sudden reversal in flows. The debate assumes a critical dimension in respect of developing countries and emerging market economies (EMEs). While these economies can potentially benefit enormously from larger volumes of capital inflows, their relatively shallow and underdeveloped institutions render them more vulnerable to crises as compared with the developed economies.

8.2 The lessons from the East Asian and other financial crises of 1990s have brought about a marked shift in the approach towards capital account liberalisation, particularly among developing countries. Countries are less confident today of the conventional wisdom which maintained that trade flows were the key determinants of exchange rate movements. The long-standing assumption that the case for liberalising capital account transactions is analogous to that for liberalising trade is being increasingly called into question (Bhagwati, 1998). In more recent times, with the tail of mobile capital accounts wagging the dog of the balance of payments, the importance of capital flows in determining the exchange rate movements has increased considerably, rendering some of the earlier guideposts of monetary policy formulation possibly anachronistic (Mohan, 2003). On a day-to-day basis, it is capital flows rather than trade flows which influence the exchange rate and interest rate arithmetic of the financial markets. Thus, instead of the real factors underlying trade competitiveness, it is expectations and reactions to news which drive capital flows and exchange rates, often out of alignment with fundamentals. Unregulated capital flows in some instances have been subject to destabilising speculation, thereby imposing a burden on the real economy. It is well recognised now that although global capital flows have a potential for improving efficiency and growth prospects, they also can trigger instability, due to a variety of reasons (Reddy, 2000a).

8.3 The East Asian crisis of 1997 amply demonstrated the need to proceed with caution in opening the capital account. Not surprisingly, the pace and content of opening up of the capital account has slowed down in many EMEs with a view to limiting their vulnerability to crises. It has been recognised that capital account liberalisation needs to be undertaken as an integral part of macroeconomic and structural reforms and be synchronised with appropriate macroeconomic, exchange rate and financial sector policies. The issue relates as much to the sequence of reforms as to their speed. It is argued that a combination of sound macroeconomic policies, a well-regulated financial system and restrictions on short-term speculative flows is likely to create a system wherein the benefits of external capital could be reaped without its adverse effects (Jadhav, 1999; Rangarajan and Prasad, 1999).

8.4 In India, capital account liberalisation is treated as a process rather than an event (Reddy, 2000a). India adopted a cautious approach while initiating a process of gradual capital account liberalisation in the early 1990s. The Report of the Committee on Capital Account Convertibility (Chairman: S.S. Tarapore) provided the framework for liberalisation of capital account and served as the basis for undertaking further liberalisation during the late 1990s. Initial reform measures on the heels of the balance of payments crisis in 1991 were predominantly directed at current account convertibility leading to acceptance of obligations under Article VIII of the International Monetary Fund's (IMF) Articles of Agreement by August 1994. Subsequently, policies in regard to foreign direct investment (FDI), portfolio investment and long-term commercial borrowings were progressively liberalised. With growing consolidation of the external sector, restrictions on outflows have also been liberalised over time. There are, however, two areas, where extreme caution is advocated, *viz.,* (i) unlimited access to short-term external commercial

borrowing for meeting working capital and other domestic requirements; and (ii) unrestricted freedom to domestic residents to convert their domestic bank deposits and idle assets (such as, real estate) in response to market developments or exchange rate expectations (Jalan, 2003). The policy challenges for India arising from the opening of the capital account broadly fall under two categories: (i) management of the surges in capital flows; and (ii) entrenchment of preconditions that could create room for further liberalisation of the capital account (Jadhav, 2003).

8.5 Against this backdrop, the Chapter is organised in six Sections. Section I delineates, in brief, movements in international capital flows and discusses the associated problems of volatility and contagion, which define the negative aspect of capital flows. Section II presents a theoretical perspective on the costs and benefits of capital account liberalisation. Country experiences with the imposition and withdrawal of capital controls are discussed in Section III with focus on four broad groups of countries which applied/withdrew capital controls under various circumstances. The general motives and design for imposition of capital controls are also analysed. Section IV discusses the approaches of the multilateral institutions like the IMF, the World Bank, the OECD and the European Union to capital account liberalisation. In Section V, the Indian experience with capital account liberalisation is covered with special reference to the recommendations of the Committee on Capital Account Convertibility. The final Section presents some concluding observations.

I. VOLATILITY OF CAPITAL FLOWS AND CONTAGION

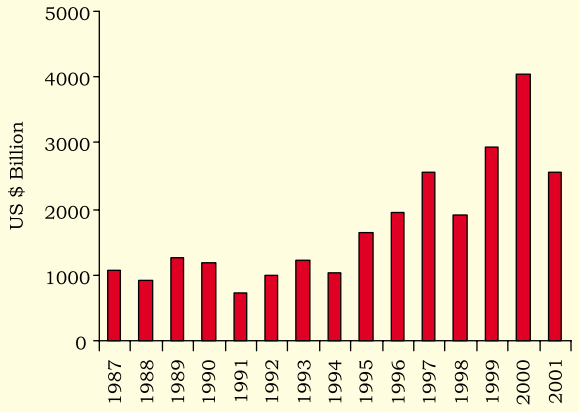
8.6 The history of capital flows in the last four decades reveals well-defined periods of booms and reversals. EMEs experienced a dramatic surge in capital inflows in the 1970s. The oil shock of 1973-74, growth of the Eurodollar market and a sharp increase in bank lending during 1979-81 all contributed to this spurt. Latin America was the primary recipient of these inflows. The composition of capital flows during this period was dominated by syndicated bank loans. The flow of international lending, however, came to an abrupt end in 1982 with a sharp increase in world interest rates and a severe debt crisis in several Latin American countries. The late 1980s saw a revival in capital flows to EMEs led again by Latin America. This time round, an increasing volume of inflows also found their way to Asia. The composition of capital flows also underwent a change with FDI and portfolio investment replacing bank lending. Bank lending to both Asia and Latin America declined from 70 per cent of net private capital flows in the 1970s to about 20 per cent in the 1990s (Kaminsky, 2003).

8.7 During the 1980s and the 1990s, several developing countries in Asia undertook capital account liberalisation as part of unilateral financial deregulation, often in the face of large external surpluses. In general, the period from the mid-1980s to mid-1990s was characterised by removal of official restrictions on financial markets and wider market-oriented reforms in both mature and EMEs (Mohan, 2003). These developments have had the effect of further strengthening the capital flows which increased substantially at the global level (Chart VIII.1).

8.8 The early 1990s experienced capital flow boom again, followed by the reversal of such flows especially in the second half of the 1990s. The first reversal occurred in the aftermath of Mexico's currency crisis in December 1994. It was, however, limited to some Latin American economies and capital flows resumed soon after. The second reversal, which was more severe and enduring, came in 1997 and resulted in the East Asian crisis. This was aggravated by the Russian default in August 1998 and the Brazilian crisis in 1998-99, followed more recently by the collapse of the Argentine currency board peg in 2001 and the spate of corporate failures and accounting irregularities in the USA in 2002.

8.9 The reversal of short-term flows was especially "brutal" with such flows to Asia declining from net inflows

Chart VIII.1 : Global Capital Flows



Note: Data denote gross inflows under financial account of the balance of payments.

Source: Balance of Payments Statistics Yearbook, IMF (various issues).

of US $ 69 billion in 1996 to net outflow of US $ 104 billion in 1997. Net flows to developing countries declined almost continuously after 1997. The fall was particularly sharp in the form of bank lending and bonds, reflecting uncertainty and risk aversion. In 2002, net capital flows fell again, remaining far below the 1997 peak. Flows to Latin America reached their lowest level in a decade. Flows to Asia began a hesitant recovery with new bank lending exceeding repayments for the first time in five years. Global FDI inflows, down by 41 per cent in 2001, fell by another 21 per cent in 2002, attributable to weak economic growth, large sell-offs in equity markets, and a plunge in cross-border mergers and acquisitions. Flows to Asia were less badly affected primarily on account of large FDI flows into China. The overall capital flows to all emerging market economies are yet to assume their pre-reversal volumes (Kaminsky, 2003).

8.10 In the final analysis, the heightened exchange rate volatility of the era of capital flows has had adverse implications for all countries except the reserve currency economies. The latter have been experiencing exchange rate movements which are not in alignment with their macro imbalances and the danger of persisting currency misalignments looms large over all non-reserve currency economies (Mohan, 2003).

8.11 Against this background, it would be useful to take a closer look at the recent upheavals in the East Asia. Large and volatile capital flows combined with sharp increases in current account deficits of the crisis economies (from 2 per cent of GDP in 1993 to over 5 per cent of GDP in 1996), played a significant role in the East Asian crisis. In some cases, notably in Malaysia and Thailand, current account imbalances became extremely severe, rising to 8-10 per cent of GDP. This increase in current account deficit was partly triggered by significant appreciation of real exchange rates of several East Asian economies by 10-20 per cent during 1994-97. The real appreciation in the exchange rates was mainly because of stable nominal exchange rates, higher domestic inflation as compared with world averages, rise in the US dollar against other major currencies and to some extent, devaluation of the Chinese yuan by around 32 per cent in 1994. Obviously, the increased current account deficit was financed by huge capital inflows from abroad, which also went on to increase the reserves of these countries. Once the surge of capital inflows into these economies began to build up, there followed a rampant increase in domestic asset prices (in typical "bubble" fashion), which induced further capital inflows. This led to further real appreciation of their currencies. Eventually, current account deficits deteriorated sharply, leading to a hard landing (IMF, 1998).

8.12 The fragile banking sector had the effect of building up of huge net foreign liabilities. The vulnerabilities of banking sector were twofold, both of which were linked to the behaviour of capital inflows. A withdrawal of capital inflows led to currency devaluation, which inflated the value of foreign currency liabilities of the banks. At the same time, reversal of capital inflows led to collapse of the real estate and equity prices, thus undermining the collateral which was the backing of the banks' assets. This vicious double squeeze was the main problem leading to the crisis in the banking sector (Reddy, 1998).

8.13 To add to the problems of external sector, the process of financial sector vulnerability began to unfold during the crisis period. The freeing up of financial system along with the capital controls coupled with high domestic interest rates gave the incentive to take cheap foreign currency loans. The tendency was exacerbated by low to non-existent perceived foreign currency risk, as the exchange rate of most of the currencies remained largely stable between 1993 and 1996. Relying on a stable currency over the years, the market participants had not hedged their currency exposures. With significant depreciation, these loans had suddenly become expensive to repay, which had hit corporate balance sheets and added to the risk of defaults in payments. This was aggravated further by the hardening of interest rates. The exposure of the banking system and the non-banking financial sector to these external liabilities with a concentration towards short-term maturities particularly when the financial health of such economies was in bad shape led to further deterioration in the situation (Reddy, 1998).

8.14 The experience of the Asian crisis, thus, reveals that large and volatile capital flows may lead to overshooting of exchange rates, often out of alignment with the fundamentals. Such volatility imposes substantial risks on market agents, who may not be able to sustain or manage such risks. Furthermore, financial markets, driven by the massive cross-border capital flows and the information technology revolution, immediately transfer the valuation of risks associated with uncertainty across the globe and this can lead to contagion. Indeed, global interdependence is marked by common shocks and a "confidence channel" rapidly transmits these shocks to various parts of the world (Mohan, 2003). In such circumstances, the key issue under consideration of the monetary authority is to determine whether the capital inflows are of a

permanent and sustainable nature or whether such inflows are temporary and subject to reversal. In practice, this determination is difficult to achieve. Since external capital flows cannot be easily predicted and can reverse even in the presence of sound fundamentals, management of capital account involves control, regulation and gradual liberalisation. Gradualism in liberalisation implies that the mix between regulated and liberalised capital transactions keeps changing gradually in favour of the latter (Reddy, 2000a).

8.15 While controls may be potentially inefficient, there is considerable merit in using a regulatory mechanism for moderating the ebb and flow in capital movements. In regard to the dynamics of control or regulation *vis-à-vis* liberalisation, it is clear that a workable framework appropriate to each country is necessary. The more important aspect of management of capital account is the flexibility available in the framework to progressively liberalise the capital account transactions, depending on the domestic and international developments. At the same time, such flexibility could permit quick responses to changes in magnitudes, direction and composition of flows that may appear to be inappropriate to the circumstances. This flexibility in operations may, for success, warrant complementarity with other policies. Finally, there may be a case for retaining the freedom to re-impose controls or tighten regulations as long as the vulnerability to highly speculative or motivated attack on the currency exists, since market corrections may be more destabilising to the economy. Thus, it may be wise, even with a liberalised capital account to retain an option to impose controls or tighten regulations (Reddy, 2000a).

8.16 There is certainly an implicit recognition that the net benefits from liberalisation of capital account in respect of any developing country would be enhanced if certain complementary policies are followed. Strengthening the banking system, diversifying financial intermediation through both banks and non-banks, and developing as well as regulating financial markets in a sound manner are some of the primary prerequisites of capital accounts liberalisation. Second, the regulatory practices and the co-ordination between regulators at the national level and among the national level regulators at the international level are also attracting attention. Third, monitoring the balance sheets of large banks, large corporates and even governments in terms of their growth, quality and vulnerability to shocks is considered important. This monitoring may have to cover stocks and flows, as also foreign currency exposures, hedged or unhedged, and direct or indirect. Fourth, there is a fiscal burden in case there are systemic problems, especially in banking sector, irrespective of whether banking is in public or private sector. The health of banking sector is critical for many reasons, one of them being stability in external sector (Reddy, 2000a).

8.17 In India, it is recognised that the pace of liberalisation of the capital account would depend on both domestic factors (especially progress in the financial sector reform), and the evolving international financial architecture. The regulatory framework is being used in several combinations to address problems of excessive inflows and pressures towards outflows. In this regard, an integrated view of the state of development of activities in financial markets needs to be taken. The activity in foreign exchange markets and its linkages with other markets, including money market, debt market (especially government securities market), and equity markets have to be identified and monitored while managing capital flows. Recognition of such linkages, monitoring the developments, and willingness to intervene credibly in any or all of these markets, as appropriate, may be essential. As each of the financial markets develops and gets integrated with others, measures to increasingly liberalise the capital account could be considered. Indeed, it is possible to argue that liberalisation of the capital account would aid the process of development of financial markets, but this is valid only when some informed judgements are made in respect of each country on the interactions between the management of capital account and the financial markets. In any case, capital control or regulatory framework of liberalisation would be ineffective or unstable in the absence of proper appreciation of such linkages among financial markets.

II. THEORETICAL PERSPECTIVES ON COSTS AND BENEFITS OF CAPITAL ACCOUNT LIBERALISATION

8.18 Capital account liberalisation essentially provides freedom from prohibitions on transactions in the capital and financial accounts of the balance of payments. The role of capital flows was integrated into traditional macroeconomics by Fleming and Mundell spelling out the requirement of balance in the external sector of an economy for equilibrium to be attained. This was formalised with the inclusion of a BP (balance of payments) curve in the erstwhile IS-LM framework. A corollary of the Fleming and Mundell model was what has come to be known as the “impossible trinity”- the idea that free capital

mobility, fixed exchange rates and independence in monetary policy cannot coexist (Mundell, 1963). Sterilisation in various degrees and a managed float, however, are two instruments which allow policy makers a certain degree of manoeuvrability in this respect. The third way out of the trilemma is offered by regulating the extent of capital mobility through the use of capital controls. The debate on capital account liberalisation, however, extends much beyond the impossible trinity as free capital flows have numerous direct and indirect effects not captured within any single model.

Costs and Benefits of Capital Account Liberalisation

8.19 There are some differences of opinion as to whether liberalisation of capital account would necessarily add to growth prospects of the developing countries. There are nevertheless, several developments in regard to international trade in goods and services, international business, technology and cross border flows of capital that would necessitate a more active management of capital account, with a view to continuously assess the costs and benefits of liberalisation *vis-à-vis* control or regulation (Reddy, 2000a).

8.20 The origins of the theoretical controversy over the benefits of capital account liberalisation can be traced to the basic question – are financial markets predominantly efficient or do information asymmetries and real sector rigidities render them irredeemably, or at least in large measure, inefficient? Proponents of the efficient markets hypothesis argue that an open capital account could bring with it greater financial efficiency, specialisation and innovation by exposing the financial sector to global competition.

8.21 Gruben and McLeod (2001) found that greater financial openness across a large number of countries and the significant decline in global inflation could contribute to higher growth. Capital account liberalisation could, in combination with other policies, play a significant role in the take-off of less developed countries, and to the extent that it does, it would have large benefits (Gourinchas and Jeanne, 2002). Developing countries need external capital to sustain an excess of investment over domestic saving and an open capital account could attract foreign capital. Residents get the opportunity to base their investment and consumption decisions on world interest rates and world prices for tradables which could enhance their welfare. By setting prices right, an open capital account enables aggregate savings and investments to be optimised, leading to both allocative efficiency and competitive discipline. Capital flows permit nations to trade consumption today for consumption in the future to engage in inter-temporal trade (Eichengreen *et al.*, 1999). Again, by offering the opportunity of using the world market to diversify portfolios, an open capital account permits both savers and investors to protect the real value of their assets through risk reduction. On the other hand, capital controls could encourage hidden capital flight and/or diversion of savings into real assets and gold, leading to sub-optimal use of internal resources.

8.22 In the neo-classical framework capital flows contribute to growth primarily by supplementing domestic savings. In the endogenous growth framework, the contributions to growth attributed to capital flows comprise the spillovers associated with foreign capital in the form of technology, skills, and introduction of new products as well as positive externalities in terms of higher efficiency of domestic financial markets resulting in improved resource allocation and efficient financial intermediation by domestic financial institutions. Since the spillovers and externalities associated with different forms of foreign capital could vary, a pecking order approach to the composition of capital flows is often pursued by prioritising the capital flows based on the growth-enhancing role of each form of capital.

8.23 Several arguments, on the other hand, are put forward against the liberalisation of the capital account, *viz.,* potential macroeconomic instability arising from the volatility of short-term capital movements; the risk of large capital outflows and associated negative externalities; export of domestic savings from capital scarce developing countries; and weakening the ability of authorities to tax domestic financial activities, income and wealth. There is also the potential risk of the "Dutch disease effect" due to large capital inflows and appreciating real exchange rate diverting resources from tradable to non-tradable sectors in the face of rising external liabilities. Inefficient financial markets with asymmetric information could also lead to risk of financial bubbles. Besides, premature liberalisation could lead to currency substitution and capital flight, balance of payments crises, depreciation and inflation. It is argued that monetary contraction not only slows economic activity through the normal interest channels, but also can threaten the health of the economy through the banking system (Kaminsky and Reinhart, 1999). Although financial globalisation can, in theory, help to promote economic growth through various channels, there is as yet no robust empirical evidence that financial integration helps developing countries to improve growth rates and reduce macroeconomic volatility (Prasad *et al.*, 2003).

8.24 The growing global macroeconomic imbalance – as evidenced by the large and sustained current account deficit of the US – suggests that markets may at times allocate global saving differently from what is perceived by the policy makers as appropriate and sustainable in the long-run. Like the effect on resource allocation, the beneficial effects of capital account liberalisation on growth are ambiguous. There is no evidence that countries without capital controls have grown faster, invested more, or experienced lower inflation (Rodrik, 1998).

8.25 Unlike the ambiguity surrounding the resource allocation argument, there is greater unanimity on the point that open capital account exerts pressures to discipline domestic macro-economic and financial environment. Disciplinary effects of an open capital account on the fiscal deficit suggest that complete freedom for outward capital mobility could be associated with a reduction in the budget deficit (Kim, 1999). Gourinchas and Jeanne (2002) emphasised that many EMEs may benefit from the discipline effect rather than the conventional resource allocation effect. If the benefits of capital market liberalisation are smaller for the poorest countries than for the middle income countries, the same is probably also true of the costs (Gilbert *et al.,* 2000).

8.26 Furthermore, controls on outflows are viewed by markets as an additional risk factor, and their prolonged use has often been associated with capital flight. Fischer (1998) insisted that currency controls, no matter how well executed, impose distortions on the economy and the longer they are in place, the more serious they tend to get. Another fact that weighs against capital controls relates to their efficacy. Capital controls are not very effective, particularly when the current account is convertible, as current account transactions create channels for disguised capital flows. Capital controls intend to insulate domestic financial conditions from external financial developments. The influence of external financial conditions, however, has been increasing over the years even in countries with extensive capital controls. As the costs of evading the controls have declined and the attractiveness of holding assets in offshore markets have increased, capital controls are increasingly becoming ineffective. As per the squeezing on a balloon argument, capital being fungible, restrictions on one form of capital and not on others would quickly lead to displacement of flows to the uncontrolled segment (Quirk and Evans, 1995).

8.27 In the aftermath of the Asian crisis, there has, however, been an increasing clamour for reimposing capital controls. Controls on outflows could be broadly classified into preventive controls and curative controls. While the former intend to prevent balance of payments crises, the latter could be applied as a means to manage a crisis (as in the case of Malaysia). A review of the empirical studies on the effectiveness of both variants of control suggests that in almost 70 per cent of the cases where the controls on outflows were used as a preventive measure, a large increase in capital flight was observed after their imposition (Yoshitomi and Shirai, 2000). The support for using curative control came from Krugman (1998) who suggested temporary use of controls amidst a crisis to avoid the adverse effects of a high interest rate defence of the exchange rate. Krugman justified temporary capital controls on the ground that the costs of any resulting distortions were likely to be lower than the alternative costs to the economy on account of higher interest rates and economic slump. The qualifications to this argument were fourfold, *viz.,* (i) controls should disrupt ordinary business as little as possible; (ii) controls must be used as a temporary measure as distortions associated with controls tend to grow over time; (iii) controls may cause the greatest damage when the intention is to defend an overvalued exchange rate; and (iv) controls must aid reforms and they should not be viewed as an alternative to reform. Bhagwati (1998) asserted that full capital mobility was not a necessary condition for free trade. He advocated capital controls as a stop gap measure as part of the solution for Asia on grounds that it allowed these countries to adopt more expansionary monetary and fiscal policies and hence promoted a faster recovery of the real economy. Such a recovery could be expected to reduce the problems of insolvency and closure in the corporate sector and non-performing loans in the banking system. Stiglitz (1998) contended that the cost of disruption due to swings in expectations is invariably high for developing countries. Thus, there exists a case for more direct intervention in less sophisticated economies. Given the nature of international financial transactions, developing countries ought to give themselves as much freedom as they can to place prudential controls on the more volatile forms of capital movements, in particular, portfolio capital and short-term flows (Agosin, 1998). Gilbert, Irwin and Vines (2000) felt that, "within a cost-benefit framework, the benefits are seen as more modest than had previously been supposed, while the Asian crisis has increased our estimates of the potential costs of liberalisation".

8.28 While no conclusive end to the debate appears to be in sight, there is a general consensus that the case for capital account convertibility would rest on the circumstances and economic conditions specific to a

country as also the extent of development of its markets and institutions. In the absence of an all-or-nothing case for or against capital account convertibility, several countries have experimented with various types of capital controls in different situations. The experiences of these countries provide useful lessons for theorists and policymakers alike.

III. COUNTRY EXPERIENCE ON CAPITAL CONTROLS

8.29 Despite substantial disparities in the initial conditions of countries which have made use of capital controls, certain broad commonalities emerge when experiences of countries with regard to capital controls are studied in aggregation. Capital controls are more likely to exist in countries with fixed or managed exchange rate regimes, lower per-capita incomes, larger government consumption as a ratio to GDP, less independent central banks, larger current account deficits, low levels of economic development, high tariff barriers, and large black market premia (Johnston and Tamirisa, 1998). Historically, experiences of countries with capital account liberalisation throw up three general observations. First, capital account liberalisation usually went hand in hand with domestic economic and financial liberalisation. Second, the policy on portfolio capital flows has differed from the policy on foreign direct investment. Third, circumstances and policy goals varied for controls on inward and outward capital flows.

8.30 The country experience with respect to imposition of capital control in recent times has been varied. In this context, it is useful to review the experiences of EMEs separately from those of developed economies. Experiences of emerging market economies, may be categorised into four broad groups: (i) Brazil (1993-97), Chile (1991-98), Colombia (1993-98), Malaysia (1994) and Thailand (1995-97) used capital controls to limit short-term capital inflows in response to concerns about the macroeconomic implications of the increasing size and volatility of such flows; (ii) Romania (1996-97), Russia (1998) and Venezuela (1994-96) resorted to extensive system of controls in both current and capital transactions in connection with crises; (iii) Malaysia (1998), Spain (1992) and Thailand (1997-98) imposed controls on capital outflows; and (iv) Argentina (1991), Kenya (1991-95), and Peru (1990-91) implemented relatively rapid liberalisation of the capital accounts by removing controls (Ariyoshi *et al.*, 2000).

8.31 Many different measures were available for controlling capital inflows in the first group of five countries (see Chapter VI). These countries used controls on inflows mainly to preserve or enhance monetary policy autonomy. Obviously, sterilisation operations were usually the first policy response to inflows. However, such operations typically entailed costs to the central bank and attracted further inflows as they tended to keep interest rates high. Controls on capital inflows were imposed to reduce reliance on sterilisation and in some cases to postpone other adjustments. The controls were seen as a means to resolve the classic policy dilemma that resulted from having more objectives than independent policy instruments. Various episodes suggest that capital controls had only temporary effect on stemming capital inflows. Capital controls on inflows in Colombia (1993-98) and Brazil (1993-97) did not prevent the continued appreciation of their currencies. Likewise, between 1991 and 1998, Chile applied a reserve requirement that placed a wedge between domestic and foreign interest rates, and provided a disincentive to short-term capital. These controls also lost effectiveness as loopholes were found to avoid the regulations. Capital controls in Thailand and Malaysia may have altered the maturity structure of capital inflows, but did not insulate the Thai baht from speculative attacks in 1997.

8.32 In the second category (crisis-driven current and capital account controls), extensive exchange controls were undertaken to stabilise the respective foreign exchange markets. Experiences of Romania, Russia and Venezuela indicate that such controls may temporarily relieve pressures on the balance of payments but they do not provide lasting protection when the fundamental causes of the imbalances remain unaddressed. As with more targeted controls, in these countries the controls reduced access to foreign capital.

8.33 The desire of authorities to limit downward pressures on their currencies was one of the most frequent motives for imposing capital controls in the third category (controls on capital outflows). Such restrictions were mainly applied to short-term capital transactions to counter volatile speculative flows. In some cases, these restrictions served as an alternative to prompt adjustment of economic policies and, thus, helped the authorities to “buy time”. They have also been used to insulate the real economy from volatility in international financial markets. The experiences of Malaysia, Spain and Thailand with controls on capital outflows indicates that: (i) controls do not provide lasting protection in the face of sufficient incentives for circumvention; (ii) ability to control off-shore market activity may have been instrumental in containing outflows and stemming speculative pressures; and (iii) effective measures risk discouraging even legitimate transactions.

8.34 In all three economies in the fourth category (rapid liberalisation of capital account), the liberalisation of the capital account was preceded by a period of severe macroeconomic imbalances in the external account or other sectors of domestic economy. Capital account liberalisation was intended to signal a strong pre-commitment to reform and was motivated by a desire to create conditions that would attract foreign financing and sustained growth. In these countries the liberalisation of the capital account was just one part of a wide-ranging liberalisation programme. Experiences of Argentina, Kenya, and Peru with rapid liberalisation of the capital account highlighted the importance of sound macroeconomic policies combined with ongoing efforts to strengthen the financial system and implement associated reforms.

8.35 The experiences of countries undertaking capital controls suggests that the designs of controls varied widely. The single common factor was their targeting of the activities of non-residents by restricting the access of the latter to domestic currency funds that could be used to take speculative positions against the domestic currency. The controls explicitly exempted current account transactions, foreign direct investment flows, and certain portfolio investments. Sale of short-term instruments to non-residents and outright forward and swap transactions with foreigners were prohibited in some of these countries. Tax on foreign investment in the debt and stock markets is another common form of discouraging capital outflows. Limits on, and approval procedures for short-term external commercial borrowings were also imposed by some countries.

8.36 Thus, the experiences with capital controls by a spectrum of EMEs suggest the following: First, to be effective, the controls must be comprehensive, strongly enforced and accompanied by necessary reforms and policy adjustments. Controls may lose effectiveness over time as markets exploit the loopholes in the system to channel the 'undesired' flows through the exempted ones. Second, although capital controls appeared to be effective in some countries, their role remains doubtful given the problems involved in disentangling the impact of the controls from that of the accompanying policies, which included strengthening of prudential regulations, greater exchange rate flexibility and adjustments in monetary policies. Third, inflow controls may not be ideally suited as instruments of prudential policy, as they are often imposed and modified for macroeconomic rather than microeconomic reasons. The experience of a number of countries *e.g.,* Brazil and Thailand, also suggests that the use of controls on inflows may not provide lasting protection against reversals in capital flows if they are not accompanied by necessary adjustments in macroeconomic policies and strengthening of the financial system.

8.37 In respect of developed countries, experiences with capital controls highlight a somewhat different set of issues. The time taken by developed countries to liberalise their capital account varied considerably, ranging from a number of years for France and Japan to a few months in the case of United Kingdom. Australia and New Zealand are also examples of speedy transition from rather restrictive to open financial regimes. Experiences of these countries reveal that accompanying macroeconomic policies and domestic reforms were critical for successful liberalisation under either approach. It was felt that proper sequencing in relation to reforms in other areas is important to ensure stabilisation. In particular, the need for developing adequate prudential supervision standards before liberalisation has been underscored. In most cases, direct investment flows were formally liberalised ahead of portfolio flows. On the other hand, restrictions on cross-border bank lending and foreign investment opportunities by the residents were among the last to be lifted (Griffith-Jones *et al.*, 2000).

Motives of Capital Controls

8.38 A number of motives have been suggested for maintaining controls on capital movements. While there is some overlap between the motives, they can generally be classified into those relating to (i) balance of payments and macroeconomic management; (ii) underdeveloped financial markets and regulatory systems (markets and institutional evolution); (iii) prudential; and (iv) other reasons (Johnston and Tamirisa, 1998). In practice capital controls are used for a number of purposes – both short-term and long-term, some of which may not correspond exactly to the four-fold classification mentioned above (Box VIII.1).

Types of Capital Controls

8.39 Broadly, there are three categories of measures that fall under the definition of capital controls, *viz.*, quantity-based, price-based and regulatory capital controls. Quantity-based measures involve the explicit limits or prohibitions on capital account transactions such as ban on investment in money market instruments and limits on short-term borrowings. On outflows, these can take the form of explicit moratorium. Price-based controls, such as tax on stock market purchases and

Box VIII.1

Purposes of Capital Controls

Purpose of Control	Method	Direction of Control	Example
1	2	3	4
Generate Revenue/ Finance War Effort	Control on capital outflows permit a country to run higher inflation with a given fixed exchange rate and also hold down domestic interest rates.	Outflows	Most belligerent use during World War I and World War II
Financial Repression/ Credit Allocation	Governments that use the financial system to reward favoured industries or to raise revenue may use capital controls to prevent capital from going abroad to seek higher returns.	Outflows	Common in developing countries
Correct a Balance of Payments Deficit	Controls on outflows reduce demand for foreign assets without contractionary monetary policy or devaluation. This allows a higher rate of inflation than otherwise would be possible.	Outflows	U.S. interest equalisation tax, 1963-74
Correct a Balance of Payments Surplus	Controls on inflows reduce foreign demand for domestic assets without expansionary monetary policy or revaluation. This allows a lower rate of inflation than would otherwise be possible.	Inflows	German Bardepot Scheme, 1972-74
Prevent Potentially Volatile Inflows	Restricting inflows enhances macroeconomic stability by reducing the pool of capital that can leave a country during a crisis.	Inflows	Chilean E*ncaje*, 1991-98
Prevent Financial Destabilisation	Capital controls can restrict or change the composition of international capital flows that can exacerbate distorted incentives in the domestic financial system.	Inflows	Chilean E*ncaje*, 1991-98
Prevent Real Appreciation	Restricting inflows prevents the necessity of monetary expansion and greater domestic inflation that would cause a real appreciation of the currency	Inflows	Chilean E*ncaje*, 1991-98
Restrict Foreign Ownership of Domestic Assets	Foreign ownership of certain domestic assets – especially natural resources – can generate resentment.	Inflows	Article 27 of Mexican Constitution
Preserve Savings for Domestic Use	The benefits of investing in the domestic economy may not fully accrue to savers to that economy, as a whole, can be made better off by restricting the outflow of capital.	Outflows	
Protect Domestic Financial Firms	Controls that temporarily segregate domestic financial sectors from the rest of the world may permit domestic firms to attain economies of scale to compete in world markets.	Inflows and Outflows	

Source: Neely (1999).

tax on foreign exchange transactions, seek to alter the cost of capital account transactions (Neely, 1999). Regulatory capital controls could be both price- and quantity-based and generally treat transactions with non-residents less favourably than those with the residents. The coverage of regulations could apply to inflows as well as outflows on actions initiated by non-residents and residents. The transactions which may be subject to capital controls are with reference to maturity *i.e.,* short and long-term transactions or with reference to the nature of investments involved *i.e.,* foreign direct investment, portfolio investment, cross border holdings of real estate, domestically and internationally issued equity and debt, deposits with banks and other financial institutions, guarantees and financial back up facilities, life insurance contracts and derivative instruments (Box VIII.2).

Box VIII.2

Mechanism of Capital Controls

Capital controls have in general taken two main forms: direct or administrative controls and indirect or market-based controls. Direct or administrative capital controls restrict capital transactions and/or the associated payments and transfer of funds through outright prohibitions, explicit quantitative limits, or an approval procedure (which may be rule-based or discretionary). Administrative controls typically seek to directly affect the volume of the relevant cross-border financial transactions. A common characteristic of such controls is that they impose administrative obligations on the banking system to control flows.

Indirect or market-based controls discourage capital movements and the associated transactions by making them more costly to undertake. Such controls may take various forms, including dual or multiple exchange rate systems; explicit or implicit taxation of cross-border financial flows (*e.g.* a Tobin tax); and other predominantly price-based measures. Explicit taxation of cross-border flows involves imposition of taxes or levies on external financial transactions, thus limiting their attractiveness, or on income resulting from the holding of foreign financial assets by residents or the holding of domestic financial assets by nonresidents, thereby discouraging such investments by reducing their rate of return or raising their cost. Tax rates can be differentiated to discourage certain transaction types or maturities. Indirect taxation of cross-border flows, in the form of compulsory unremunerated reserve/deposit requirements (URR) has been one of the most frequently used market-based controls. Under such schemes, banks and non-banks dealing on their own account are required to deposit at zero interest with the central bank an amount of domestic or foreign currency equivalent to a proportion of the inflows or net positions in foreign currency. URRs may seek to limit capital outflows by making them more sensitive to domestic rates. Other indirect regulatory controls have the characteristics of both price- and quantity-based measures and involve discrimination between different types of transactions or investors motivated by domestic monetary control considerations or prudential concerns. Such controls include provisions for the net external position of commercial banks; asymmetric open position limits that discriminate between long and short currency positions or between residents and nonresidents; and certain credit rating requirements to borrow abroad. While not a regulatory control in the strict sense, reporting requirements for specific transactions have also been used to monitor and control capital movements (*e.g.*, derivative transactions, non-trade related transactions with nonresidents).

Table: Types of Capital Transactions Possibly Subject to Controls

Inflows	Outflows
1	2
1. Capital And Money Markets	
Shares or Other Securities of a Participating Nature	
Purchase Locally by Nonresidents	Sale or Issue Locally by Nonresidents
Sale or Issue Abroad by Residents	Purchase Abroad by residents
Bonds or Other Debt Securities	
Purchase Locally by Nonresidents	Sale or Issue Locally by Nonresidents
Sale or Issue Abroad by Residents	Purchase Abroad by Residents
Money Market Instruments	
Purchase Locally by Nonresidents	Sale or Issue Locally by Nonresidents
Sale or Issue Abroad by Residents	Purchase Abroad by Residents
Collective Investment Securities	
Purchase Locally by Nonresidents	Sale or Issue Locally by Nonresidents
Sale or Issue Abroad by Residents	Purchase Abroad by Residents
2. Derivatives And Other Instruments	
Purchase Locally by Nonresidents	Sale or Issue Locally by Nonresidents
Sale or Issue Abroad by Residents	Purchase Abroad by Residents
3. Credit Operations	
Commercial Credits	
To Residents From Nonresidents	by Residents to Nonresidents
Financial Credits	
To Residents From Nonresidents	by Residents to Nonresidents
4. Guarantees, Sureties, and Financial Backup Facilities	
To Residents From Nonresidents	by Residents to Nonresidents
5. Direct Investment	
Inward Direct Investment	Outward Direct Investment
	Controls on Liquidation of Direct Investment
6. Real Estate Transactions	
Purchase Locally by Nonresidents	Purchase Abroad by Residents
	Sale Locally by Nonresidents
7. Provisions Specific To Commercial Banks	
Nonresident Deposits	Deposits Overseas
Borrowing Abroad	Foreign Loans
8. Personal Capital Movements: Deposits, Loans, Endowments, Inheritances, And Legacies	
To Residents From Nonresidents	by Residents to Nonresidents
9. Settlements Of Debts Abroad by Immigrants	
Transfer Into the Country by Immigrants	Transfer Abroad by Emigrants
10. Provisions Specific To Institutional Investors	
	Limits on Securities Issued by Nonresidents and on Portfolio Invested Abroad. Limits on Portfolio Invested Locally

Source: International Monetary Fund, 1999 and other IMF Documents.

8.40 These experiences reveal certain commonalities, particularly with regard to motives for and design of capital controls. By implication, they also offer certain lessons relating to the speed and sequencing of capital account liberalisation.

Speed and Sequencing of Capital Account Liberalisation

8.41 The sequencing literature argues that capital account liberalisation should be delayed until non-traditional export industries are well established, fiscal discipline is secure, and both trade and financial systems have been liberalised. It has been argued that restrictions on trade in goods and services should be liberalised prior to liberalisation of capital transactions, because large capital flows that may result in response to opening up of the capital account could give rise to real exchange rate appreciation, which in turn could erode trade competitiveness and thereby constrain trade liberalisation (McKinnon, 1991). The emerging consensus is that capital account opening has to be accompanied - and preferably preceded - by an overhaul of the country's capacity to supervise, regulate and manage financial institutions, so that the domestic financial system can cope with the complexities arising from free capital movements (McKinnon and Pill, 1996). Second, strengthened market discipline and self-regulation of banks and other corporate entities is an important pre-condition, given the rapidly changing business environment in a global economy, especially in the financial markets. The main challenge in this area is to design and maintain a regulatory framework flexible enough to encourage market development while enhancing market discipline and self-regulation. Third, pursuing sound macroeconomic policies and avoiding domestic and external imbalances are important to preserve stability in financially open economies. Fourth, improvements in the reporting and monitoring of capital flows, especially private sector short-term flows related to inter-bank transactions, and of direct placements and consolidated debt of the corporate sector in emerging economies assume importance in this context. Finally, due to market failures there is room for prudential regulation of the capital account, aimed at changing the composition of capital inflows and giving monetary policy more flexibility to pursue inflation or current account targets.

8.42 The empirical literature generally emphasises the following preconditions to liberalisation of the capital account: (i) substantial narrowing of the differences between domestic and external financial market conditions; (ii) establishing a flexible interest rate structure; (iii) reducing fiscal deficit and financing the lower level of deficit in a non-inflationary way; (iv) limiting/reducing taxes on income, wealth, and transactions to international levels; (v) an appropriate exchange rate policy with greater flexibility as the degree of openness increases; (vi) strengthening prudential supervision of financial institutions; (vii) enforcing domestic competition to foster allocative and operational efficiency within the financial sector; (viii) restructuring and recapitalisation of domestic financial institutions; and (ix) reducing restrictions which inhibit wage price flexibility. Theory, however, has its limitations in approximating the challenges posed by capital flows in reality. Even with the best possible sequencing, mistakes will be made and crises will occur (Gilbert *et al.,* 2000). Costs outweigh the benefits when the sequencing of liberalisation becomes faulty and it is the attainment of preconditions that should determine the sequencing of liberalisation.

8.43 In the current debate on international financial architecture, there is no settled position on several of the actions being considered. In respect of liberalisation of capital account, however, there appears to be a broad consensus: it should be gradual, well-sequenced and undertaken in conjunction with several other measures at the micro and macro levels. In most cases, the desirability of limiting total external debt, especially short-term debt is generally advocated. Clearly, therefore, there is need for developing countries to choose among or prioritise alternative forms of capital flows on the basis of costs and benefits. The components of the capital account need to be managed by each country taking into account its own specific characteristics.

IV. APPROACH OF MULTILATERAL INSTITUTIONS TOWARDS CAPITAL ACCOUNT CONVERTIBILITY

8.44 The approach of multilateral institutions towards capital account convertibility assumes particular relevance in this context in view of the recent initiatives towards a new international financial architecture within which such institutions are expected to play a major role in assisting national governments prevent and manage capital account related crises. The IMF has certain conditions attached to the aid it offers to EMEs. IMF conditionalities often relate to changes in policy regimes within these economies with an orientation towards greater liberalisation and fiscal prudence. Among developed countries, such institutions serve as

fora for coordinating the extent and timing of capital account liberalisation.

8.45 The approach of multilateral institutions over time towards capital account convertibility has generally followed the prevailing consensus, though sometimes with a lag. Since the early 1990s, policies of the International Monetary Fund (IMF) towards emerging market economies have been dominated by the "Washington consensus", which looked at financial (and trade) liberalisation as the way to growth and prosperity (Miller and Zhang, 1999). Consequently, EMEs were encouraged to liberalise markets as quickly as possible. Prior to the Asian crisis, the IMF generally discouraged tightening of controls over capital movements in response to large capital flows and encouraged adjustments in fiscal, monetary, and exchange rate management. An implicit assumption was that financial markets are usually efficient in deciding the right amount and composition of capital flows to a country. Hence further improvement in market discipline to promote private capital flows was recommended (Goldstein and Mussa, 1993). Thus, although the IMF recognised the freedom accorded to members under the Articles to maintain or impose capital controls in order to achieve balance of payments and exchange rate stability, it urged members to undertake capital account liberalisation if it was deemed a crucial element of broader structural reforms.

8.46 In developed countries, the IMF has been supportive of liberalisation of capital account transactions in the context of Article IV consultations, drawing mainly from the framework of EU directives and the OECD Code of Liberalisation of Capital Movement. With respect to developing countries, the IMF followed a case-by-case approach. Although, the IMF generally supported a gradual approach to capital account liberalisation, it encouraged an acceleration of this process in some cases when it was felt that further liberalisation of capital outflows could help mitigate the macroeconomic complications associated with strong inflows (RBI, 2001).

8.47 In April 1997, the then Interim Committee of the IMF came out in favour of amending the IMF's Articles of Agreement to make liberalisation of the capital account as one of the objectives of the IMF (Eichengreen, 1999). Even as late as October 1997, the Fund's World Economic Outlook (WEO) recommended further liberalisation of the capital account noting the linkage between 'rapid growth and large capital inflows'. It was argued that although developing countries might experience increased volatility, these should be managed with greater exchange rate flexibility without imposing capital controls.

8.48 In the wake of the Asian crisis, however, IMF's active support for capital account convertibility was challenged by a number of country authorities, institutions and academics. The basic premises of pursuing capital account liberalisation was questioned, as was the advocacy of vesting the IMF with responsibility for promoting the orderly liberalisation of capital flows (Eichengreen and Mussa, 1998). In the face of such intellectual opposition to its policies, a moderation of the IMF's stance became evident. The imposition of capital controls in Malaysia in September 1998 did not find favour with the IMF initially, but eventually, the IMF recognised the role of capital controls and acknowledged that, "controls appear to have provided some breathing space in which to implement more fundamental reforms" (IMF, October 2001). The IMF also favoured imposition of capital controls on short-term capital inflows as in the case of Chile to increase the potency of monetary policy. The IMF acknowledged the existence of important preconditions for an orderly liberalisation of capital movements. Since then, the IMF, in general, favours a gradual approach to opening the capital account if the preconditions of effective liberalisation are not in place. It underscores the importance of the creation of conditions and institutions that can encourage foreign capital.

8.49 In the light of the Asian crisis, the World Bank (1999) also came out with the suggestion that capital account liberalisation should proceed cautiously, in an orderly and progressive manner in developing countries, given the large risks of financial crises – heightened by international capital market failures. Benefits of capital account liberalisation and increased capital flows have to be weighed against the likelihood of crises and their costs. The World Bank called for a policy of openness on the grounds that the benefits from FDI and longer-term capital inflows outweigh the costs associated with the increased likelihood of financial crisis. However, in the case of more volatile debt portfolio and inter-bank short-term debt flows under full capital account convertibility, there are associated risks of financial crises and greater uncertainty about the benefits. The World Bank also called for tighter prudential regulations on banks and market oriented restrictions on more volatile short-term inflows that minimise distortions (*e.g.*, taxes) where the domestic regulatory and prudential safeguards are weak.

8.50 The OECD code stemmed from the primary objective of establishing the organisation in 1961 of reducing or abolishing obstacles to the exchange of goods and services and current payments as well as maintaining and extending the liberalisation of capital movements. Detailed codes to this effect were adopted in 1961 and amended four times (1964,1973,1983 and 1989) to widen their coverage with the evolving situation. The gradual approach adopted by the OECD had two major steps. In the first step, mainly direct investment, long-term capital movements and trade transactions were liberalised in 1964. The second step, undertaken in the late 1980s/early 1990s, liberalised short-term financial operations. The year 1989 can be regarded as a turning point, since all types of capital movements were covered by the Code from that year. In the context of financial integration in the EU, liberalisation of the capital account gained momentum in the 1980s culminating in the ratification of the Single European Act in 1987. The Act specifically required all restrictions on capital movements to be removed and explicitly recognised full liberalisation as a necessary condition for creation of the common market. The objectives of the OECD Code of Liberalisation of Capital Movements and the EU directives have been fully attained and their rules apply to the industrial countries. The World Trade Organisation (WTO) is another organisation which aims at promoting liberalisation of trade in services including financial services and the associated capital flows (OECD, 2003).

8.51 While several initiatives are being proposed at the global level, the task of preventing a crisis is essentially a national responsibility though an enabling international environment is sought to be put in place to facilitate action by individual countries. While prevention of crises as well as mitigating their effects when they occur require multilateral efforts in today's globalised world, the social consequences of such crises have to be met by the national governments concerned. In this sense, the ultimate responsibility in regard to crisis prevention and management rests primarily on the policy makers of the countries concerned (Reddy, 2000a).

V. THE INDIAN EXPERIENCE

Approach

8.52 The Indian approach to capital account convertibility has been one of gradualism, treating liberalisation of the capital account as a continuous process rather than a single event. The Indian approach is akin to construction of dams which " ... do not stop, but only temper the flow of water from the top of a mountain... without the dams there are floods that bring with them death and property reduction. By contrast, with the dam, not only is the death and destruction reduced, but the water itself can be channelled into more constructive uses" (Stiglitz, 1999). This stance has been vindicated in the wake of the Asian crisis.

8.53 In India, there is a strong opinion in favour of cautious liberalisation, with a greater weight attached to stability. The policy in India is to approach liberalisation on capital account cautiously, gradually, in a sequenced manner, and in response to domestic monetary and financial sector developments as also the evolving international financial architecture (Reddy, 2000a).

8.54 A qualitative change, however, has been brought about in the legal framework by the enactment of the Foreign Exchange Management Act (FEMA) in June 2000 by which the objectives of regulation have been redefined as facilitating trade and payments as well as orderly development and maintenance of foreign exchange market in India. The legal framework envisages both the developmental dimension and orderliness or stability. The legislation provides power to the government to re-impose controls if public interest warrants it.

8.55 In India, like in several other EMEs, liberalisation of the current account preceded the liberalisation of the capital account. Capital account transactions were gradually liberalised during the 1990s. Restrictions on inflows were relaxed first, with an emphasis on encouraging FDI and portfolio equity investment and discouraging short-term debt-creating inflows. In the recent period, restrictions on capital outflows have subsequently been relaxed. Convertibility of non-resident investment has all along been a basic tenet of Indian foreign investment policy, *albeit* subject to administrative procedures. In the context of the liberalisation of capital account in India, it was noted that "the current framework of controls needs to be analysed from different angles for capturing operational reality. First, there is a differentiation between current (convertible) and capital account (subject to some controls) transactions. Second, there is a distinction and asymmetrical treatment between inflows (less restricted), outflows associated with inflows (free) and other outflows (more restricted). Third, residents are treated differently (more restrictive) than non-residents (less restrictive). Non-resident Indians have a well-defined intermediate status between residents and non-residents. Fourth, there are also differences in

treatment of individual (highly restrictive), corporates (restrictive) and financial intermediaries such as institutional investors (less restrictive) and banks (more restrictive)" (Reddy, 2000b).

Report of the Committee on Capital Account Convertibility

8.56 The Report of the Committee on Capital Account Convertibility (Chairman: S.S. Tarapore), submitted in May 1997, provided the framework for liberalisation of capital account transactions in India. The Committee recommended a phased implementation of Capital Account Convertibility (CAC) in India to be completed by the year 1999-2000 and prescribed the macroeconomic framework for implementing full convertibility in terms of the preconditions for greater liberalisation. The Committee had suggested that implementation of the measures in each of the three phases should be based on a continuous monitoring of certain preconditions and attendant variables identified from the lessons of the international experiences and related to the specifics of the Indian situation.

8.57 While there is no formal definition of CAC, the Committee recommended a working definition for purposes of its report. CAC refers to the freedom to convert local financial assets into foreign financial assets and *vice versa* at market determined rates of exchange. It is associated with changes of ownership in foreign/domestic financial assets and liabilities and embodies the creation and liquidation of claims on, or by, the rest of the world. CAC can be, and is, coexistent with restrictions other than on external payments. It also does not preclude the imposition of monetary/fiscal measures relating to foreign exchange transactions which are of a prudential nature.

8.58 The Committee recognised that the implementation of financial sector reforms in India brought into the open weaknesses which had been in the system for a long time. The introduction of CAC would require more proactive policy action as an open capital account could bring these weaknesses into a sharper focus. CAC would impose a strong discipline upon the financial system, expedite the rectification of infirmities in the system and lead to widening/ deepening of markets to enable the spreading/ distribution of risks.

8.59 A significant feature was that the Committee did not recommend unlimited opening up of capital account, but preferred a phased liberalisation of controls on outflows and inflows over a three year period. Even at the end of the three-year period, capital account was not to be fully open and some flows, especially debt would continue to be managed. An obvious corollary of this approach was that the mere attainment of preconditions may not be enough for implementing full liberalisation of the capital account. The approach towards full convertibility must be consistent with the overall policy framework that is assigned to the objective of growth and stability (Jadhav, 2003).

Preconditions/Signposts for CAC

8.60 The three crucial preconditions laid down by the Committee for attaining CAC were fiscal consolidation, a mandated inflation target and strengthening of the financial sector. In addition, the Committee stressed that a few important macroeconomic indicators should also be assessed on an on-going basis (Box VIII.3).

Experience

8.61 In India, most categories of capital account transactions like foreign direct investment, portfolio equity investment, external commercial borrowing, non-resident deposits, short-term credit and outward investment were subject to a number of restrictions prior to 1991. During this period, FDI was seen primarily as a vehicle for transfer of technology that would be costly or difficult to develop domestically. A selective policy of case-by-case approvals was designed to channel FDI into areas that required sophisticated technology; where critical production gaps existed; or where there were prospects for substantial export potential. Foreign investment in the form of foreign collaborations was also regulated. Portfolio equity investment was generally not permitted. External commercial borrowings (ECBs) required prior approval by the Government of India on a case by case basis and the permission was granted after taking into account the purpose of the borrowing, export potential of the projects, and the capacity to generate foreign exchange to meet debt service and other payments. A new, more liberalised ECB policy has been announced (Box VIII.4). Non-Resident Indian (NRI) deposits were permitted under a variety of schemes with interest rates significantly above international levels, besides exchange rate guarantees from the Reserve Bank and certain tax concessions (see Chapter VI).

Box VIII.3

Report on Capital Account Convertibility: Preconditions and Current Status

Precondition	Recommendation	Current Status
Fiscal Consolidation	Reduction in Gross Fiscal Deficit as percentage of GDP from 4.5 (budgeted) in 1997-98 to 4.0 in 1998-99 and further to 3.5 in 1999-2000.	Gross fiscal deficit as a percentage of gross domestic product stood at 5.9 during 2002-03.
Mandated Inflation Rate	The mandated rate of inflation for the three year period 1997-98 to 1999-2000 should be an average of 3 - 5 per cent.	The realised (not mandated) inflation rate averaged 4.6 per cent between 1997-98 and 2002-03.
Strengthening of Financial System	Reduction of CRR from 9.3 per cent as of April 1997 to 3 per cent by 1999-2000.	CRR reduced to 4.5 per cent by December 2003.
	Reduction in gross NPAs of banks as a percentage of total advances from 13.7 per cent in 1996-97 to 9 per cent by 1998-99 and to 5 per cent by 1999-2000.	NPAs of banks as a percentage to total advances have declined to 8.8 per cent by end-March 2003.
	Interest rates to be fully deregulated in 1997-98 and any formal or informal interest rate controls must be abolished.	All interest rates (except savings bank interest rate) have been deregulated.
	100 per cent marked to market valuation of investments for banks.	The concept of marked to market valuation has been done way with. The modern concept works on banks classifying their entire portfolio into three categories 'Held to Maturity', 'Available for Sale' and 'Held for Trading'.
	Best practices on risk management and accounting /disclosure norms be implemented.	Risk management guidelines have been issued, broadly covering credit risk and market risk.
	Banks to follow international accounting disclosures norms.	Disclosures on banks' balance sheet have been gradually expanded.
	Capital prescription to be stipulated for market risks.	Since March 2000, standard assets have been given a risk weight of 0.25 per cent
Important Macroeconomic Indicators	A monitoring band of +/-5 per cent around the neutral Real Effective Exchange Rate (REER) to be introduced.	No such band is maintained in India.
	Over the three year period 1997-98 to 1999-2000, rising trend prescribed for current receipt/GDP ratio from the level of 15 per cent in 1997-98.	Current receipts/GDP ratio has increase from 14.3 per cent in 1997-98 to 18.7 per cent in 2002-03.
	Reduction in debt service ratio gradually from 25 per cent in 1997-98 to 20 per cent in 1999-2000.	Debt Service ratio has steadily declined from 21.6 per cent in 1997-98 to 14.7 per cent in 2002-03.
	Four indicators were prescribed on foreign exchange reserves - Reserves (i) not be less than 6 months of imports, (ii) not be less than three months of imports plus 50 per cent of debt service payments plus one month's exports and imports, (iii) ratio of short-term debt and portfolio stock to reserves to be lowered to 60 per cent and (iv) NFA/Currency ratio should be prescribed by law at not less than 40 per cent.	At present, foreign exchange reserves meet all the four criteria.

8.62 During the post-1991 period, the initial liberalisation of capital account transactions was an integral part of the programme to address the balance of payment crisis of 1991. Liberalisation was accompanied by exchange market reforms in order to move over to the era of market-determined exchange rate. The major reforms in the capital account were the liberalisation of FDI and portfolio equity investment. Liberalisation of FDI gathered momentum and took a definite shape with the

Box VIII.4

Recent Capital Account Liberalisation Measures in India

- Resident individuals and listed Indian companies have been permitted to invest in overseas companies listed on a recognised stock exchange and which have the shareholding of at least 10 per cent in an Indian company listed on a recognised stock exchange in India (as on 1st January of the year of the investment). Such investments by corporates shall not exceed 25 per cent of the Indian company's net worth, as on the date of latest audited balance sheet. Investment by resident individuals is without any monetary limit.
- Limit on banks' investment from/in overseas markets has been raised. In case of resident banks, ADs have been given freedom to undertake investments in overseas markets, subject to the limits approved by the banks' Board of Directors. Banks in India have the freedom to invest the undeployed FCNR(B) funds in overseas markets in long-term fixed income securities rated at least AA(-) by Standard and Poor, or Aa3 by Moody's or AA by Fitch IBCA.
- Banks are allowed to invest their unimpaired Tier I capital in overseas money market or debt instruments without any percentage or absolute limit subject to approval by their Board of Directors.
- Indian companies are allowed to access ADR/GDR markets through an automatic route without prior approval subject to specified norms and reporting requirements. They can invest abroad funds raised through ADRs/GDRs in bank deposits/certificates of deposit (CDs), Treasury Bills and other monetary instruments pending repatriation/utilisation of such funds.
- Indian companies with a proven track record were eligible to invest upto 100 per cent of their net worth within the overall limit of US $ 100 million for investment in a foreign entity engaged in any *bonafide* business activity. The overall limit of US $ 100 million has been done away with.
- Exporters are permitted to extend trade related loans/ advances to overseas importers out of their exchange earners' foreign currency (EEFC) balances without any ceiling.
- A unit in domestic tariff area (DTA) can receive foreign exchange out of the foreign currency account of a unit in Special Economic Zones (SEZs) which is permitted to be treated as eligible for credit to its EEFC account.
- Foreign investment by non-resident corporates/NRIs under the Reserve Bank's automatic route has been substantially expanded to include almost all items/ activities, for investment under FDI (excepting 6 prohibited items and 12 items included in the negative list).
- With the new External Commercial Borrowings (ECBs) policy announced in January 2004, ECBs have been allowed under an automatic route up to US $ 500 million (for ECBs with average maturity of more than five years) and up to US $ 20 million (for ECBs between three to five years of average maturity). Borrowings which fall outside purview of the automatic route will be subject to a transparent process and will be decided by an Empowered Committee of the Reserve Bank.
- Indian companies have been permitted to prepay existing FCCBs subject to certain conditions.
- Residents have been allowed to open Resident Foreign Currency (RFC) (Domestic) Accounts without any ceiling.
- Resident individuals are permitted to remit foreign exchange for acquisition of foreign securities under employees' stock option plan (ESOP) scheme without any monetary limit.
- Resident shareholders of Indian companies are permitted to offer their shares for conversion to ADRs/ GDRs and to receive the sale proceeds either in foreign currency or by way of credit to their EEFC/ RFC(Domestic) accounts or to their rupee accounts in India at their option.
- Non-resident Indians (NRIs)/persons of Indian origin (PIOs) and foreign nationals are permitted to remit up to US $ 1 million per calendar year out of balances held in non-resident ordinary (NRO) accounts/sale proceeds of assets.
- The lock-in period for repatriation of sale proceeds to the extent of funds brought in or paid by debit to NRE/ FCNR(B) account for acquisition of immovable property (other than agricultural land/farm house/plantation property) purchased in India by NRIs/PIOs has been removed.
- ADs are permitted to issue international credit cards (ICCs) to NRIs/PIOs and to remit refund of funds received for purchase of shares.
- Any non-resident Indian is permitted to purchase/sell shares and/or convertible debentures of an Indian company through a registered broker on a recognised stock exchange, provided the NRI routes all his transactions through designated branch of an authorised dealer in India.
- NRIs/PIOs have been permitted to repatriate assets in India acquired by way of inheritance / legacy, in addition to other facilities. Full repatriation of current income like rent, dividend, pension and interests of NRIs even without holding an NRO account in India has also been permitted.

Industrial Policy Statement, 1991 effecting significant policy liberalisation in the context of FDI. During the course of the 1990s, most sectors have been brought under the ambit of automatic approval route for FDI with permissible foreign equity participation being significantly enhanced. In 1992, foreign institutional investors (FIIs) were permitted to invest in the primary and secondary markets for listed equity securities and Indian companies were also permitted to raise funds abroad through the issue of global depository receipts (GDRs) and foreign currency convertible bonds (FCCBs).

8.63 There has also been a gradual liberalisation of international credit operations since 1991 with a shift in emphasis on lengthening of maturities. In this connection, NRI deposits, external commercial borrowings and the operations of authorised dealers (ADs) received policy focus. New deposit schemes for non-resident Indians were launched to attract stable deposits while schemes which carried exchange guarantees were phased out (see Chapter VII for details). The emphasis on preconditions and a policy of gradual liberalisation have enabled the country to reap the benefits of liberalisation while avoiding the sources of vulnerability.

8.64 The purpose and the spirit of measures undertaken by the Reserve Bank since 1997-98 to open up the capital account have been broadly in line with the recommendations of the Report, while the timetable itself has assumed lesser significance (Annex VIII.1).

8.65 In terms of the standard indicators of efficacy of capital controls, it may be pointed out that controls have been effective in India because: (i) there has been no major real appreciation of the exchange rate despite strong inflows; (ii) monetary independence has not been lost and a wedge has been created and maintained between domestic and foreign interest rates; and (iii) black market premia on the exchange rate have declined to negligible levels (Jadhav, 2003).

8.66 Capital account liberalisation has impacted the Indian financial system in a number of ways. There are two channels through which this has occurred. The first is a direct channel in which the greater degree of operational flexibility in foreign exchange operations has affected the portfolio of financial entities, especially commercial banks, which are typically the ADs in foreign exchange. The second is an indirect channel in which the globalisation of the economy in general has affected the balance sheet of the financial system. The twin channels of globalisation have brought about a number of changes in the functioning of the Indian financial system. First, the process of opening up has facilitated foreign investment adding to the liquidity in the financial system, including equity markets. Second, there is the process of integration of prices in the domestic financial markets with the international markets, requiring financial entities, including commercial banks, to optimise portfolios across markets. A related issue has been the management of foreign exchange risk. Finally, the process of capital account liberalisation has strengthened the process of imparting a degree of market discipline to the functioning of the financial system through greater alignment towards international standards and codes.

8.67 With significant opening up of the capital account, particularly on inflows, there were sustained foreign inflows during the 1990s. Capital inflows picked up sharply since the latter half of 2000-01 leading to a surge in foreign exchange reserves and necessitating active sterilisation. In the absence of sterilisation, there could be excessive volatility in the financial markets, interest and exchange rates, leading to erosion of competitiveness of the economy; this would have an adverse impact on the economy at large and the non-government sector in particular. In this context, a Working Group was set up in the Reserve Bank review the various instruments used in India and in other countries and examine the various trade-offs involved in the choice of such instruments to deal with the emerging situation and the extent of their use (see Chapter VI).

VI. CONCLUDING OBSERVATIONS

8.68 The volatile nature of the capital flows triggering instability and leading to a crisis situation and the subsequent contagion effect has been reflected in various episodes of crisis in the 1990s. The experience of the Asian crisis revealed that large and volatile capital flows influenced the exchange rates and interest rates, leading thereby, to overshooting of exchange rates in some cases as expectations and reactions to news drove capital flows and exchange rates often out of alignment with fundamentals. Policy makers in developing countries, therefore, have to manage their capital accounts to ensure an orderly process of liberalisation. The success of policy would lie essentially in managing the flows to reduce their volatility and limit their negative impact while reaping the benefits of such flows to enhance growth prospects of the economy.

8.69 The approach of multilateral institutions towards capital account convertibility has undergone a significant shift after the Asian crisis. In April 1997, the then Interim Committee of the IMF had come out in favour of amending the IMF's Articles of Agreement to make liberalisation of the capital account as one of the objectives of the IMF. Noting the linkage between rapid growth and large capital inflows, it was argued that although developing countries might experience increased volatility, it should be managed with greater exchange rate flexibility without imposing capital controls. In the wake of the Asian crisis, however, the basic premises of pursuing capital account liberalisation were questioned, as was the advocacy of vesting the IMF with the responsibility for promoting orderly liberalisation of capital flows. In the face of intellectual opposition to its policies, a moderation of the IMF's stance became evident. The IMF recognised the role of capital controls and acknowledged the existence of important preconditions for an orderly liberalisation of capital movements. Since then, the IMF, in general, has favoured a gradual approach to opening the capital account if the preconditions for effective liberalisation are not in place. The World Bank also came out with the suggestion that capital account liberalisation should proceed cautiously, in an orderly and progressive manner in developing countries, given the large risks of financial crises – heightened by international capital market failures. The multilateral institutions now underscore the importance of creating appropriate conditions for encouraging capital flows.

8.70 In India, several measures to liberalise specific aspects of capital account transactions have already been implemented. The stress in the process has been on achieving certain preconditions related to health and strength of the financial sector, sustainability in the fiscal sector and inflation to reduce the vulnerability of the economy to crises. Two areas where extreme caution would be needed are unlimited access to short-term external commercial borrowing and providing unrestricted freedom to domestic residents to convert their domestic bank deposits and idle assets. In respect of short-term external commercial borrowings, there is already a strong international consensus that emerging markets should keep such borrowings relatively small in relation to their total external debt or reserves. As regards free convertibility of domestic assets by residents for an emerging market economy like India whose currency is not globally traded and is exposed to external shocks, any expectations of depreciation of the local currency may induce the residents to convert a part or whole of their stock of domestic assets into foreign assets from domestic currency to foreign currency, which may be self-fulfilling, leading to a severe external crisis. Financial institutions play a major role in perpetuating and exacerbating crises related to capital flows. Hence, sound balance sheets and sound operational procedures of financial institutions, mainly banks, are an essential ingredient of the package for mitigating the vulnerability of the financial sector to crises.

8.71 The plans for further liberalisation of the capital account would have to be built over the progress made so far and take into account domestic and international developments in addition to achievement of the preconditions set out by the Committee. The importance of strong macroeconomic fundamentals and cautious approach towards CAC became evident during the Asian crisis when India successfully withstood the contagion. In India, the policy of hierarchy followed with regard to liberalisation of outflows has been in the order of corporates, financial intermediaries and individuals. Further liberalisation of inflows is expected to be continued and dovetailed into the objective of minimising risks associated with them. However, if the momentum of capital inflows is maintained, it may be possible that with limits to sterilisation, further capital account liberalisation would follow logically. The pace of liberalisation would, however, depend on domestic factors, especially further progress in financial sector reforms, fiscal consolidation and the evolving international financial architecture.

Annex VIII.1: Report of the Committee on Capital Account Convertibility: Measures Undertaken

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
I. CORPORATES/ BUSINESS			
A. Corporate/ Business - Residents			
1. Issuing foreign currency bonds to residents and investment in foreign currency bonds and deposits (only rupee settlement)	Not permitted.	To be permitted without any ceiling.	No action taken.
2. Financial capital transfers abroad including for opening current / chequeable account.	Not permitted.	To be allowed in phases with US $ 25,000 per annum in Phase I, US $ 50,000 in Phase II and US $ 1,00,000 per annum in Phase III.	• Listed Indian companies have been permitted to invest abroad in companies listed in recognised stock exchanges, which have a shareholding of at least 10 per cent in an Indian company listed on a recognised stock exchange in India (as on 1st January of the year of the investment). Such investments shall not exceed 25 per cent of the Indian company's net worth, as on the date of latest audited balance sheet. • Indian corporates have been permitted to invest within the respective ceilings as applicable in rated bonds/ fixed income securities. The rating should be at least A-1/AAA by Standard and Poor or P-1/Aaa by Moody's or F1/AAA by Fitch IBCA *etc.* for short term obligation and corresponding rating for long term ones.
3. Accessing capital markets abroad through American Depository Receipts (ADRs)/ Global Depository Receipts (GDRs) / other form of equity issues	Permitted individually by Government. Approval under FEMA given by the Reserve Bank.	No approval to be taken from the Reserve Bank / Government. Reporting within 30 days of issue.	• Indian companies are allowed to access ADRs/GDRs markets through an automatic route without prior approval of the Ministry of Finance subject to specified norms and post-issue reporting requirements. Others require case by case approval from Government. • Indian companies have been allowed to retain abroad funds raised through ADRs/GDRs, for any period to meet their future forex requirements and/or pending utilisation of foreign resources raised, the Indian company may invest the foreign currency funds.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
4. External Commercial Borrowings (ECBs)	ECBs were subject to overall ceilings and sub-ceilings.	Queuing for purpose of implementing ceiling on ECBs while ensuring that relatively smaller borrowers are not crowded out by a few very large borrowers. No restrictions on end use of funds. Loans for period with average maturity of 10 years and above in Phase I and 7 years and above in Phase II to be kept outside the ceiling.	• The new policy announced in January 2004 significantly raised the ceiling under the automatic route from US $ 50 million. ECBs have now been allowed under an automatic route up to US $ 500 million (for ECBs with average maturity of more than five years) and up to US $ 20 million (for ECBs between three to five years of average maturity). Borrowings which fall outside purview of the automatic route will be subject to a transparent process and will be decided by an Empowered Committee of the Reserve Bank. The above relaxations will also be applicable to Foreign Currency Convertible Bonds (FCCBs). • ADs have been permitted to approve proposals not exceeding US$ 20 million per import transaction for short term credit for financing, by way of either Suppliers' Credit or Buyers' Credit, of import into India for a period less than three years. • ECB proceeds have to be parked abroad unless actually required.
5. Foreign Currency Convertible Bonds (FCCBs) / Floating Rate Notes (FRNs)	Permitted individually by Government within overall ECB ceiling	To be within the ECB ceiling with same procedure *viz*. queuing vide item 4.	• Government has decided to transfer entire work relating to ECB/FCCB/FRN to the Reserve Bank with transparent guidelines. The method for giving clearance by the Reserve Bank is being worked out in detail and a notification is under preparation. • Government of India has allowed Indian companies to prepay the existing FCCBs subject to certain conditions. • Also see 4 above.
6. Loans from non-residents	Allowed by the Reserve Bank on a case-by-case basis for loans from Non-Resident Indians (NRIs) on non-repatriable basis with restrictions on interest payments and end use.	To be allowed to borrow up to US $ 250,000 per entity in Phase I, US $ 500,000 per entity in Phase II and US $ 1 million per entity in Phase III with payment of interest not exceeding LIBOR without restriction on period of loan, use of funds and repatriation of loan/ interest.	• Such loans are governed by ECB guidelines.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
7. Joint Ventures (JVs)/ Wholly Owned Subsidiaries (WOSs) abroad	Proposals for investments up to US$ 4 million were cleared by the Reserve Bank. The extent of outflow is dependent upon the export performance of the Indian promoter and capability for repatriation by way of dividend, *etc.*, within a period of five years. Cases not covered by these criteria were cleared by a Special Committee. Balances in EEFC accounts can be used for investment up to US$ 15 million without the specific approval of the Reserve Bank.	Direct investments abroad to be allowed for ventures up to US $ 50 million by ADs subject to transparent guidelines to be laid down by the Reserve Bank. Above US $ 50 million through a special committee. The current stipulation on repatriation of earnings by way of dividend *etc.* within a specified time period should be removed. JVs/WOSs can be set up by all parties and not restricted only to exporters / exchange earners.	• Indian parties are allowed to make direct investment in a JVs/WOSs outside India without prior approval of the Reserve Bank/Government subject to certain conditions. • The existing ceiling for Indian investment in Myanmar and SAARC countries (excluding Pakistan) under the automatic route has been enhanced to US$ 150 million or its equivalent. • The investment may be funded out of EEFC balances and 100 per cent of ADRs/GDRs raised by the Indian party. • Any Indian company with a proven track record was eligible to invest upto 100 per cent of its net worth by way of market purchases for investment in foreign entity engaged in any bonafide business entity. The overall limit of US $ 100 million has been done away with. • Investment in overseas financial sector is also permitted subject to certain terms and conditions. • An Indian party engaged in the activities specified by the Reserve Bank is permitted to acquire shares of a foreign company engaged in the similar activity in exchange of ADRs/GDRs issued to the latter in accordance with the guidelines issued by the Government. • Investment not covered in any of the permissible routes requires approval by the Special Committee for overseas investment. • Resident shareholders of Indian companies, who offer their shares for conversion to ADRs/GDRs, have been permitted to receive the sale proceeds in foreign currency. Further, the sale proceeds, so received by residents, are also permitted to be credited to their EEFC/RFC (D) Accounts. • Individuals: A person resident in India being an individual is permitted to acquire foreign securities by way of gift, inheritance or under cashless Employees Stock Option Scheme (ESOP). In addition, employees or directors of the Indian office/branch/ subsidiary of a foreign company or an Indian company are permitted to acquire ESOPs against remittance without any monetary limit. • The Reserve Bank also allows resident employees of software companies to purchase foreign securities under the ADR/GDR linked stock option scheme upto a consideration not exceeding US $ 50,000 in a block of five calendar years.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
8. Project Exports	Indian project exporters were required to approach the Reserve Bank for prior approval for a variety of purposes while executing the projects abroad.	Requirement of prior approval by the Reserve Bank may be dispensed with subject to reporting to the Reserve Bank.	• Where export of goods or services is proposed to be made on deferred payment terms or in execution of a turnkey project or a civil construction contract, the exporter is required to submit the proposal for prior approval of the approving authority, before entering into such export arrangement. Approving authority considers the proposal in accordance with the guidelines issued by the Reserve Bank from time to time.
9. Establishment of offices abroad	Powers given to ADs to allow remittances for exporters with an average annual export turnover of Rs.150 lakhs and above to open representative/non-trading offices. Further, EEFC account holders were permitted to utilise their EEFC balance without any restriction for establishing any type of offices. Other cases required the Reserve Bank's approval.	Any corporate entity may open offices abroad without the need for prior approval from the Reserve Bank. Capital expenditure towards opening of the offices and current expenditure for maintenance could be subject to overall value limits to be allowed by ADs.	• Remittances towards opening of offices abroad is classified as a transaction of current account nature. General permission to open/maintain foreign currency account has been granted subject to certain conditions. • Indian corporates who have set up overseas offices have been allowed to acquire immovable property outside India for their business as well as for staff residential purposes.
10. EEFC accounts for exporters and exchange earners	50 per cent for EOUs and 25 per cent for others - restrictions on use of funds for current account and permitted capital account transactions.	100 per cent of earnings for all exporters/exchange earners to be allowed to be held in EEFC accounts in India. Use of funds allowed for current and permitted capital account transactions with cheque writing facility in Phase I and II. In Phase III, EEFC accounts can be held with banks outside India at the option of the exporter and exchange earners.	• There are two categories of EEFC account holders, one those who can retain up to 100 per cent of their receipt in foreign exchange and others who can retain 50 per cent. A 100 per cent Export Oriented Unit (EOU) or a unit situated in (a) Export Processing Zone (EPZ) or (b) Software Technology Park (STP) or (c) Electronic Hardware Technology Park (EHTP), status holder exporters, professionals are eligible to credit up to 100 per cent of their foreign exchange receipts to their EEFC account. • On application, the corporates are permitted to credit higher than the permissible percentage of export proceeds to their EEFC account on a case-to-case basis to enable them to take advantage of lower interest rates and prepay the ECBs.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
B. Corporates-Non-Residents (including OCBs)			
1. Foreign Direct Investment (FDI)	Overseas Corporate Bodies (OCBs) were allowed facilities similar to NRIs. Other corporates were allowed to invest up to various proportions with the Reserve Bank/ Government approval under the FDI policy of the Government.	Prior approval of the Reserve Bank not required for FDI. Reporting by ADs to the Reserve Bank.	• Government has since substantially expanded foreign investment under the "Reserve Bank's Automatic Route" to include all items/activities, except certain items, (*i.e.*, 6 prohibited items and 12 items included in the negative list) for investment under FDI/NRI/OCB investment. However, sectoral caps continue to apply. Investment under automatic route requires reporting of the transaction to the Reserve Bank within 30 days. Investment exceeding these sectoral caps or investment in sectors in the negative list requires approval from Foreign Investment Promotion Board (FIPB). OCB has been derecognised as a class of investor since September 16, 2003. • Registered Foreign Venture Capital Investors (FVCIs) have been permitted to invest in Indian Venture Capital Undertakings/ Venture Capital Funds. • An Indian company may sponsor issue of ADRs/GDRs with an overseas depository against shares held by its shareholders at a price to be determined by a lead manager subject to certain conditions. • Existing non-resident shareholders have been permitted to apply for issue of additional equity shares or preference shares or convertible bonds over and above their rights entitlement, subject to sectoral caps.
2. Portfolio Investment in India through stock exchanges in shares/debentures.	Allowed within the 24 per cent limit (can be increased to 30 per cent at the option of the company) which includes portfolio investment by NRIs, Foreign Institutional Investors (FIIs) and OCBs subject to approval by the Reserve Bank which is valid for a period of five years. The investment restricted to one per cent by individual NRIs/OCBs and 10 per cent by individual FIIs. Corporates, other than OCBs and FIIs were not permitted.	To be allowed to all non-residents without prior approval by the Reserve Bank. Designated ADs should be required to report to the Reserve Bank.	• An NRI is permitted to purchase/ sell shares and/or convertible debentures of an Indian company through a registered broker on a recognised stock exchange provided: i) The NRI routes all his transactions through designated branch of an AD in India. ii) The paid-up value of shares purchased by NRIs, on individual basis, both on repatriation/non-repatriation basis does not exceed 5 per cent of the total paid-up capital of the company concerned. iii) The paid-up value of each series of convertible debentures both on repatriation/non-repatriation basis does not exceed 5 per cent of the total paid-up value of each series of the convertible debentures of the company concerned.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
			iv) The aggregate paid-up value of shares of the company purchased by NRIs does not exceed 10 per cent of the total paid-up capital and in the case of convertible debentures, the aggregate paid-up value of each series of debentures purchased by NRIs does not exceed 10 per cent of the total paid-up value of each series of the convertible debentures of the concerned company. v) The above ceilings of 10 per cent can be raised to 24 per cent if a Special Resolution to that effect is passed by the General Body of the Indian company concerned. vi) The facility to FIIs/NRIs and FVCIs to purchase shares or convertible debentures of an Indian company, which is engaged in print media sector has been withdrawn. The restriction is also applicable to purchase of shares and convertible debentures of NRIs on non-repatriation basis.
3. Disinvestment	Disinvestment as approved by the Reserve Bank except where sales are made through stock exchanges under portfolio investment scheme.	RBI approval to be dispensed with.	Action deferred
II. BANKS			
A. Banks - Residents			
1. Loans and borrowings from overseas banks and correspondents including overdrafts in nostro accounts.	ADs were permitted to borrow up to US $ 10 million from their overseas offices/ correspondents without any conditions on end use and repayment of such borrowings.	(i) Each bank may be allowed to borrow from overseas markets, short-term (up to one year) and long-term (over one year), to the extent of 50 per cent of the unimpaired Tier I capital with a sub limit of one third (*i.e.*, 16.67 per cent of unimpaired Tier I capital) for short-term borrowings. Ceilings to be raised progressively in Phases II and III. (ii) No restrictions on use of funds and repayment. Prudential norms regarding open position and gap limits to continue.	• ADs in India are permitted to borrow in foreign currency as given below subject to certain conditions: i) From its head office or branch or correspondents outside India upto 25 per cent of its unimpaired Tier I capital or US $ 10 million, whichever is more. ii) From the head office or branch or correspondents outside India without limit for the purpose of replenishing rupee resources (not for investment in call money or other markets). iii) Lines of credit from a bank / financial institution outside India without any limit for the purpose of granting pre-shipment are post-shipment credit to its constituents. iv) A branch outside India of an AD may borrow in foreign currency in the normal course of its banking business outside India.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
2. Investments in overseas markets	Banks allowed to invest in overseas money markets up to US$ 10 million.	Investments may be in overseas money markets, mutual funds and foreign securities. To be allowed subject only to requirements of Section 25 of Banking Regulation (BR) Act 1949 and open position/gap limits.	• ADs have been given freedom to undertake investments in overseas markets subject to the limits approved by the banks' Board of Directors. Such investments may be made in overseas money market instruments and/or debt instruments issued by a foreign state with a residual maturity of less than one year and rated at least AA(-) by Standard and Poor / Fitch-IBCA or Aa3 by Moody's. • Banks in India have the freedom to invest the undeployed FCNR(B) funds in overseas markets in long-term fixed income securities rated at least AA(-) by Standard and Poor, or Aa3 by Moody's or AA by Fitch IBCA.
3. Fund-based/ non-fund based facilities to Indian JVs and WOSs abroad	Cleared by the Reserve Bank / Special Committee	To be left to banks' discretion - only restriction to be Section 25 of BR Act.	• Indian commercial banks are allowed to extend credit/ non-credit facilities (*viz.*, letters of credit and guarantees) to Indian JVs/WOSs abroad subject to certain conditions (*i.e.,* up to 10 per cent of Tier I Capital).
4. Buyers' credit/ acceptance for financing importers/ their bankers for buying goods and services from India.	Depending on amount cleared by ADs/EXIM Bank/ Working Group. FERA approval required from the Reserve Bank.	To be allowed subject only to Section 25 of BR Act.	• Commercial banks have been permitted to provide, at their discretion, buyers credit/acceptance finance to overseas parties for facilitating exports of goods and services from India subject to certain conditions.
5. Accept deposits and extend loans denominated in foreign currencies from /to individuals (only rupee settlement).	Not allowed other than under existing foreign currency deposit schemes.	To be allowed without any ceilings - assets/liabilities mismatch to be taken into overall open position/gap limits.	• The facility of foreign currency loans in India against the security of funds held in FCNR (B) deposit account to the account holders only, subject to certain conditions, has been extended. • RFC(D) Account can be credited with/opened out of foreign exchange earned and/or gifts received from close relatives (as defined in the Companies Act) and repatriated to India through normal banking channels by resident individuals. Foreign exchange earnings could be through export of goods and/or services, royalty, honorarium, etc.
6. Forfaiting	EXIM Bank alone was permitted by the Reserve Bank to do forfaiting	All ADs should be permitted to undertake forfaiting.	• ADs have been permitted to introduce scheme of forfaiting of medium term export receivables on lines similar to the scheme operated by EXIM Bank.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
B. Banks – Non-Residents			
1. Rupee accounts of non-resident banks	Used only for merchant based transactions - investments not allowed. Overdrafts allowed up to Rs.150 lakhs for normal business requirements for temporary periods.	Forward cover to be allowed to the extent of balances. Cancelling/ rebooking to be allowed. The present over draft limit could be increased and limited investments may be allowed in rupee accounts. In Phase III, non-residents may be allowed to freely open rupee accounts with banks in India without any restrictions on their operations.	• Banks may permit their overseas branches / correspondents temporary overdrawals not exceeding Rs. 500 lakh in aggregate for meeting normal business requirements. This limit applies to the amount outstanding against all overseas branches and correspondents in the books of all branches of the bank in India.
III. NON BANKS-FINANCIAL			
A. Non-Banks-Financial - Residents			
1. SEBI Registered Indian investors (including mutual funds) investments overseas	Not allowed	Overall ceiling of US$ 500 million and the ceiling should be so operated that a few large funds do not pre-empt the overall amount. Overall ceiling to be increased to US $ 2 billion by Phase III.	• Mutual Funds were being permitted on application, after obtaining necessary permission from SEBI, to invest in ADRs/GDRs of Indian companies and rated debt instrument in overseas market. Recently, they have also been permitted to invest in equity of overseas company, subject to conditions applicable to corporates/ Individuals as indicated above. The existing overall cap of US$ 500 million fixed for investment abroad has also been raised to US$ one billion. This facility is available till further notice. • Mutual funds having the approval from SEBI for undertaking such investments, need not obtain separate approval from the Reserve Bank.
2. All India Financial Institutions	Borrowings from overseas markets or investments abroad subject to the Reserve Bank / Government prior approval	(i) Borrowings more than one year to continue within ECB ceiling with Government approval.	• Borrowings permitted within ECB ceilings.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
		(ii) Short-term borrowings to be allowed subject to limits. Investments in short-term instruments to be permitted within limits up to the extent of liabilities maturing within one month in Phase I, three months in Phase II and six months in Phase III.	
B. Non-Banks – Non-Residents			
1. FIIs			
(a) Portfolio Investment	Investments in secondary market allowed once FII is registered with SEBI subject to 24 per cent ceiling (can be increased to 30 per cent at the option of the company) which includes portfolio investment by NRIs, FIIs and OCBs with a 10 per cent limit for individual FIIs and 1 per cent by individual NRIs/ OCBs. FERA approval is given by the Reserve Bank, and is valid for a period of five years.	To be allowed without the Reserve Bank's prior approval. Designated ADs would be required to report to the Reserve Bank.	• A registered FII/SEBI approved sub-account of FII is permitted to purchase/sell the shares and convertible debentures of an Indian company under portfolio investment scheme by the Reserve Bank subject to certain conditions : i) The total holding of each FII/SEBI approved sub-account of FII shall not exceed 10 per cent of the total paid-up equity capital or 10 per cent of the paid up value of each series of convertible debentures issued by the Indian company. ii) The aggregate holding of all FIIs/sub-accounts of FIIs shall not exceed 24 per cent of the paid-up equity capital or paid-up value of each series of convertible debentures. The limit of 24 per cent could be increased to sectoral cap/statutory ceiling as applicable by the Indian company by passing a resolution by its Board of Directors followed by passing of special resolution to that effect by its General Body.
(b) Primary market investment/private placement	Primary market offering/private placement allowed with the Reserve Bank approval up to 15 per cent of the new issue/ capital.	The Reserve Bank's approval not required. Designated ADs to report to the Reserve Bank.	• General permission granted to registered FIIs to purchase shares / convertible debentures of an Indian company through offer / private placement subject to specified ceiling.
(c) Disinvestment	i) Disinvestment through stock exchange allowed freely. ii) Other routes of disinvestment require the Reserve Bank's approval	The Reserve Bank approval for disinvestment to be dispensed with.	Action deferred.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
(d) Investment in Debt Instruments	Permitted to invest in dated Government securities of Central and State Governments (excluding Treasury Bills) both in primary and secondary markets. ECB ceiling included FII investment in rupee debt instruments. The debt funds of FIIs are also allowed to invest in corporate debt securities (non-convertible debentures, Bonds, *etc.*) listed or to be listed. FIIs can invest in equity and debt in the ratio of 70:30. Debt funds of FIIs can invest up to 100 per cent in debt instruments subject to a ceiling prescribed by SEBI.	Maturity restrictions on investments in debt instruments (including treasury bills) to be removed. FII investments in rupee debt securities to be kept outside ECB ceiling but could be part of a separate ceiling.	• A registered FII is permitted to purchase/sell dated Government Securities, Treasury Bills, non-convertible debentures/ bonds issued by an Indian company and units of domestic mutual funds subject to the following : i) The FII shall restrict allocation of its total investment between equity and debt instruments in the ratio of 70:30. ii) If the FII desires to invest up to 100 per cent in dated Government Securities, it shall form a 100 per cent debt fund and get such a fund registered with SEBI.
IV. INDIVIDUALS			
A. Individuals-Residents			
1. Foreign currency denominated deposits with banks/ corporates in India (only rupee settlement)	Not permitted.	To be permitted without ceiling.	• Residents have been permitted to open, hold and maintain with ADs in India a non-interest bearing current account in foreign currency to be known as Resident Foreign Currency (Domestic) (RFC) Account out of foreign exchange acquired in the form of currency notes, bank notes and travellers' cheques from the specified sources. This is in addition to existing facility of RFC account and retention of foreign exchange in cash or travellers' cheques upto US $ 2,000 or its equivalent.
2. Financial capital transfers including for opening current/ chequeable accounts	Not permitted.	To be allowed in phases with US $ 25,000 per annum in Phase I, US $ 50,000 in Phase II and US $ 1,00,000 per annum in Phase III.	• Resident individuals have been permitted to invest in overseas companies listed on a recognised stock exchange and which have the shareholding of at least 10 per cent in an Indian company listed on a recognised stock exchange in India (as on 1st January of the year of the investment). Such investments shall not exceed 25 per cent of the Indian company's net worth, as on the date of latest audited balance sheet without any monetary limit.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
			• Resident individuals have been permitted to invest within the respective ceilings as applicable in rated bonds/fixed income securities. The rating should be at least A-1/AAA by Standard and Poor or P-1/Aaa by Moody's or F1/AAA by Fitch IBCA etc. for short term obligation and corresponding rating for long term ones.
3. Loans from non-residents	Residents were allowed to obtain interest free loans on non-repatriation basis from non - resident relatives for personal and business purposes other than investment. Other cases need the Reserve Bank approval.	To be allowed to borrow up to US $ 250,000 per entity in Phase I, US $ 500,000 per entity in Phase II and US $ one million per entity in Phase III with payment of interest not exceeding LIBOR without restriction on period of loan, use of funds and repatriation of loan/ interest.	• A person resident in India (not a company) is permitted to borrow in rupees on non-repatriation basis from a non-resident Indian or person of Indian origin resident outside India subject to certain conditions. • Residents have been permitted to borrow upto US $ 250,000 from their close relatives, resident outside on repatriation basis provided the loan is free of interest and is repayable after one year.
B. Individuals: Non-Residents			
1. Capital transfers from non repatriable assets held in India (including Non-Resident Ordinary (NRO) and Non-Resident Non-Repatriable Rupee Deposits NR(NR)RD accounts)	Not allowed; however, a few cases allowed on sympathetic grounds.	To be allowed in phases with US $ 25,000 per annum in Phase I, US $ 50,000 in Phase II and US $ 1,00,000 per annum in Phase III.	• To provide full convertibility of deposit schemes for non-resident Indians and rationalise the existing non-resident deposit schemes, Non-Resident Non-Repatriable Rupee Deposits NR(NR)RD and Non-Resident Special Rupee (NRSR) Account schemes have been discontinued with effect from April 1, 2002. The maturity proceeds of the deposit under NR(NR)RD shall be credited to the account holders Non-Resident (External) Rupee account (NRE) and the maturity proceeds of the NRSR will be credited to the account holders' NRO account. • The existing dispensation of permitting transfer of funds out of NRO accounts for different purposes such as education, medical, sale proceeds of immovable property, assets of foreign nationals including retired employees/ widows of Indian citizens resident outside India and assets in India acquired by NRIs/PIOs by way of inheritance/legacy, has been removed. Instead ADs have been permitted to allow remittance upto US $ one million in a year, subject to Indian taxes. However, if the assets represent sale proceeds of immovable property, the present requirement that the property should have been held for 10 years continues. In case property is sold, having been held for less than ten years, remittance can be made if the sales proceeds have been held by NRIs/PIO for the balance period.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
			• NRIs/PIOs have been permitted to utilise the funds in their NRO accounts to the extent of card limit, for settlement of International Credit Card charges in respect of cards issued by banks in India.
2. Foreign Direct Investment in India (other than in real estate)	a) FDI for NRIs with repatriation benefits are to be cleared by the Reserve Bank/ Government under FDI policy. b) FDI for other non-resident individuals are to be cleared by Government and the Reserve Bank.	No Reserve Bank permission for FDI subject to reporting by ADs.	• Government of India have since substantially expanded foreign investment under the "RBI's Automatic Route" to include all items/activities, except certain items, (*i.e.,* 6 prohibited items and 12 items included in the negative list) for investment under FDI and NRI investment, subject to sectoral caps. Investment under automatic route requires reporting of the transaction to the Reserve Bank within 30 days. Investments exceeding these sectoral caps or investment in sectors in the negative list requires approval from FIPB. • A registered broker in India may purchase shares of an Indian company on behalf of person resident outside India for the purpose of converting the shares so purchased into ADRs/GDRs subject to certain conditions. • Existing non-resident shareholders have been permitted to apply for issue of additional equity shares or preference shares or convertible bonds over and above their rights entitlement, subject to sectoral cap.
3. Portfolio Investment in India through stock exchanges	Allowed to NRIs within the 24 per cent ceiling (can be increased to 30 per cent at the option of the company) which includes portfolio investment by NRIs, FIIs and OCBs subject to approval by the Reserve Bank which is given for a period of five years. The investment restricted to 1 per cent by individual NRIs/ OCBs and 10 per cent by individual FIIs.	Allowed to all non-residents without the Reserve Bank's prior approval. Designated ADs would be required to report to the Reserve Bank.	• An NRI is permitted to purchase/ sell shares and/or convertible debentures of an Indian company through a registered broker on a recognised stock exchange provided : (i) the NRI routes all his transactions through designated branch of an AD in India. (ii) the paid-up value of shares purchased by NRIs/ both on repatriation/non-repatriation basis does not exceed 5 per cent of the total paid-up capital of the company concerned. (iii) the paid-up value of each series of convertible debentures both on repatriation/non-repatriation basis does not exceed 5 per cent of the total paid-up value of each series of the convertible debentures of the company concerned.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
			(iv) The aggregate paid-up value of shares of the company purchased by NRIs does not exceed 10 per cent of the total paid-up capital and in the case of convertible debentures, the aggregate paid-up value of the each series of debentures purchased by NRIs does not exceed 10 per cent of the total paid-up value of each series of the convertible debentures of the concerned company. • The above ceilings of 10 per cent can be raised to 24 per cent if a Special Resolution to that effect is passed by the General Body of the Indian company concerned. • The facility to NRIs/FIIs/FVCIs to purchase shares or convertible debentures of an Indian company, which is engaged in Print Media Sector has been withdrawn. The restriction is also applicable to purchase of shares and convertible debentures of NRIs on non-repatriation basis.
4. Disinvestment	Disinvesment to be approved by the Reserve Bank except where sales are made through stock exchange under portfolio investment scheme.	The Reserve Bank approval to be dispensed with.	• Reserve Bank has issued Notification in terms of which exemption has been granted for sale/transfer of shares, bonds, or debentures of Indian companies by NRIs/PIOs through stock exchange in cases where such transfers are made in favour of Indian citizens or PIOs resident in India or in favour of body corporate/ incorporated under any law in force in India provided the transferor had purchased/ acquired shares/bonds/ debentures in accordance with the terms and conditions prevailing under FEMA, the Reserve Bank approval granted at the time of acquisition or the Reserve Bank Notification No. FEMA 20/3.5.2000.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
V. FINANCIAL MARKETS			
1. Foreign Exchange Market			
(a) Forward Contracts	Forward contracts are allowed to be booked on the basis of business projections in respect of exporters and importers. Also forward cover allowed for non residents for limited purposes such as dividend remittance and freight/passage collections.	To allow all participants in the spot market to participate in the forward market; FIIs, non residents and non resident banks having rupee assets can be allowed forward cover to the extent of their assets in India. Banks to be allowed to quote two way in rupee to overseas banks/ correspondents both spot and forward subject to their position/ gap limits. Those with economic exposures to be allowed to participate in forward market. In Phase III, no restrictions in spot/ forward market participation.	• Importers/exporters are now permitted to book forward contracts on the basis of declaration of an exposure upto the eligible limits (the average of the past three year's export/import turnover or the previous year's turnover, whichever is higher) subject to the condition that the contracts so booked and outstanding at any point of time shall not exceed 50 per cent (raised from 25 per cent) of the eligible limit, provided that contracts booked for amounts in excess of 25 per cent of the eligible limit shall be on a deliverable basis. • Reserve Bank on application may consider permitting importers / exporters desirous of availing limits higher than the overall cap of 50 per cent to book forward contracts on the basis of past performance. • ADs have been given freedom to offer the facility of rebooking of cancelled contracts to all foreign exchange exposures falling due within one year without any cap. • ADs may also enter into forward contracts with residents in respect of transactions denominated in foreign currency but settled in Indian Rupees. These contracts shall be held till maturity and cash settlement would be made on the maturity date by cancellation of the contracts. Forward contracts covering such transactions once cancelled, are not eligible to be rebooked. • Resident entities having overseas direct investments have been permitted to hedge the exchange risk arising out of such investments. Accordingly, ADs may enter into forward/option contracts with residents who wish to hedge their overseas direct investments (both in equity and loan), subject to verification of such exposure and provided further that the contracts are completed by delivery or rolled over on the due date. • Foreign banks may hedge the entire Tier I capital held by them in Indian books subject to the conditions prescribed by the Reserve Bank.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
(b) Authorised Dealers	Authorised dealers at present are only banks.	All India Financial Institutions (FIs), which comply with the regulatory / prudential requirements and fulfill well defined criteria, should be allowed to participate as full-fledged ADs in the forex market. In Phase III, to allow select Non-Banking Financial Companies (NBFCs) to act as full fledged ADs on the basis of criteria similar to FIs.	Action deferred.
(c) Products	Currently, the only derivative in the Rupee-Dollar market is the forward contract. ADs have been allowed to enter into Rupee/ Dollar currency swaps with counterparties in India subject to open position and gap limits. Cross currency derivatives and interest rate derivatives allowed for covering underlying exposures to be routed through ADs.	All derivatives including rupee based derivatives to be allowed. Futures in currencies and interest rates to be introduced with the system of screen based trading and an efficient settlement mechanism. In Phase II, direct access to overseas markets by corporates for derivatives without routing through ADs.	• Index based futures have been introduced. • Residents and non-residents have been permitted foreign currency rupee options to hedge currency exposures. • FIIs have been permitted to trade in all exchange traded derivative contracts approved by SEBI, subject to limits prescribed by SEBI. • NRIs have been permitted to invest in exchange trade derivative contracts approved by SEBI, out of Rupee funds held in India on non-repatriation basis, subject to limits prescribed by SEBI. Such investment is not eligible for repatriation. • Derivative products like forward rate agreements and interest rate swaps were introduced in July 1999 to enable banks, FIs and Primary Dealers (PDs) to hedge interest rate risks.
2. Government Securities market	A number of measures have been taken to strengthen the market for Government Securities such as a move towards market related rates of interest, introduction of auctions and new instruments and measures to develop the secondary market through Primary Dealers (PDs) and Satellite Dealers (SDs).	i) Access to FIIs in Treasury Bill market; (ii) the Reserve Bank to develop Treasury Bill market offering two-way quotes; (iii) Government Securities (including Treasury Bills) futures to be introduced; (iv) the Reserve Bank to provide Liquidity Adjustment Facility to PDs through Repos and Reverse Repos and (v) number of PDs and SDs to increase.	• FIIs were permitted to purchase/sell Treasury Bills and Government dated Securities • Role of Primary Dealers have been increased. • New auction based instruments introduced. • Floating Rates Bonds (FRBs) benchmarked to the 364 day treasury bill yields and a 10 year loan with embedded call and put options exercisable on or after 5 years from the date of issue were introduced.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
		Progressive increase in share of PDs in underwriting. Commission to PDs to be related to underwriting commitment. (vi) Government to initiate action for setting up of an Office of Public Debt (OPD) (vii) Delivery Versus Payment (DVP) system to be fully automated for all securities on a real time basis with proper safeguards for ensuring that risks are controlled.	• FIIs were allowed to set up 100 per cent debt funds to invest in Government dated securities in both primary and secondary markets. • A practice of pre-announcing a calendar of treasury bills and government securities auctions to the market was introduced. • The Negotiated Dealing System (NDS) was operationalised in February 2002 to enable on line electronic bidding facility in the primary auctions of Central/ State Government securities, Open Market Operation (OMO)/LAF auctions, screen based electronic dealing and reporting of transactions in money market instruments, including repo and to facilitate information on trades with minimal time lag. • Retail trading of Government Securities at select stock exchanges commenced in January 2003. • Improvements in transparency of operations and data dissemination.
3. Gold	There were restrictions on import of gold. There were only three channels through which import of gold was allowed. (i) Through canalising agencies (ii) through returning NRIs and (iii) through special import licences.	(i)Banks and financial institutions fulfilling well defined criteria to be allowed to operate freely both in domestic and international markets; (ii) Sale of gold by banks and FIs included under (i) above to be freely allowed to all residents; (iii) Banks to be allowed to offer gold denominated deposits and loans; (iv) Banks fulfilling well-defined criteria may be allowed to mobilise household gold and provide working capital gold loans to jewellery manufacturers as also traders; (v) Banks may be allowed to offer deposit schemes akin to GAPs (gold accumulation plans).	• Banks fulfilling certain criteria have been permitted to import gold. Banks have been permitted to accept gold under the Gold Deposit Scheme. • Banks have been permitted to use exchange traded and Over the Counter (OTC) hedging products to manage their price risk.

Item	Position at the time of Report	Recommendation of the Committee	Measures undertaken
1	2	3	4
4. Participation in international commodity markets.	Not allowed.	To be allowed.	• Indian entities having genuine underlying exposure have been permitted to access international commodity exchanges for Exchange Traded Futures Contract/ Options (purchase only) for hedging commodity price. Hedging of oil & petroleum products permitted since September 2000. • Further, Indian entities have also been permitted to use OTC future contracts based on average prices. They have been permitted to hedge exposures to bullion prices arising from export commitments in the London Bullion Market (through London Bullion Market Association approved brokers) besides recognised international exchanges. • General permission has been granted to entities in Special Economic Zones (SEZs) for undertaking hedging transactions in the international commodity exchanges/markets to hedge their commodity price risks on import/export, provided, such transactions are undertaken on stand-alone basis. (By “Stand-alone” it is meant that units in the SEZs would be completely isolated from financial contacts with their parent or subsidiaries in the mainland or within the SEZs as far as their import/export transactions are concerned). • Foreign banks have been given freedom to make their own decision as regards the timing to hedge their Tier I capital held in Indian books.

IX INTERNATIONAL FINANCIAL ARCHITECTURE

Introduction

9.1 The design of international financial architecture that is appropriate for promoting economic growth while ensuring financial stability has been a subject of intense debate worldwide. Despite frequent modifications to adapt to the changing needs of national economies and emerging complexities of the globalisation process, the international financial architecture has, arguably, had only a limited success in ensuring global monetary and financial stability. While weaknesses of international financial architecture had been exposed in various economic crises occurring in the world economy from time to time, it was perhaps the widespread East Asian crisis in 1997 that triggered a renewed debate on the need to revamp the architecture for the international monetary and financial system.

9.2 With the contagion spreading across several countries, the East Asian crisis revealed serious shortcomings of the international financial architecture in respect of both crisis prevention and crisis management. Some of the major shortcomings observed included: (i) untimely and inadequate availability of financial assistance for the countries under stress; (ii) absence of an effective debt resolution mechanism; (iii) lack of a comprehensive and reliable early warning system; and (iv) absence of effective means to involve the private sector in resolving crises.

9.3 Inadequacies in the international financial architecture have, time and again, underscored the need for a new framework. Consequently, several measures were initiated by the international financial community and national authorities to address the weaknesses of international financial architecture. The perceived role of a new architecture, it was felt, would be to reduce the probability of a crisis; contain the severity of crises when they occur; and as far as possible, insulate the global economy from contagion, while providing desirable level of confidence to the national authorities to sustain the process of globalisation.

9.4 In the debate on international financial infrastructure, increased recognition has been given to three pre-requisites for the efficient functioning of the financial sector, *viz.*, a well designed infrastructure, effective market discipline, and a strong regulatory and supervisory framework. A well designed infrastructure includes a proper legal and judicial framework, good corporate governance, comprehensive accounting standards, a system of independent audits and an efficient payment and settlement system. Effective market discipline also requires a good credit culture and well developed equity and debt markets with a wide variety of instruments for risk diversification. A sound regulatory and supervisory system contributes to the development of financial infrastructure and in enforcing market discipline.

9.5 Against this backdrop, this Chapter analyses, in detail, the international financial architecture that has been evolving after the East Asian crisis. The chapter is organised into five sections. Section I deals with the international financial architecture in historical perspective. Section II critically analyses the evolution of the new international financial architecture in the aftermath of the East Asian crisis. Section III presents the Indian perspective of the new international financial architecture. Section IV delineates some of the issues for further reform in the international financial architecture. The Chapter ends with concluding observations.

I. HISTORICAL PERSPECTIVE OF INTERNATIONAL FINANCIAL ARCHITECTURE

9.6 The importance of economic cooperation among nations has always been recognised. In the recent period, however, it has emerged as a pre-requisite for overall growth and stability worldwide. The international financial architecture whose genesis can be traced back to the days of gold standard has come a long way in terms of international economic cooperation.

9.7 During the period of the gold standard that prevailed from 1875 to 1914, gold played the role of a medium of exchange along with a store of value. Under the gold standard, the standard unit of currency was a fixed weight of gold or the value of a fixed rate of gold with paper money convertible on demand into gold. The gold standard came under severe constraint after the World War I. War ravaged economies chose

to revive their economies independently given the then lack of cooperation among nations. Various countries engaged in competitive devaluations to get an edge over others in the prevailing unrestricted trade environment. Such 'beggar thy neighbour' policies devastated the international economy. World trade declined sharply. Unemployment surged and the standard of living declined in many countries. Unable to serve the needs of nations, the gold standard in which gold played the role of a medium of exchange, was abandoned in 1931.

9.8 A series of efforts were made towards the end of World War II to restore some order to the international monetary system. Three main decisions emerged in a conference held at Bretton Woods, New Hampshire (USA) in 1944 to negotiate the institutional set-up for the post-War world economic order: (i) all national currencies were to be tied to the US dollar which, in turn, was pegged to gold (at $35 an ounce); (ii) capital controls introduced during the wartime were to remain in place; and (iii) international institutions like the International Monetary Fund (IMF) and the World Bank were to be founded.

9.9 Countries that joined the IMF agreed to keep their exchange rates pegged to the US dollar and in the case of the United States, the value of the dollar was fixed in terms of gold. The peg could be adjusted but only to correct a 'fundamental disequilibrium' in the balance of payments and that too with the concurrence of the IMF (the Articles of Agreement). The system worked well as long as the US had enough gold to back its currency. With the then large current account surplus, the US had both ability and willingness to continue the gold/dollar standard to command international acceptability. However, the situation soon reversed on account of over-financing of exports by the US and the picking-up of economic activity in war-torn countries. Both these factors led to a dollar glut, which strengthened the role of dollar as an international currency but at the cost of loosened grip of the Federal Reserve on money supply and consequent inflation. Also, the potential dollar claims against the US gold supply became seven times larger than what could be honoured by the United States. Recognising this precarious situation, the US severed the link between the dollar and gold on August 15, 1971. The US Government suspended the convertibility of the US dollar and the dollar reserves held by other countries into gold. Gold became another commodity whose price was left to the market forces of demand and supply. Since then the IMF members have been free to choose any form of exchange arrangement except pegging their currency to gold.[1]

9.10 The Smithsonian Agreement among the Group of Ten countries, entered into in December 1971 with the objective of re-instituting a system of stable exchange rates at new par values, lasted only 14 months. The UK government decided to allow the Sterling to float in June 1972. In early 1973, the Swiss Franc and then the Japanese Yen were allowed to float against the US dollar. The international financial system was now left to the vicissitudes of the market forces of demand and supply. With this, the gold standard became history and by 1973, the dollar firmly assumed the role of the world's key international currency.

9.11 The decade of 1970s was marked by a sharp rise in syndicated bank lending, especially to Latin American countries. The first oil shock[2] that occurred in 1973 had serious implications for the US economy as also for developing economies. With the US importing half of its oil from the OPEC, an inflationary shock struck the US economy coupled with a massive transfer of wealth to OPEC nations in the form of petrodollars. On the other hand, oil-importing developing countries, suffering a deteriorating balance of payments situation, required funds for financing their oil and other crucial imports. As funds from the IMF for such purposes were available on a limited scale and that too on some restrictive conditions, rescue came from the recycling of the petrodollars. Flushed with petrodollars along with limited absorptive capacity, OPEC nations started parking their petrodollars with European and American banks, which, in turn, given the general recessionary trend, used such petrodollars and eurodollars to provide loans to developing countries.[3] The spurt in petrodollar funds, in turn, increased developing countries' debt heavily. The second round of OPEC price increase in 1979 made this high level of debt unsustainable. The US economy suffered a three-year period of stagflation (1979-81) along with further worsening of trade and current accounts. The requirements of developing countries for funds received another demand impetus, and the American banks were more than ready to provide loans to them. Loans to developing countries, mainly Latin

[1] This was formalised in terms of the Second Amendment to the Articles of Agreement of the IMF which became effective on April 1, 1978.

[2] Outraged by the US support of Israel during the Yom Kippur War, the OPEC put an embargo which dramatically raised the price of oil (from $1.30 a barrel in 1970 to $10.72 per barrel by 1975).

[3] Large accumulated US dollars with oil exporting countries are known as Petrodollars. Eurodollars are US dollar deposits in commercial banks outside the United States.

American countries, were made at variable interest rates. Funds raised were utilised mainly to pay for oil imports, the development of import substitution industries and financing large infrastructure projects. However, restrictive monetary policies, needed to deal with the inflationary impact of the rise in oil prices, pushed up the cost of servicing the existing debt as well as the cost of new borrowings. Global demand also slowed down as a result of which investment projects undertaken turned out to be unsustainable. The build-up of developing countries' debt coupled with increasing liabilities of debt servicing on account of rising interest rates led to a debt crisis that surfaced with Mexico in 1982. The debt crisis, which engulfed countries like Argentina, Brazil, Chile, Venezuela, Peru, Nigeria, Philippines, Turkey, Poland, Romania, and many other countries, exacerbated the problem as the western economies were themselves suffering from stagnation.

9.12 Almost all the debt crisis affected countries of Latin America went in for IMF's Stabilisation programmes and World Bank's Structural Adjustment Programmes (SAP).[4] In view of the fact that the existing financing mechanisms were inadequate and that some of the low income countries needed highly concessional financial support on a longer term-basis, the IMF set up the Structural Adjustment Facility (SAF) in March 1986 besides its regular funding scheme, which was subsequently renamed as Enhanced Structural Adjustment Facility (ESAF) in December 1987, for providing assistance on concessional terms to low income member countries (such as Bolivia, Guyana, Honduras, and Nicaragua from Latin America and the Caribbean region) facing a persistent balance of payment problem.

9.13 Given the formidable magnitude of the debt (approximately US $ 300 billion), the funding from the IMF and the World Bank was insufficient to resolve the debt crisis and the need was felt for restructuring the debt by involving the private sector (Bulow and Rogoff,1990). A plan, known as Brady Plan (formulated by Nicholas Brady, Secretary, US Treasury), was evolved in 1989, which involved a permanent reduction in principal and the existing debt servicing obligations. Substantial funds were raised from the IMF, the World Bank and other sources by debtor nations to facilitate such a debt reduction by issuing instruments such as debt-equity swaps, buy-backs and exit bonds.

9.14 Gross capital flows at global level rose significantly since the 1980s (See Chapter VIII). Capital flows to developing countries quadrupled between the early 1980s and early 1990s. Total net private capital inflows to emerging market economies finally peaked at US $ 226.5 billion in 1996 (Bulow and Rogoff, 1990). The increase in capital flows was also marked by a change in composition. Unlike the capital flows of the 1980s, most of which were in the form of syndicated bank lendings, capital flows in the 1990s comprised largely foreign direct investment (FDI), bonds (including short-term debt), and portfolio flows (See Chapter VI). The sharp increase in international capital flows in the 1990s to developing countries was facilitated by two factors. First, developing countries liberalised their domestic financial sector and external sector. The proportion of emerging stock markets allowing free entry to foreign investors roughly doubled to nearly 60 per cent between 1991 and 1994 (World Bank, 1997). Developing countries created investment opportunities for institutional investors by privatising public sector enterprises and deepening their financial markets. Second, advances in information and communication technology made it much easier to evaluate and monitor investment prospects around the globe.

9.15 The 1990s also exhibited a series of crises, beginning with the fall of the exchange rate mechanism (ERM) of the European Monetary System in 1992-93, the Mexican crisis in 1994, the East Asian crisis in 1997, the Russian and Brazilian crises in 1998, and later Argentine and Turkish crises in 2001.

9.16 The ERM crisis brought into focus the ability of speculators to precipitate a crisis and the limited ability of available foreign exchange reserves to stem the run on a currency in a world of volatile capital flows. The ERM crisis also highlighted the trade-off between monetary and exchange rate management policies under a convertible currency. Mexico again suffered a currency crisis, which deteriorated into a debt crisis in 1994 mainly due to volatile capital flows. This time, however, being a partner of the US in North American Free Trade Area (NAFTA), Mexico received a large bail out package of unprecedented magnitude amounting to around US $ 50 billion of official financing. The enormity of the crisis alarmed the world community. Accordingly, the G-7 meeting at Halifax

[4] The stabilisation programme of the IMF seeks to achieve fiscal consolidation and current account stabilisation, while the World Bank's Structural Adjustment Program (SAP) is a long-term programme aiming at raising the GDP and facilitating the integration of borrowing country with the world economy.

in July 1995 called for a number of measures to improve the stability of the global economy.

9.17 The most severe shock to the then existing international financial architecture was witnessed during the East Asian crisis, which unfolded in 1997. The East Asian crisis began with the collapse of the Thai Baht in July 1997 and then engulfed other Asian countries like South Korea, Indonesia, Philippines and Malaysia. The East Asian crisis could not be explained along traditional lines as some of the countries that were affected exhibited strong macroeconomic fundamentals. The crisis reflected a typical case of structural imbalance and some major deficiencies in the affected economies. Uncontrolled capital account liberalisation on the back of weak financial systems that were characterised by poor monitoring and surveillance, inappropriate policy stances such as pegged exchange rates and unlimited access to foreign currency loans for the private sector led to the crisis. Lack of timely and adequate financial assistance from the multilateral institutions, at least initially, seems to have exacerbated the crisis.

9.18 The post East Asian crisis period was to be marked by a series of country-specific financial crises. Faced with significantly large capital outflows in the face of inadequate reserves, Russia defaulted on its domestic and external debt in August 1998. It subsequently devalued its currency, thereby disrupting the international economy to a certain extent. This event reinvigorated the debate on evolving an appropriate mechanism to sovereign debt restructuring. In February 1999, following months of speculative pressure and in spite of a large IMF rescue package, the Brazilian Real was devalued. Although Brazil was a victim of the unsettled international capital markets, it did have fundamental problems. Its innovative *Real Plan,* adopted in 1994, to control hyper-inflation (more than 2,700 per cent per year at that time) and acceleration in GDP growth led to a dramatic decline in inflation, an overvalued currency and a widening current account deficit. Moreover, inadequate fiscal consolidation led to fears of default, high interest rates, and a consequent debt spiral.

9.19 In September 2001, Argentina defaulted on almost US $ 3 billion debt owed by it to the IMF (the largest non-payment of a loan in IMF history). Argentina, with foreign exchange reserves of over US $ 13 billion, chose to keep its kitty closed until the IMF agreed to a three-year aid deal. Interactions between an unsustainable fiscal regime and the existing currency board arrangement in the face of unfavourable external developments were the most crucial elements in the Argentine crisis. The inability to mount an effective and timely policy response under the assumption that the short boom experienced by the economy during the mid-1990s would be sustained further compounded the problem.

9.20 The immediate cause of crisis in Turkey in 2001 was a combination of portfolio losses and liquidity problems in a few banks, which triggered a loss of confidence in the entire banking system leading to a reversal of capital flows. The overnight interest rates soared, culminating into a failure of the banking system. The Turkish Lira was devalued by 30 per cent in February 2001 and the Government adopted a floating exchange rate regime to keep most of its reserves intact.

9.21 Some stylised facts emerging from a series of crises in the 1990s and the beginning of the present decade can now be put in perspective. The crises of the 1990s could be characterised as capital account crises as in almost all the cases they were caused by sharp and quick reversal of capital flows. Thus, while debt crises of the 1980s were caused by inability of the indebted countries to service the debts which were largely in the form of syndicated bank loans, the crises of 1990s were caused by reversal of capital flows, which were largely in the form of short-term bonds and portfolio flows. The approach towards the management of such flows failed to take into account associated risks. Inappropriate exchange rate policy was the other most common feature in all the crisis hit countries. Domestic financial systems in most of these countries were fragile due to inadequate supervision of the banking system. Corporate governance practices followed by the corporate sector also left much to be desired. Most of these countries were also found to be lacking in transparency.

9.22 The Asian crisis in 1997 and subsequent crises in Russia, Brazil, Argentina and Turkey exposed several weaknesses of the international financial architecture relating to preventive requirements, surveillance system and crisis resolution measures. Inappropriateness of exchange rate policies, haphazard and unplanned capital account liberalisation leading to exposure of the economy to risky foreign capital, mainly short-term debt, and inadequate domestic institutional framework were some of the major weaknesses. Besides, absence of strict and reliable monitoring and surveillance of financial system, lack of comprehensive and reliable early warning systems, and deficiencies in the international rating system adopted by the rating agencies turned out to be grossly inadequate. Finally, inadequate international liquidity to meet different

needs and to build confidence, lack of timely and appropriate financial assistance from multilateral institutions, especially the IMF, lack of effective debt resolution mechanisms and involvement of private sector in resolving crises, and application of 'one-size-fits-all' policy recommendations and the accompanying conditionalities by multilateral lending institutions were also responsible, *albeit* indirectly.

9.23 Although inadequacies in the international financial architecture were exposed during the debt crisis in Latin American economies in the 1980s and some measures were initiated to reform the architecture, regrettably, it did not become a rallying point for the overhaul of the then existing architecture. As a result, the vulnerabilities of the existing structure resurfaced with the East Asian crisis, which brought with it the "contagion effect" for the first time spreading across several countries even with sound economic policies and macroeconomic fundamentals**.** This proved to be a turning point for the debate on the reform of the international financial architecture.

9.24 The Asian crisis brought to the fore several broad issues, which have since become the focus of the current debate on international financial architecture:

(i) The decades of 1980s and 1990s witnessed a sharp increase in trade and finance. However, there has not been a commensurate increase in the lending resources of international financial institutions (IFIs). In view of the growing size of capital flows and the speed with which they could be reversed, it is argued that international financial institutions will not be able to deal effectively with the crises. It is, therefore, being felt in many quarters that resources of international financial institutions need to be augmented suitably to enable them to cope with the crises should they occur. The crises of the 1990s have also raised several concerns about governance of international financial institutions.

(ii) Capital flows have been observed to cause overshooting of exchange rates as market participants act in concert. It is their expectations and reactions to news, which drive capital flows and exchange rates out of alignment with fundamentals (Mohan, 2003). The crises reflected the tendency of financial markets to experience sharp boom-bust cycles. During financial booms, lenders and borrowers underestimate the risks involved in high levels of indebtedness. Such risks only become apparent, with particular severity, during the ensuing downswings and panics. This volatility reflects not only imperfections in the flow of information, but also radical changes in its interpretation and sharp revisions in expectations as new information arrives.

(iii) In the light of the volatility induced by capital flows and self-fulfilling expectations that this can generate, there is now a growing consensus that emerging market countries should, as a matter of policy, maintain "adequate reserves" (Jalan, 2003; Reddy, 2003b). Large reserves are deemed to be necessary as they provide 'self insurance' which can be potentially more effective to deal with crises than provided by the existing international financial architecture.

(iv) The East Asian crisis has demonstrated that financial crises are contagious and foreign exchange markets are prone to bandwagon effects (Mohan, 2003). Markets do not adequately discriminate between countries with strong and weak economic fundamentals under panic conditions. In many cases, financial crises spread because highly leveraged international investors, faced with losses in one market and ensuing margin calls, sell good assets in other countries to recoup the losses leading to sharp swings in asset prices. Investment banks and mutual funds may also engage in a similar behaviour in order to raise liquidity in expectation of withdrawals by clients (IMF, 2001).

(v) Any form of financial crisis imposes substantial social costs for an economy, particularly in respect of a debt crisis or banking sector crisis. As it happens, poor sections of society bear a substantial share of the costs of adjustment to debt crisis, whereas they benefit only marginally from financial booms. The experience of many developing countries in several regions of the world also indicates that the social effects of debt crisis continue to afflict countries even after several years of successful economic restructuring and recovery. The Latin American experience since the early 1980s is particularly relevant in this regard.

(vi) The recent crises have also brought into sharp focus a fundamental anomaly in the process of development of the global economy in the last decade. The speed of adjustment of the global regulatory and institutional regimes to the increasingly sophisticated and dynamic international financial world, with rapid globalisation of financial portfolios, has been inadequate. In brief,

existing institutions are sometimes found deficient to deal with financial globalisation. This is true for institutions at the international level as well as for domestic institutions.

(vii) The East Asian crisis showed that financial system problems could influence the effectiveness of monetary policy, set off capital flight, create large fiscal costs related to rescuing of troubled financial institutions, and deepen economic recessions. Moreover, financial weaknesses can have contagion effect. Thus, growing financial liberalisation and increasing mobility of international capital at an unprecedented rate have underlined the need for appropriate domestic macroeconomic and financial policies (World Bank, 2000).

(viii) Recent global developments have transformed the environment in which a country's economic and financial policies operate, throwing up opportunities as well as challenges. Globalisation has greatly expanded economic interdependence and interaction of countries. This has created the need for greater coordination in terms of the design of appropriate institutional architecture as well as standardisation reflected in increasing internationalisation of policy environment, *i.e.*, adoption of similar economic and financial policy approaches (Mohan, 2003).

9.25 Against the backdrop of various deficiencies of the international financial system, several initiatives have been undertaken by the international community to reform the present architecture.

II. NEW INTERNATIONAL FINANCIAL ARCHITECTURE: THE EVOLVING STRUCTURE

9.26 The process of reform in the international monetary and financial system, although steady, is marked by certain points of inflexion. While the basic objectives of the international financial structure continue to remain same, *viz.*, of fostering global trade in goods and assets, promoting prosperity and growth, achieving an equitable distribution of wealth and ensuring global monetary and financial stability, the instruments and policies envisaged to deal with the new challenges of unstable global capital flows in an era of crises and contagion are quite different from those applied in the earlier period of crises.

Initiatives Undertaken by the International Community

9.27 The international financial architecture in recent years has been evolving rapidly with frequent episodes of financial crisis in emerging market economies. The Mexican crises of 1995 resulted in the largest support of official financing to avoid a debt default. The US Treasury and the IMF garnered US $ 50 billion of official financing to redeem the whole stock of *tesebonos*.[5] In exchange, Mexico adopted a set of policy changes aimed at cutting its current account deficit and reducing inflation. However, the Mexican 'bailout' brought into focus the moral hazard problem associated with such a package and the limitations of IMF's resources (Kenen, 2001). The Rey Report (G-10 Working Party chaired by Jean Jacques Rey), which was preceded by the Halifax Summit of 1995, supported large scale financial assistance, as was done in Mexico, only under exceptional circumstances and recognised the inherent problems of moral hazard and inequitable distribution of burden of adjustment in cases of such financing.[6] While praising the effectiveness of the Paris Club[7] and the London Club[8] in restructuring sovereign debt, it rejected the proposal for radical innovations such as the establishment of an International Bankruptcy Court to meet the need of sovereign debtors. However**,** it recognised the difficulties associated with the restructuring of sovereign bonds.

9.28 In response to the Halifax recommendations, the IMF also initiated some measures, which, *inter alia* included: (i) an Emergency Financing Mechanism (EFM) to foster prompt and continuing consultations between the Fund's Management and its Executive Board; (ii) a Special Data Dissemination Standard (SDDS) and a General Data Dissemination System (GDDS) to improve transparency; and (iii) the New Agreement to Borrow (NAB) to augment the Fund's resources.

9.29 Notwithstanding the reforms initiated by the IMF in line with the Halifax recommendations, the East

[5] Short-term debt instruments which were repayable in Pesos but indexed to the US dollar were issued by the Mexican Government. This was issued to limit the loss of foreign exchange reserves of Mexico.

[6] The Halifax Summit recommended for (i) Development of an Early Warning System for crises prevention; (ii) Development of an 'Emergency Financing Mechanism' at the IMF for crisis resolution; (iii) Enhancement of Fund resources by doubling the entitlement under General Agreement to Borrow (GAB); (iv) Safegaurd the financial system through strengthening international co-operation in supervising financial instruments and markets (v) Reform the legal system involving restructuring of sovereign debt (vi) Examination of 'other procedures' such as the establishment of an International Bankruptcy Court.

[7] Paris Club is a forum of official creditors for restructuring sovereign debt.

[8] The London Club provides for a forum for restructuring sovereign debt to commercial banks.

Asian crisis of 1997 took the international economy by surprise. In response to this crisis, the IMF adopted new instruments in the form of the Supplementary Reserve Facility (SRF) in 1997 and the Contingent Credit Line (CCL) in 1999. However, the use of such facilities was tagged to the compliance with stricter Fund conditionality. The severity of the crisis in East Asia and its contagion effect as experienced in Russia, Brazil, and Argentina brought into sharp focus the limitations of the content and sequencing of the IMF's programmes and the corresponding role of the international financial institutions in ensuring global stability.

9.30 A meeting of Finance Ministers and Central Bank Governors from a number of systemically significant economies (G-22) was held in Washington, D.C. in April 1998 to examine issues related to the stability of the international financial system and the effective functioning of global capital markets.[9] This meeting stressed the need for action in three key areas, *viz.*, enhancing transparency and accountability; strengthening domestic financial systems; and managing international financial crises. In 1999, the G-7 established the Financial Stability Forum (FSF) to promote international co-operation and exchange of information among national and international bodies involved in supervising and regulating the financial sectors. The FSF established three working groups to address the issues of international capital flows, activities of hedged funds and other highly leveraged institutions and the problems posed by the offshore financial centres. Another major development was the creation of a new international forum in 1999, the G-20 comprising the G-7 countries and other systemically important countries, including emerging market economies (EMEs). The G-20 was established to involve the EMEs in an effort to reform the international financial architecture. On the other hand, the issue of Fund conditionality, which was discussed in the Meltzer's Report,[10] commissioned by the US Congress described conditionality to be both intrusive and ineffective (Kenen, 2001). The crises in Russia, Brazil and Argentina which brought to the fore the difficulties involved in restructuring sovereign bonds resulted in the IMF's initiative for establishing a Sovereign Debt Restructuring Mechanism (SDRM) in 2001 and the whole set of issues involving Fund lending into arrears.

9.31 The evolving international financial architecture is broadly centred around six main issues: (i) ensuring a transparent and stable global financial system so as to minimise the risks of crises; (ii) the involvement of the private sector in crisis prevention and resolution to evolve a mechanism so as to ensure an equitable sharing of burden between the sovereign debtors and the lenders in the event of crises; (iii) strengthening the IMF surveillance system with greater disclosures and transparency; (iv) encouraging sound principles of corporate governance; (v) prudent management of the external sector; and (vi) strengthening the financial sector. Some of the major initiatives undertaken to reform the international financial architecture are dealt with in greater detail in the following sections.

International Core Principles, Standards and Codes

9.32 Development and implementation of standards and codes is one of the cornerstones of the recent initiatives to strengthen the international architecture. Adherence to international standards and codes of good practices has been found desirable, especially for those countries, which access international capital markets. International standards and codes of good practices provide benchmarks for policymakers at the domestic level and investors at the global level to judge the level of stability of the domestic systems, which is a pre-requisite for a well-functioning open financial system. Various standard-setting bodies constituted by central banks, international financial institutions, national authorities and international supervisory and regulatory bodies were drawn together by the Financial Stability Forum (FSF) and a set of 12 standards have been highlighted as a common reference for various standards. These include: (i) monetary and financial policy transparency (IMF); (ii) fiscal policy transparency (IMF); (iii) data dissemination (IMF); (iv) insolvency (World Bank); (v) corporate governance (OECD); (vi) accounting (International Accounting Standards Committee, IASC); (vii) auditing (International Federation of Accountants, IFAC); (viii) payment and settlement (Committee on Payment and Settlement System, CPSS); (ix) money laundering (Financial Action Task Force, FATF); (x) banking supervision (Basel Committee on Banking Supervision, BCBS); (xi) securities regulation (International Organisation of Securities Commissions, IOSCO); and (xii) insurance (International Association of Insurance Supervisors, IAIS) (Box IX.1).

[9] The April meeting was attended by Finance Ministers and Central Bank Governors from Argentina, Australia, Brazil, Canada, China, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Korea, Malaysia, Mexico, Poland, Russia, Singapore, South Africa, Thailand, the United Kingdom and the United States. The heads of the BIS, IMF, OECD and the World Bank, as well as the Chair of the Interim Committee, attended as observers (The Willard Group).

[10] International Financial Institution Advisory Commission, 2000.

Box IX.1
International Standards: Institutions Involved

Macroeconomic Policy and Data Transparency	
Code of Good Practices on Fiscal Transparency	IMF
General Data Dissemination System (GDDS)	IMF
Special Data Dissemination Standard (SDDS)	IMF
Code of Good Practices on Transparency in Monetary and Financial Policies	IMF
Institutional and Market Infrastructure	
Principles of Corporate Governance	OECD
International Accounting Standards	IASC
International Standards on Auditing	IFAC
Core Principles for Systemically Important Payment Systems	CPSS
Real Time Gross Settlement Systems	CPSS
Settlement Risk in Foreign Exchange Transactions	CPSS
Report of the Committee on Inter-bank Netting Schemes of the Central Banks of the Group of Ten Countries (The 'Lamfalussy Report')	CPSS
OTC Derivatives: Settlement Procedures and Counterparty Risk Management	CPSS
Clearing Arrangements for Exchange-Traded Derivatives	CPSS
Delivery Versus Payment in Securities Settlement Systems	CPSS
Ten Key Principles for the Improvement of International Co-operation Regarding Financial Crimes and Regulatory Abuse	G-7
The Forty Recommendations of the Financial Action Task Force on Money Laundering	FATF
How Should We Design Deep and Liquid Markets	CGFS
Financial Regulation and Supervision	
Core Principles Methodology	BCBS
Sound Practices for Banks' Interactions with Highly Leveraged Institutions	BCBS
Core Principles for Effective Banking Supervision	BCBS
International Convergence of Capital Measurement and Capital Standards	BCBS
Amendment to the Capital Accord to Incorporate Market Risks	BCBS
Supervisory Framework for the use of 'Backtesting' in Conjunction with the Internal Models Approach to Market Risk Capital Requirements	BCBS
The Supervision of Cross-Border Banking	BCBS
Minimum Standards for the Supervision of International Banking Groups and their Cross-Border Establishments	BCBS
Principles for the Supervision of Banks' Foreign Establishments (the Concordat)	BCBS
Recommendations for Public Disclosure of Trading and Derivatives Activities of Banks and Securities Firms	BCBS
Sound Practices for Loan Accounting, Credit Risk Disclosure and Related Matters	BCBS
Enhancing Bank Transparency	BCBS
Principles for the Management of Credit Risk	BCBS
Framework for Internal Control Systems in Banking Organisations	BCBS
Operational Risk Management	BCBS
Risk Management for Electronic Banking and Electronic Money Activities	BCBS
Principles on the Management of Interest Rate Risk	BCBS
Risk Management Guidelines for Derivatives	BCBS
Objectives and Principles of Securities Regulation	IOSCO
IOSCO Resolution: Principles for Record Keeping, Collection of Information, Enforcement of Powers and Mutual Cooperation to Improve the Enforcement of Securities and Futures Laws	IOSCO
Methodologies for Determining Minimum Capital Standards for Internationally Active Securities Firms which Permit the Use of Models under Prescribed Conditions	IOSCO
Guidance on Information Sharing	IOSCO
Report on Co-operation Between Market Authorities and Default Procedures	IOSCO
Principles of Memoranda of Understanding	IOSCO
Recommendations for Public Disclosure of Trading and Derivatives Activities of Banks and Securities Firms	IOSCO
International Disclosure Standards for Cross-border Offerings and Initial Listings by Foreign Issuers	IOSCO
Risk Management and Control Guidance for Securities Firms and their Supervisors	IOSCO
Client Asset Protection	IOSCO
Operational and Financial Risk Management Control Mechanisms for Over-the Counter Derivatives Activities of Regulated Securities Firms	IOSCO
Securities Activity on the Internet	IOSCO
The Application of the Tokyo Communiqué to Exchange-Traded Financial Derivatives Contracts	IOSCO
Principles for the Supervision of Operators of Collective Investment Schemes	IOSCO
Report on Investment Management Principles for the Regulation of Collective Investment Schemes and Explanatory Memorandum	IOSCO
Co-ordination between Cash and Derivative Markets: Contract Design of Derivative Products on Stock Indices	IOSCO
Insurance Core Principles	IAIS
Principles on the Supervision of Insurance Activities on the Internet	IAIS
Supervisory Standard on Group Co-ordination	IAIS
Insurance Core Principles Methodology	IAIS
Principles for the Conduct of Insurance Business	IAIS
Supervisory Standard on On-Site Inspections	IAIS
Supervisory Standard on Licensing	IAIS
Guidance on Insurance Regulation and Supervision for Emerging Market Economies	IAIS
Model Memorandum of Understanding	IAIS
Principles Applicable to the Supervision of International Insurers and Insurance Groups and their Cross-Border Operations	IAIS
Supervisory Standard on Asset Management by Insurance Companies	IAIS
Supervisory Standard on Derivatives	IAIS
Supervision of Financial Conglomerates	JF
Intra-Group Transactions and Exposure Principles	JF
Risk Concentration Principles	JF

Source: Clark, A. (2001). JF : Joint Forum

9.33 Notwithstanding the benefits of adopting standards and codes, it is argued that such an adoption cannot guarantee financial stability. Further, the extent and depth of integration of domestic economies with international capital markets could vary from country to country. As such, all codes may not be equally relevant for a country, thereby, warranting country specific prioritisation in the extent and pace of compliance. In fact, international standards themselves keep evolving. Besides, the implementation of these standards and codes, which have multiplied in recent times, could impose severe strain on the manpower and financial resources of the implementing countries and could involve micro management of sovereign national economies and, therefore, may be overtly intrusive. An 'inclusive process' in the implementation of standards and codes, therefore, would be crucial. Under such circumstances, it is felt that each country should have the necessary flexibility to move towards broad consistency with freedom to deviate depending on its unique circumstances. Apart from reduction in cost, this will also help in strengthening ownership of standards and codes (Reddy, 2001).

9.34 An important development in the context of standards and codes has been the initiation of experimental case studies or Reports on the Observance of Standards and Codes (ROSCs) by the IMF, in collaboration with the national authorities and the World Bank. The ROSCs consist of a description of country practices and an independent assessment by the Fund of the extent to which the country meets the standard(s). The purpose of such assessments is to help identify weaknesses that may lead to economic and financial vulnerability, help countries determine reform and development priorities and provide further impetus for improved transparency and disclosure and help create incentives to adhere to standards. Keeping in view the resource requirements as well as coordination problems, the IMF has adopted a modular approach in which each standard would be assessed separately and the entire range of standards would be assessed over time. While the IMF produces reports on data dissemination and fiscal transparency as part of its usual surveillance process, reports on financial sector standards, particularly the one on banking supervision is prepared as part of the joint Bank-Fund Financial Stability Assessment Programme (FSAP). Participation in ROSCs and FSAP is, however, voluntary. The IMF feels that in future ROSCs will help national authorities develop their own reform plans, assess compliance with international standards and codes, and serve, if published, as a signal of their policies' enhanced transparency. They will also provide inputs for IMF surveillance and technical assistance.

Role of the Private Sector in Crisis Prevention and Resolution

9.35 One of the most contentious issues in the recent debate has been about achieving "private sector involvement" in crisis prevention and resolution. This issue is raised in the context of sovereign debt restructuring. Some of the key aspects involved in the restructuring of sovereign debt include: (i) estimating the size of the financing requirements; (ii) the prospects for a spontaneous return to capital market access; (iii) the availability of tools for securing appropriate private sector involvement; (iv) the impact on the country's future cost of borrowing; and (v) the possible impact of spillover effects on other countries.

9.36 The problems of sovereign debt restructuring are associated with different perceptions of the participating agents in the process. While the official sector views the sovereign debt restructuring process as disorderly and too costly to the debtor, the private creditors tend to foresee a constant risk that a sovereign's external creditors will be treated less favourably than other creditor groups (Roubini, 2002). They worry that any further steps to protect the sovereign from litigation would weaken the sovereign's incentive to pay. On the other hand, some sovereign debtors perceive that the official sector's interest in developing a bankruptcy regime is primarily motivated by a desire to reduce the level of official support provided to debtor countries. The basic problems of the debt restructuring process need to be examined in the context of such varied perceptions about the present mechanism. Several problems need to be addressed in this context. There is tendency for a rush to exit from the sovereign's debt at times of liquidity problems even when the sovereign is solvent and a rush for litigation in case there is a suspension of payments. Besides, there is a problem of having free riders or holdout litigation when the restructuring plan is not approved by a super majority of bond holders. The absence of an enforceable priority structure for the sovereign's own debt, which raises issues of equity and the relative treatment of different creditor groups, is another malaise to the system (Roubini and Setser, 2003). Moreover, the requirement of policy conditionality for enhancing the capacity of the debtor to honour its obligations and the role of the IMF in this context, as well as 'moral hazard' problems associated with 'rush to default' make the debt restructuring process problematic (Mussa, 2002).

9.37 The role of the private sector in forestalling a debt crisis is assuming importance especially in the context of limiting moral hazard problems associated with IMF bail-outs and to ensure a more equitable

sharing of the burden of adjustment between the creditors and debtors and strengthening market discipline. The whole idea is to ensure an orderly debt restructuring process and restore early access to international capital markets for the crisis affected countries.

9.38 While there is widespread acceptance of the need for an involvement of the private sector in crisis resolution, a consensus regarding the "mode" of burden sharing is yet to emerge. It is argued that a public sector imposition of default losses on the private sector would impair future private capital flows by sending the wrong signal that countries can default painlessly, thereby, destroying the quasi-collateral nature of sovereign debt. On the other hand, a too generous approach risks a moral hazard problem.

9.39 Before examining the various suggestions for "involving the private sector" it is imperative to have an overview of the nature of private sector response and its participation in crisis resolution, particularly debt restructuring, as experienced by the international community. This would bring to light the extent of voluntary participation of the private sector in recent episodes (Box IX.2).

Box IX.2

Debt Restructuring: International Experience

The international community has witnessed a number of episodes of financial crises in the recent years including debt default by both sovereign and private borrowers. The ensuing debt restructuring process involved varying degrees of voluntary initiatives by the private creditors. This is evidenced by the country experiences of debt restructuring as illustrated below:

- *Brady bond*[11] *debt reduction* - Restructuring under the Brady plan included at least two basic options for debt holders including the exchange of loans for either par bonds or discount bonds. The principal payments and a portion of the interest payable on both par bonds and discount bonds were collateralised by U.S. Treasury zero coupon bonds and other high grade instruments. Mexico was the first nation to begin negotiating with its commercial bank creditors in 1982 and succeeded in restructuring under the Brady Plan during 1989-90. This was followed by a number of countries including Argentina, Brazil, Ecuador, and Uruguay among others. Though this form of an arrangement for restructuring of bank claims initially proved to be quite successful, the dominance of Brady bonds in the emerging markets' debt markets gradually eroded during the 1990s. The default of Ecuador on its Brady bond claims in 2000 has lowered the credibility of this vehicle as a superior claim.
- *London-club rescheduling* - The classic case of private sector involvement (PSI) in the early phase of the 1980s debt crisis was the rescheduling of bank claims (including medium-term to longer maturities) at par and with interest rates above LIBOR. The reduced role of such rescheduling in the 1990s was mainly on account of a smaller share of syndicated bank claims (and larger share of bond claims), and perhaps as well because of the lesser dominance of book-value accounting and greater incidence of mark-to-market valuation even among major banks (Cline, 2002).
- *Spontaneous lendin*g remains the most voluntary form of private sector involvement as was experienced by Mexico in 1994-95.
- When an economy is in crisis, the uninterrupted inflow of direct investment can be a key source of stability, comprising an important source of voluntary PSI .
- Maintenance of short term inter-bank and trade credit by international banks as was done in the case of Brazil in the second quarter of 1999 mitigating liquidity/refinancing risks.
- A more formal elongation of short-term international bank claims into 1 to 3 year notes, as was done in Korea in early 1998 represents a relatively voluntary mode but one involving greater exertion of moral suasion and concentration among lenders.
- *Bond exchange maintaining value* - The cases of Pakistan in 1999, Ukraine in 2000, and especially Argentina's mega-swap in June, 2001, are in this category. In these exchanges, the sovereign sets forth an offer that involves an exchange of existing bonds for new ones bearing longer maturities, and at interest rates that are not lower than the original interest rates. The offers involve lesser or greater degrees of voluntarity. Whereas the Argentine swap involved more consultation with bondholders, the Pakistan and Ukraine offers were less voluntary. In principle, these exchanges do not involve debt forgiveness (Cline, 2002).
- *Bond exchange and forgiveness* - Such restructuring involving some amount of forgiveness is represented by the restructuring of Russian GKOs (treasury bills) and former Soviet debt to banks (1998), and Ecuador's Brady and other sovereign bonds, defaulted on in September 1999. After protracted London Club negotiations, some US $ 32 billion debt of the former Soviet Union was exchanged for US $ 20 billion in long-term bonds in an agreement in February 2000. In Ecuador, a unilateral exchange offer resulted in an exchange of approximately US $ 6 billion in Brady and Euro-bonds at an effective loss of about 40 per cent in January, 2000. In both of these cases "exit consent" clauses largely vitiating the claims of any holders not accepting the exchange were employed to help achieve high participation (Cline, 2002).

[11] Brady bonds were created in the wake of the Latin American debt crisis in the 1980s in an effort to restructure outstanding sovereign loans and interest arrears into liquid debt instruments.

9.40 As evident from these experiences, some degree of voluntary private sector involvement has always been an integral part of debt restructuring. Thus, suggestions to reform the present architecture through "binding in" the private sector need to be considered after maintaining a judicious balance between the objective of maintaining some degree of voluntarity in such participation as against the risk of "moral hazard" associated under the statutory process. The recent suggestions to involve the private sector in the debt restructuring process are based on three broad proposals: (i) the introduction of contractual provisions into new external debt issuance, particularly "Collective Action Clauses" (CACs);[12] (ii) creation of a new statutory regime to provide bankruptcy-style protection for a sovereign as has been proposed by the IMF in the form of the Sovereign Debt Restructuring Mechanism (SDRM); and (iii) the development of a Code of Conduct for a sovereign to follow during debt restructuring.

9.41 Contractual proposals seek to change the restructuring process by changing the provisions found in sovereign debt contracts, which are expected to reduce the problems associated with the free rider and holdout litigation. Introduction of CACs in international bond issues can take place in the following four ways:

- Using current New York law documentation in some jurisdictions;[13]
- Using current English law documentation in other jurisdictions;[14]
- Adoption of the new clauses as proposed by G-10 group of countries, which recommends following the English law convention and allows a bond's financial terms to be amended with a 75 per cent vote. Moreover, the G-10 also sought to broaden the use of trustees.
- Adoption of the Group of Six clauses as proposed by the private creditors, where the provisions for amending financial terms would be tighter than the provisions now found in English law bonds, and provisions for amending non-financial terms would be tighter than the provisions now found in the New York law bonds.

9.42 Recently, some countries such as Brazil, Korea, Thailand and Mexico, among others, with IMF supported programmes, have issued sovereign bonds with CACs. This will facilitate the rescheduling of existing bonds (as opposed to exchange) by a super-majority vote of holders. Theoretically, this can be done in bonds issued in the United Kingdom, which typically contain such clauses, but not in bonds issued in New York, which typically have been interpreted to require 100 per cent bondholder's approval for restructuring. However, in the two cases where this could have been done, *i.e.,* those of Pakistan and Ukraine (with bonds issued under U.K. law), it was not used. Efforts in this area continue on a case-by-case basis in IMF supported programmes.

Statutory Proposals

9.43 The statutory proposals[15] primarily aim at addressing the holdout/free rider problem through the creation of a statutory regime. Statutory proposals are, however, different from contractual proposals in two respects. First, a statutory regime would create the capacity to override the existing sovereign debt contracts, and, thus, immediately allow majority voting. Secondly, a statutory regime would replace a process that requires amending the financial terms of each and every bond separately. Under a statutory regime, a single aggregated vote by all bond holders on the debtor's restructuring proposal would replace such diverse efforts. The proposed Sovereign Debt Restructuring Mechanism

[12] CACs are certain contractual provisions (which govern debt contracts) between the debtor and creditors for resolving the debt related issues by fostering consultations and dialogue between the two parties. Such clauses are consensual and reduce the incentive for, or ability of, a small number of dissident creditors to disrupt, delay or prevent arrangements to support a credible adjustment programme agreeable to a majority of the concerned parties.

[13] A standard New York law contract requires the unanimous consent of all creditors to change "key financial terms", which are defined narrowly as payment dates and amounts. All other terms typically can be amended with the support of half or two-thirds of the outstanding bondholders (Roubini and Setser, 2003).

[14] A standard English law contract allows a super-majority of bondholders (typically 75 per cent) present at a meeting that meets quorum requirements to amend all the bond's terms, including the bond's payment dates and amounts. English law bonds usually make it more difficult for an individual bondholder to initiate litigation (Roubini and Setser, 2003).

[15] Also termed as the Anne Krueger approach, as she first highlighted the issue in a speech in November 2001.

(SDRM)[16] by the IMF reflects such an effort to introduce a statutory framework for smooth bond restructuring.

9.44 The statutory approach (i) allows for cessation of claims against the country in crisis; (ii) imposes a stay on litigation following the debt suspension; (iii) oversees voting process to determine the restructuring framework that is binding on all creditors ('majority restructuring') - thereby eliminating the 'free riding' or 'rogue creditor' problem; (iv) provides for interim financing from the IMF and ensure seniority of credit to new private financing; (v) prevents 'rush to default' by the debtor country - by linking activation of SDRM to Fund's assessment of country's debt sustainability; and (vi) ensures that the debtor country adopts appropriate policy measures so as to preserve asset values. A number of countries have expressed their reservations about the adoption of a SDRM suggested by the IMF. Resolving the conflict between the two dominant statutory and contractual approaches (in view of the revealed preference for the statutory approach by the IMF and for the contractual approach by the US) was crucial for ensuring further progress on the SDRM. By early April 2002, it became evident that both the IMF and the market based approach could be complimentary. The IMF, therefore, came out with an updated version of the statutory approach which was closer to the contractual approach. Under this synthetic approach, while the private sector can be encouraged to incorporate CACs into new sovereign debt contracts, the IMF can refine statutory approach by incorporating whatever the private sector proposes which may be necessary to tackle outstanding issues of inter-creditor equity, particularly, the aggregation problem across creditors. The revised approach of the IMF emphasised that the Fund will only aim at catalysing early and effective dialogue between the sovereign debtor and the creditors to ensure that the mechanism does not interfere with the sovereignty of debtor – only the sovereign debtor can request for activating SDRM. The mechanism would be used to restructure debt that is judged to be unsustainable. The integrity of the decision making process under the mechanism should be safeguarded by an efficient and impartial dispute resolution process.

9.45 The statutory proposal involved a number of technical issues, which need to be resolved. The issue of how the claims of official bilateral creditors would be treated under the SDRM is still a contentious one. Similarly, there are certain claims (because of their nature), which cannot be aggregated and would need to be restructured outside the framework of SDRM. In view of this and other difficulties, the IMF members seem unwilling to establish the SDRM through an amendment of the Fund's Articles. In the April 2003 communique of the IMF, it was indicated that it is not feasible at present to move forward to establish the SDRM and hence there is considerable merit in exploring the potential scope for aggregation under a contractual framework.

A Code of Conduct

9.46 The arguments for developing a code of conduct are based on the need for addressing the coordination problems that arise in a restructuring exercise. A code may help in laying out a roadmap describing how a debtor and its creditors should try to coordinate the restructuring of individual debt instruments so as to ensure sustainability of the restructuring exercise. In principle, a code could lay out a set of general principles, or it could introduce detailed procedural requirements that a debtor would need to meet to qualify for IMF lending (Roubini and Setsar, 2003). The existing proposals for the introduction of a code include the following:

- The Banque de France proposed a code that would set out both general principles and best practices for meeting these general principles.[17]
- The Institute of International Finance (IIF) has proposed an extensive code of debtor conduct to be enforced by IMF conditionality (Roubini and Setsar, 2003).

9.47 To sum up, there has been some progress in the direction of crisis resolution initiatives. Efforts are also underway to develop CACs to augment a market-led process for restructuring of sovereign bonds. It is heartening to note that rapid progress has been made in promoting the inclusion of CACs in international sovereign bond issuances. Positive developments

[16] The IMF has put forward three different proposals: (i) In November 2001, the IMF proposed to provide a debtor with temporary legal protection; (ii) The March 2002 IMF proposal suggested allowing a super- majority of creditors to vote to determine whether or not to give the debtor legal protection; (iii) In January 2003, the IMF proposed dropping a stay altogether, and relying instead on the deterrent value of the ability to bind in hold-outs and perhaps other litigation retardants.

[17] Toward a Code of Good Conduct on Sovereign Debt Re-Negotiation, paper prepared by the Banque de France, January 2003.

relating to the development of a voluntary Code of Conduct to deal with debt restructuring is also a promising departure from the earlier era.

IMF Surveillance and Initiatives in Ensuring Financial Stability

9.48 In the wake of a series of recent crises, the IMF has taken several steps towards strengthening its surveillance mechanism, both at multilateral and bilateral levels. Traditionally, the objective of the multilateral surveillance has been to serve as "early warning systems", while the bilateral surveillance process largely involves exchange of views through Article-IV negotiations in the field of money, credit, and public finances so as to identify the impact on the balance of payments position. Occasionally, it also served as a channel for influencing the policies of national governments. Recognising the role of capital account in triggering a crisis, the surveillance process has started emphasising issues relating to capital account, financial and banking sectors and financial sector stability as well as issues relating to income distribution, governance, environment, labour market and social policies.

9.49 Newer methods of surveillance have been devised which include: (i) precautionary arrangements under which members agree to a Fund arrangement without intending to use IMF resources - which can help in boosting market confidence; (ii) informal staff monitoring under which the Fund regularly monitors members' policies without formally endorsing them; and (iii) enhanced surveillance under which close and formal monitoring of the policies is undertaken without necessary Fund endorsement; these are generally seen as useful for facilitating debt rescheduling.

9.50 Besides the usual Article IV process, as mentioned before, the Fund conducts, on a voluntary basis, a Financial System Stability Assessment (FSSA), which draws on country specific joint Fund-Bank Financial Sector Assessment Programme (FSAP) reports (IMF, 2000b). These assessments essentially aim at: (i) identifying strengths, vulnerabilities and risks; (ii) ascertaining the financial sector's development and technical assistance needs; (iii) evaluating observance and implementation of relevant international standards and codes including an assessment of the ability of this observance in addressing the problems; and (iv) helping in the formulation and implementation of appropriate policy responses (IMF and World Bank, 2003).

9.51 The experience based on a pilot programme that started in 1999-2000 involving 12 countries, including India, showed that FSAP typically focuses on: (i) the macroeconomic environment; (ii) financial institutions' structure and soundness; (iii) financial market structure and market liquidity; (iv) review and assessment of systemic risks in payment systems and risk management procedures; (v) the legal framework and the system of official oversight, prudential regulations and supervision, including observance of standards, core principles and good practices; (vi) the institutional and legal arrangements for crisis management, financial safety nets, financial institution and corporate intervention and workout mechanisms; and (vii) key reforms and measures at the disposal of the authorities to reduce vulnerabilities and to minimise systemic risks. Besides the proposed 24 annual assessments, the Fund has developed a list of Macro-Prudential Indicators[18] (MPIs) that would enable the national authorities to better monitor their own financial system.

9.52 With regard to multilateral surveillance, the World Economic Outlook (WEO) assessments have already been supplemented by the International Capital Markets Surveys which offer a comprehensive review of developments in the global financial markets and their possible implications for the world economy. With a view to improving arrangements for the surveillance of global vulnerabilities, the Group of Seven (G-7) has also taken the initiative in the form of a Financial Stability Forum (FSF), as mentioned before, which meets regularly to assess risks to global financial system and to identify and oversee actions that are needed to overcome any crisis.

Enhanced Disclosures and Transparency

9.53 The East Asian crisis brought to the light deficiencies in disclosures relating to the international reserves, foreign currency liquidity and off-balance sheet activities in foreign currency of central banks and other public sector entities (IMF, 1998). It was strongly felt that wrong and misrepresented information is potentially more dangerous than lack of information and that deficiencies in such information have made it difficult to anticipate and respond to crises. Transparency with regard to certain external transactions, particularly foreign exchange reserves and short-term liabilities are critical to prevent the severity and suddenness of crises. Both the complexity and the importance of such information have increased as a result of the ongoing globalisation of financial markets and financial innovations.

[18] MPIs are broadly defined as indicators of the health and stability of financial systems. The IMF interim committee held its Consultative Meeting on MPI and Data Dissemination in September 1999 and gave its various recommendations on the identification, analysis and use of MPIs.

9.54 The case for transparency of monetary and financial policies is based on two premises (IMF, 2000b). First, the effectiveness of monetary and financial policies can be improved if the public is aware of the objectives of policy and if the authorities can make a credible commitment to meeting them. Second, to the extent that monetary and financial authorities are given a high degree of operational autonomy within the governmental apparatus, good governance calls for holding them accountable to the public and the government.

9.55 Timeliness of disclosure is another crucial issue in this respect. Timely disclosure of information can strengthen the accountability of the authorities by better apprising the public of the authorities' policy actions and risk exposure, particularly in foreign currency. It can spur a more timely correction of unsustainable policies and possibly limit the adverse effects of contagion in times of financial turbulence. It can allow the market participants to form a more accurate view of the financial health of individual countries and vulnerability of regions, thereby limiting uncertainty and the associated volatility in financial markets. Thus, timely and reliable information about economic and financial policies, practices and decisions can play an important role in crisis prevention and management strategy. The need for greater information disclosure and transparency was one of the basic recommendations of one of the three Working Groups formed by the Financial Stability Forum (FSF).[19]

9.56 The IMF has taken a number of initiatives to enhance the transparency of information of member countries. It encourages members to release Public Information Notices (PINs), which describe the IMF Executive Board's assessment of the country's economy and policies. Disclosure of information, which is consistent with the international standards and principles, helps in ensuring transparency and comparability among the national economies. In this regard, IMF's Special Data Dissemination Standard (SDDS) has made considerable progress with a focus on four key dimensions, *i.e.*, the coverage, periodicity and timeliness of the data; access by the public to those data; integrity of the data; and quality of the data. The data template provides information on a number of parameters including currency composition, deployment of foreign exchange reserves and forward position. The template for reporting reserves is now being used by over 50 countries subscribing to the SDDS of the IMF. The IMF Executive Board has plans to further strengthen the SDDS.

9.57 The establishment of an Independent Evaluation Office (IEO) in July 2001 by the IMF marks an important step towards enhancing the transparency of its activities and economic policy formulations. IEO has produced insightful reports on the IMF's role in the recent capital account crises and fiscal adjustment in Fund supported programs, providing objective assessments of arguably some of the most controversial and contentious issues related to the functioning of the Fund.

Exchange Rate Management and Capital Account Convertibility

9.58 A series of recent crises has brought to the fore the issue of the choice of an appropriate exchange rate regime. There is a fair degree of agreement that stability in the exchange rate is well served by the stability in the conduct of monetary policy (Jalan, 1999). In most countries, the weight of experience seems to be clearly in favour of intermediate regimes with country-specific features, no targets for the level of the exchange rate, exchange market interventions to ensure orderly rate movements, and a combination of interest rates and exchange rate interventions to fight extreme market turbulence (Mohan, 2003). Moreover, there is no single exchange rate regime that is best for all countries, at all times, in all circumstances (Mussa *et al,* 2000). Thus, the choice of an appropriate exchange rate system and maintenance of orderliness in the foreign exchange markets would continue to be issues of debate in the context of international financial architecture (see Chapter VII).

[19] The Working Group on Transparency and Accountability considered the contributions that transparency and accountability can make to improvements in economic performance, as well as the nature of information needed for effective transparency and accountability. Members attached particular importance to enhancing the relevance, reliability, comparability and understandability of information disclosed by the private sector. They recommended that priority be given to compliance with and enforcement of high-quality accounting standards. There was consensus on the need to improve the coverage, frequency and timeliness with which data on foreign exchange reserves, external debt and financial sector soundness are published. Furthermore, members recommended that consideration be given to compiling and publishing data on the international exposures of investment banks, hedge funds and other institutional investors. With a view to enhance transparency members recommended that international financial institutions adopt a presumption in favour of the release of information, except where release might compromise a well-defined need for confidentiality. Members also recommended that the IMF prepare a Transparency Report summarising the extent to which an economy meets internationally recognised disclosure standards.

9.59 After the East Asian crisis, there has been an extensive debate on the issue of capital account liberalisation and imposition of controls. The volatility in capital flows driven by the information technology revolution immediately transfers the valuation of risks associated with uncertainty across the globe which leads to contagion (Mohan, 2003). The emerging consensus in the developing countries is that capital account should be gradually liberalised and not undertaken before strengthening the financial systems and supported by a consistent macroeconomic framework, stable exchange rate policies and strong institutional framework in the financial markets (Reddy, 2000d). There is also a consensus that controls, when necessary, should be temporary; they should be imposed on inflows rather than outflows and should be market based rather than direct and, as far as possible, they should be focussed on short-term volatile flows (see Chapter VIII).

Corporate Governance

9.60 Poor corporate governance was identified as one of the root causes of the East Asian financial crisis. The absence of effective discipline on corporate managers, coupled with complicated and opaque relationships between corporations, their owners and their finance providers severely affected investors' confidence in the region's corporate bodies. It has been observed that economies that took early steps to improve corporate governance recovered from the crisis more quickly than those which have not addressed this issue. The East Asian crisis showed that good corporate governance is important not only for individual corporations to raise capital but also for an economy to achieve sustainable growth.

9.61 Since banks and financial institutions are highly leveraged entities, the quality of corporate governance practices followed by them has systemic implications. Given the deregulation, global integration and sweeping changes taking place in the environment in which the financial system operates, corporate governance has become particularly important. High ethical standards, adoption of high quality accounting principles, appropriate checks and balances through external and internal audits, clear division of responsibility, disclosure and transparency relate not merely to the individual firms or banks, but to the stability of the entire financial structure. In particular, it has become vital to set up firewalls against what has come to be termed as aggressive accounting practices that ultimately compromise the stake of shareholders in the corporate entity (Box IX.3).

9.62 In response to a mandate given to the OECD in 1998, a set of standards and guidelines on good corporate governance known as OECD Principles of Corporate Governance was developed and subsequently endorsed.[20] The principles focused on the following five areas: (i) rights of shareholders; (ii) equitable treatment of shareholders; (iii) role of stakeholders in corporate governance; (iv) disclosure and transparency; and (v) responsibilities of the board.

9.63 The issue of corporate governance has assumed prominence in recent times, particularly in view of the inter-locked accounting irregularities in the US which had systemic implications. The role of auditors, investment analysts and chief executives in the irregularities highlighted the need for more stringent regulation over the functioning of these entities. Enactment of Sarbanes-Oxley Act 2002 in the US is a major step in prevention of such irregularities in future (Box IX.4).

Strengthening the Financial System

9.64 With globalisation, concerns about the increased vulnerability of international banks and complaints regarding absence of level playing field came to the fore. Capital of banks is considered as the last line of defence against the vulnerability of banks to crises. After mooting various proposals to set capital standards for international banks, the Basel Committee on Banking Supervision (BCBS) was able to achieve an agreement in July 1988, which was phased in by January 1993. Known as the 1988 Capital Accord, the agreement focused on credit risk only. It required international banks to hold a minimum total capital equal to 8 per cent of risk-adjusted assets, with at least half of this met by Tier I capital.[21]

9.65 The Capital Accord may be termed as a first major step in rebuilding the banking segment of the new international financial architecture. The capital ratios suggested by the 1988 Capital Accord was criticised on the grounds that they appeared to lack economic foundation; the risk weights did not reflect accurately the risk of the obligor and it did not account for any

[20] These were endorsed by ministers at the OECD Council meeting at ministerial level during 26-27 May, 1999.

[21] Tier I capital comprises of equity capital and disclosed reserves. Risk adjusted assets were defined as the sum of the risk-adjusted assets on and off balance sheet. On-balance sheet assets were assigned to one of four risk buckets (0 per cent, 20 per cent, 50 per cent and 100 per cent). Off-balance sheet contingent contracts, such as letters of credit, loan commitments and derivative instruments, which are traded over the counter, needed to be first converted to a credit equivalent and then multiplied by the appropriate risk weight.

Box IX.3

Changes in International Accounting Practices

Accounting irregularities have deeply shaken public confidence in the reliability of financial reporting. The International Accounting Standards Board (IASB), based in London, began its operations in 2001 with a primary objective of "developing a single set of high quality, understandable and enforceable global accounting standards." A strong thrust towards this objective was provided by the European Union's decision to require publicly-traded companies to use International Financial Reporting Standards (IFRSs) from 2005. More than 90 countries will be using or permitting IFRSs by 2005. The IASB aims at developing, in the public interest, a single set of high quality, global accounting standards that require transparent and comparable information in general purpose financial statements. In pursuit of this objective, the Board cooperates with national accounting standard-setters to achieve convergence in accounting standards around the world.

Upon its inception the IASB adopted the body of International Accounting Standards (IASs) issued by its predecessor, the International Accounting Standards Committee. Fifteen standards that have been revised under the IAS improvements project are:

IAS 1 : *Presentation of Financial Statements*
IAS 2 : *Inventories*
IAS 8 : *Accounting Policies, Changes in Accounting Estimates and Errors*
IAS 10 : *Events after the Balance Sheet Date*
IAS 16 : *Property, Plant and Equipment*
IAS 17 : *Leases*
IAS 21 : *The Effects of Changes in Foreign Exchange Rates*
IAS 24 : *Related Party Disclosures*
IAS 27 : *Consolidated and Separate Financial Statements*
IAS 28 : *Investments in Associates*
IAS 31 : *Interests in Joint Ventures*
IAS 32 : *Financial Instruments: Disclosure and Presentation*
IAS 33 : *Earnings per Share*
IAS 39 : *Financial Instruments: Recognition and Measurement*
IAS 40 : *Investment Property*

Some of the salient changes, especially those relating to disclosure and transparency are as follows:

- Disclosure is required of critical judgements made by management in applying accounting policies. Disclosure is required of those assumptions made by management that are important in determining accounting estimates and could cause material adjustment to the carrying amounts of assets and liabilities (IAS 1).
- The definition of related parties and the disclosure requirement for related parties have both been expanded by adding parties (*e.g.,* joint ventures and post-employment benefit plans) and by requiring disclosure of transactions, balances, terms and conditions, and details of guarantees (IAS 24).
- Consolidation, if required, is regardless of the nature of the parent entity. Thus the requirement to consolidate controlled subsidiaries applies to parent entities that are venture capital organisations, mutual funds and unit trusts (IAS 27).
- Entities are required to disclose the compensation of key management personnel (IAS 24).
- Investments in subsidiaries, jointly controlled entities and associates, when an entity elects to present separate financial statements, are to be accounted for at cost or in accordance with IAS 39 (IAS 27).
- IAS 32 requires disclosure of information to increase users' understanding of why financial instruments are used by businesses and the associated risks. This includes information on (i) the risks associated with the entity's financial instruments; (ii) management's policies for controlling those risks; (iii) the accounting policies applied to the instruments; (iv) the nature and extent of an entity's use of financial instruments; and (v) the business purposes they serve. Improvements effected by IASB focused on reduction of complexity by clarifying and adding guidance, elimination of internal inconsistencies, and incorporation into the standards key elements.
- IAS 39 requires derivatives to be reported at their 'fair' or market value, rather than at cost. This overcomes the problem that the cost of a derivative is often nil or immaterial and hence if, derivatives are measured at cost, they are often not included in the balance sheet at all and their success (or otherwise) in reducing risk is not visible. In contrast, measuring derivatives at fair value ensures that their leveraged nature and their success (or otherwise) in reducing risk are reported. As in the case of IAS 32, improvements focused on reduction of complexity by clarifying and adding guidance, elimination of internal inconsistencies, and incorporation into the standards key elements

Improvements of standards are an ongoing process. Changes in future would depend upon future experience and evolution of new instruments, markets and institutions. The revision of standards also aims to make them universally applicable. Given the diversity in financial and corporate developments in various countries, achievement of convergence of standards across countries would be a challenge that would be faced by IASB.

Source: International Accounting Standards Committee (2003).

Box IX.4

Sarbanes-Oxley Act

The Sarbanes-Oxley (SOX) Act, in the US, represents a response to the series of accounting irregularities in the US. The SOX Act of 2002, enacted on January 23, 2002 aims to protect investors by improving the accuracy and reliability of corporate disclosures. It recognises the importance of sound information for improving the allocative efficiency of markets. The Act emphasises timely and reliable public disclosure of financial statements and changes in ownership of shares due to trading activity, independence of audit committees and obligations, strengthening of criminal penalties and addressing of conflict of interest by security analysts. These elements are expected to make far reaching changes in the management of corporate entities.

The SOX Act provides for setting up of Public Company Accounting Oversight Board (PCAOB) to oversee the audit of public companies that are subject to the securities laws. The PCAOB would register public accounting firms that prepare audit reports; establish or adopt auditing quality control, ethics, independence and other standards relating to the preparation of audit reports; conduct inspection, investigations and disciplining of audit firms; and impose sanctions, wherever justified, on audit firms or associated persons. Same set of standards would apply to foreign accounting firms that prepare an audit report for domestic companies.

Source: Sarbanes-Oxley Act of 2002.

In order to ensure auditor independence, the following provisions are made: (i) rendering of certain type of services to the same audit client by an audit firm are prohibited and PCAOB is empowered to provide exemption on a case by case basis; (ii) lead audit partner has to be rotated every 5 years; (iii) auditor is to report to the auditing committee on critical accounting policies, discussions with management officials and other material information; and (iv) an audit firm whose employee during the last one year was CEO/CFO/Controller/Chief Accounting Officer can not act as an auditor of the Company.

To promote corporate responsibility principal Executive/ Financial Officers would certify that the signing officer has reviewed the report, the report does not contain any untrue statement or omits a material fact, *etc*. Any improper influence on conduct of audits would be treated as unlawful.

The Act enhances the ambit of financial disclosures by disclosure of all material off-balance sheet transactions and other material disclosures in annual and quarterly financial reports. At least one member of the audit committee should be a financial expert. There will be enhanced review of disclosures made by certain companies and their financial statements. The Act provides for formulation of rules to eliminate conflicts of interest among analysts.

benefits from diversification. It was also realised that through financial innovation it was possible to make "cosmetic" adjustments to boost reported capital ratios without enhancing their soundness. The Accord treated all banks alike, and thus did not give safer banks the incentive to distinguish themselves from riskier ones in order to save on capital. The Accord, therefore, has been fine-tuned over time to account for financial innovation and some of the risks it did not consider initially.

9.66 A major lesson learnt from the East Asian crisis was that the concept and measurement of country risk had changed, going beyond the traditional concept of sovereign and transfer risk to include the risks posed by private sector counterparties. The importance of measuring the interrelationship between different types of risks during times of crisis also came to the fore. The experience underscored the need to place greater emphasis on stress testing and scenario analysis. Rating agencies also needed to take steps to refine their methodologies in the light of the crisis.

9.67 To develop supervisory cooperation and to strengthen prudential supervision in the emerging markets, the Basel Committee put forth a comprehensive set of principles for effective banking supervision (the Core Principles for Effective Banking Supervision) in 1997. A package of the existing Basel Committee recommendations, guidelines and standards in a reasonably compact form is also provided to the emerging economies.

9.68 The BCBS has been actively expanding its links with supervisors in non-member countries with a view to strengthen prudential supervisory standards in all the major markets. These efforts have taken a number of different forms, including:

- The development and dissemination throughout the world of policy papers on a wide range of supervisory matters;
- The creation of a close network of worldwide supervisory authorities, who meet in an international conference every two years;
- The pursuit of supervisory cooperation at local level through the creation of regional supervisory committees and active support for their activities;
- The increasing provision of supervisory training both in Basel and at regional or local level.

9.69 With greater international coordination, the pronouncements of the Basel Committee have become more and more influential as standards to which supervisory authorities, both in developed countries and

in the emerging markets, aspire. Their credibility has been supported by the principle that all the material proposals are subject to a consultative process, in which the private sector and supervisory authorities, including those from the non-G10 countries, have an opportunity to provide input.

The New Basel Accord

9.70 In June 1999, the Basel Committee released for comment its proposal for a new capital adequacy framework. The Basel II framework has been constructed over the following three pillars:

a) Pillar I - Minimum Capital Requirements: the minimum capital requirement is the sum total of the capital charges for credit risks, operational risks and market risks. Guidelines and methodologies to be followed in estimation of risks have been provided.

b) Pillar II - Supervisory Review Process: notwithstanding improvements in risk sensitivity of capital and market discipline, the New Accord underscores the crucial role of supervisory oversight. Supervisors may, if required, call for maintenance of higher capital than the minimum requirement by an institution.

c) Pillar III - Market Discipline: improvement in transparency by increasing disclosure requirements is expected to ensure the credibility for banks internal ratings used under Pillar I.

9.71 The rationale for moving towards Basel II arises from the need for flexibility and better risk sensitivity (Table 9.1).

9.72 The first pillar, the new capital requirements, aims at making capital charges more correlated with the credit risk of the banks' assets. The Committee also proposes to develop capital charges for risks not considered in the current Accord, such as interest rate risk in the banking book and operational risk. Regarding credit risk, the Committee proposes a new standardised approach and alternative approaches based on banks' internal ratings frameworks. The new standardised approach retains some parts of the 1988 Accord, such as, the definition of regulatory capital. Its major novelty is the replacement of the existing risk weighting scheme by a system where the risk weights are determined by the rating of the borrower, as defined, for example, by a rating agency. According to the proposed system, for each given class of borrowers, those with high ratings have a risk weight smaller than 100 per cent but those with the lowest rating have a risk weight larger than 100 per cent.

Table 9.1: Basel Accord: Rationale for Change

The Existing Accord	The Proposed New Accord
1	2
Focus on a Single Risk	More emphasis on banks' own measure, internal methodologies, supervisory review and market discipline.
One Size Fits All	Flexibility, menu of approaches, incentives for better risk management.
Broad Brush Structure	More risk sensitivity.

Source: Bank for International Settlements (2001).

9.73 The second pillar, the supervisory review process, is intended to ensure that a bank's capital position is consistent with its overall risk profile. According to the Committee, the review process should include the principles that: (i) banks need to operate with capital above the regulatory minimum and supervisor should be able to require them to hold capital in excess of that minimum; and (ii) the supervisors should seek to intervene at an early stage to prevent capital from falling below prudent levels.

9.74 The last pillar is intended to encourage banks to disclose information in order to enhance the role of market participants in monitoring banks. This would also compel banks to be more vigilant as far as various disclosures are concerned. To that end, the Committee has proposed that banks disclose information, *inter alia*, on their components of regulatory capital, risk exposures and risk-based capital ratios computed in accordance with the Accord's methodology.

9.75 BCBS has adopted a consultative approach so as to make the new capital adequacy framework as widely acceptable as possible. After receiving a significant response to the Second Consultative Document, the Third Consultative Document was issued in 2003 and the comments received on them are being considered.

9.76 The literature on the optimal regulation in the presence of asymmetry of information shows that incentive compatibility calls for a menu approach instead of a 'one size fits all' rule. The Committee's approach appears to indicate a move in that direction. In addition to the standardised approach, it also allows for internal ratings based (IRB) approach, which recognises that banks are better informed about their risks than regulators and can make use of that informational advantage. For measurement of operational risk also, a menu approach has been adopted. Though the details of the Accord are yet to be finalised, it would be at this stage apposite to discuss some implications of the broad framework (Box IX.5).

Box IX.5

What does Basel II Hold for the future?

The New Accord is expected to be implemented within G-10 countries from end 2006 and is expected to encompass internationally active banks, and other significant banks as national supervisors deem appropriate. Outside the G-10 countries, the national supervisors have been provided the flexibility to develop their own timetable and approach depending on their perception of benefits of the new framework for the domestic banking system. Basel II is expected to make the capital allocation more risk-sensitive. Use of supervisory oversight with market discipline would broad base and reinforce the supervisory framework and financial stability. While the Accord aims at leaving the total capital requirement for an average risk portfolio broadly unchanged, banks with a greater risk appetite will find the capital requirements increasing, and *vice versa*.

The New Accord provides a flexible structure in which banks, will adopt subject to supervisory review approaches which best fit their level of sophistication and their risk profile. Depending on their risk management capabilities, the banks would have the flexibility to upgrade from the standardised approach to internal ratings based (IRB) approach for measurement of credit risk. Under the standardised approach, the risk buckets have been aligned more closely to the underlying risk, and banks and corporates can now receive a more favourable risk weight than their sovereign. Two options under IRB approach - foundation and advanced - have been provided so that the IRB approach is now capable of being used by many more banks. A menu of approaches has also been provided for measurement of operational risk. The New Accord allows banks to use ratings provided by external credit rating agencies.

Although the initial focus of Basel II is primarily on internationally active banks, its underlying principles are intended to be suitable for application to banks of varying levels of complexity and sophistication. Basel II will be applied on a consolidated basis to internationally active banks to preserve the integrity of capital in banks with subsidiaries by eliminating double gearing. The scope of application of the Accord will be extended to include, on a fully consolidated basis, any holding company that is the parent entity within a banking group to ensure that it captures the risk of the whole banking group. A three-year transitional period for applying full sub-consolidation will be provided for those countries where this is not currently a requirement. The New Accord would require increased co-operation between supervisors, especially for the cross-border supervision of complex international banking groups. The Accord Implementation Group, set up by the BCBS, is developing a set of principles to facilitate closer practical co-operation and information exchange among supervisors. Moreover, supervisors would have to test that individual banks are adequately capitalised on a stand-alone basis to ensure that capital recognised in capital adequacy measures is readily available for their depositors.

The complexity and sophistication of the proposals, however, may restrict universal application of the New Accord in the emerging markets, where the banks continue to be the major segment of financial intermediation. The New Accord would involve shift in direct supervisory focus away to the implementation issues. Moreover, banks and the supervisors would be required to invest large resources in upgrading their technology and human resources to meet the minimum standards. The increasing reliance on external rating agencies in the regulatory process may undermine the initiatives of banks in enhancing their risk management policies and practices and internal control systems. The supervisors would find it difficult to verify the accuracy of a bank's internal rating system.

The Reserve Bank has pointed out that the minimum standards set even for the internal rating based foundation are complex and beyond the reach of many banks. Besides, the line of demarcation between the six broad classes of exposures (*viz.,* corporate, sovereigns, banks, retail, project finance and equity) could often be thin. As such, without recognising the institutional framework and geographical spreads such segregation could pose serious implementation problems. The New Accord could also enhance the minimum regulatory capital, especially for banks in developing economies, due to reasons, such as (i) withdrawal of uniform risk weight of 0 per cent on all sovereign claims (OECD and non-OECD); (ii) explicit capital charge; or (iii) imposition of higher risk weights on claims on certain high risk exposures like venture capital or private equity (RBI, 2001).

Another adverse impact of the New Accord would be reduction in lending by internationally active banks in developing countries due to relative predominance of borrowers with sub-BBB ratings as compared to the industrialised countries. Procyclicality of capital requirements and ratings would lead to higher capital requirement and consequently, lower credit supply during recessions and *vice versa* during booms, resulting in larger amplitude of business cycles as a country progressively adopts the New Accord (Ray, 2002). Moreover, with increasing financial and economic integration, the vulnerabilities and cycle swings could become more synchronised and more pronounced. Basel II has recognised the existence of procyclicality in its capital requirements and has tried to take care of it partly through flattening of risk-weight curve, introduction of stress tests and provision for buffer capital over the minimum requirement under Pillar I.

Perceptions about the applicability of the New Accord vary among the developed countries as well. European regulators see Basel II, like Basel I, as a global standard to be applied to all banks. On the other hand, American regulators, reportedly, intend to apply the new rules to fewer than a dozen of their banks. Thus, most of the American banks may enjoy the advantage of theoretically lower cost of making loans.

Securities Market

9.77 Securities markets are a major component of the financial sector and as such play a central role in the stability of the financial sector. They offer an alternative source of intermediation, enhancing efficiency through competition and also reducing the pressure on the banking sector. Sound regulation and effective supervision is essential for maintenance of investor confidence and maintenance of macroeconomic stability. Development of standards and codes for the securities market under FSAP has been done by the International Organisation of Securities Commission (IOSCO). IOSCO is an association of securities regulatory agencies, self-regulatory organisations and international institutions, with the IMF and the World Bank as affiliate members. Endorsed in 1998, the IOSCO Principles cover such areas as the regulator, enforcement, issuers, market intermediaries, collective investment schemes and secondary markets.

9.78 The IOSCO Objectives and Principles of Securities Regulation set a standard against which a country's practice of regulation and supervision of securities market is assessed. Individual countries are themselves taking steps to develop markets, review their ongoing regulatory and supervisory procedures and adopt international best practices. Countries are also making efforts to strengthen the legal environment in which the financial systems are operating. Appreciable steps have also been taken to improve bankruptcy procedures.

III. INDIA'S PERSPECTIVE ON INTERNATIONAL FINANCIAL ARCHITECTURE

9.79 The orderly functioning of the global markets is crucial both for short-term stability and sustainable growth of emerging markets. The crises of the 1990s have amply demonstrated that deficiencies in international financial architecture may have several ramifications for other countries even if they themselves continue to pursue sound macroeconomic and financial policies. Therefore, an appropriate international financial infrastructure that can ensure global financial stability is of particular relevance to an emerging market like India.

9.80 As a member of various international groups – the International Monetary and Financial Committee (IMFC) at the IMF, Development Committee of the World Bank, the Bank for International Settlements (BIS), the Group of 20 and the Working Groups set up by the Financial Stability Forum and various other organisations, India has been playing an active role in the discussions on the international financial architecture and related issues.

9.81 India is one of the founding members of G-20, which was created in September 1999 to establish an informal mechanism for dialogue among systemically important countries within the framework of Bretton-Woods institutional system. The G-20 aims at promoting international financial stability. India became the first developing country to assume the leadership of G-20 in March 2002. The G-20 Deputies and Ministerial Meetings held in July 2002 and November 2002, respectively, in New Delhi deliberated on a range of issues concerning international financial architecture. India has also been actively involved with the Group on Joint Task Force on Securities Settlement Systems constituted by CPSS, the International Organisation of Securities Commissions (IOSCO), Core principles Liaison Group (CPLG) constituted by the BCBS, and the joint IMF-World Bank FSAP.

9.82 India has been closely monitoring the developments on all aspects of the new international financial architecture and has been fine-tuning and strengthening the internal crisis prevention and management frameworks. India is also one of the first members to subscribe to the Special Data Dissemination Standards (SDDS) through which information, relevant for assessment of macro-economic stability is being disseminated regularly. India voluntarily agreed for an FSAP. After the completion of the programme in 2001, India's internal frameworks for assessing financial system stability have been validated.

9.83 In addition to being closely associated with several international standards setting bodies, India was a part of the Task Force on the Implementation of Standards and participated in the Joint Committee Group meeting of the FSF. The Task Force was set up to explore key issues relating to standards, codes and core principles and consider the strategy for fostering implementation of international standards relevant for a sound financial system. The Reserve Bank was also represented at the Follow Up Group on Incentives for Implementation of Standards instituted by the FSF following submission of the Task Force Report to ascertain how various elements of market and official incentives could best reinforce one another within the framework of the overall strategy to foster implementation of standards.

9.84 In the context of increasing uncertainty associated with capital flows as evident from several crises in emerging and transition economies, the major issues pertaining to international financial infrastructure including the choice of exchange regime, foreign exchange reserves, management of capital flows, strengthening of financial systems with appropriate institutions, and appropriate supervisory and regulatory framework, international transparency codes and standards have assumed considerable significance for developing economies, in general, and India, in particular (Jalan, 1999).

9.85 Keeping in view the deficiencies of international financial architecture and risks associated with globalisation and financial integration, India has been following a gradual and cautious approach towards liberalisation of the financial and external sectors. Conceptually, the Indian approach to financial sector reforms is based on five principles, *viz*., cautious and proper sequencing; mutually reinforcing measures; complementarity between reforms in the banking sector and changes in fiscal, external and monetary policies; developing financial infrastructure; and developing financial markets (Reddy, 2000c and 2000d). While this approach is at variance with the 'big-bang' approach pursued in several countries, the gradualist approach is credited with the advantage of enhancing macro stability, whilst at the same time, fostering the microeconomic linkages.

9.86 In pursuing financial and external sector reforms, India has emphasised on the process of institution building. The broad strategy of institution building process, especially in the financial sector, encompasses strengthening of existing institutions including banks and financial institutions to adapt to market conditions and enable such institutions to operate in tune with market pressures. Institutions in the private sector are encouraged to foster competition while ensuring adequate safeguards in terms of appropriate regulatory and legal framework and monitoring mechanism. Prudential regulations and supervisory standards have been put in place in line with international standards to ensure safety and soundness of institutions and markets. Transparency and accountability in operations were introduced to enhance the credibility of the banking system (RBI, 2003a).

9.87 Recognising the importance of self assessment, the Reserve Bank appointed a Standing Committee on International Financial Standards and Codes (Chairman: Y.V.Reddy) in December 1999, in consultation with the Government in order to: (i) identify and monitor developments in global standards and codes being evolved in the context of international developments; (ii) consider the applicability of these standards and codes to the Indian financial system; and (iii) chalk out a road map for aligning India's standards and practices to the evolving international standards. In 2000, the Standing Committee constituted ten Advisory Groups comprising non-official experts in the area of banking supervision, bankruptcy laws, corporate governance, data dissemination, fiscal transparency, insurance regulation, accounting and auditing, monetary and financial transparency, payment and settlement system and securities market regulation to examine the feasibility and time frame of compliance with international best practices. An internal Group on Market Integrity subsequently covered issues relating to money laundering. Reports of the Advisory Groups were placed in public domain for wider discussion. The approach followed by India was based on the internationally acclaimed systematic three-step process of identification of standard and codes, in-depth assessment and mapping a comprehensive course of possible actions for achieving the best practices. A synthesis report was prepared to encompass the major observations and recommendations of the Advisory Groups, to identify the inter-linkages amongst different standards, and to provide an overarching view while listing the required specific legal reforms and to identify the follow-up action required by the concerned regulatory agencies and other authorities. The spirit of the Indian approach could be summarised as follows: "The process in India is an exercise that aims at understanding and comprehending various standards and codes in terms of rationale, technical complexities, institutional and legal requirements and the immediacy and relevance at the present stage of development and institutional structure. Second, it is intended to result in getting a fair view of the country's status with reference to standards. Third, this would enable getting an idea about the necessary steps required to move closer to the adherence of standards and codes. Fourth, it would sensitise the regulatory authorities, agencies and institutions about the priority areas of action" (Reddy, 2001).

9.88 In respect of standards and codes, India has been stressing the importance of ensuring that the manner in which these standards are developed and monitored does not degenerate into categorising countries as performers and non-performers. Such categorisation could entail adverse market implications for these countries. The IMF (along with

other international bodies) should continue to work towards developing the best practices but only rely on market based incentives to encourage voluntary compliance. Given the low base, from which the developing countries have to start for complying with these norms, only a gradual approach could work.

9.89 In the area of transparency, the Reserve Bank has been at the forefront among national monetary authorities in terms of disclosure practices. The Reserve Bank publishes daily data on a number of variables such as exchange rates, forward premia, foreign exchange turnover and weekly data on movements in foreign exchange reserves in the Weekly Statistical Supplement (WSS) of its Bulletin with a time lag of one week. Moreover, data on the Reserve Bank's purchases and sales in the foreign exchange market along with outstanding forward liabilities on reserves *etc*., are published in the Reserve Bank of India Bulletin with a time lag of one month. The Reserve Bank is also disclosing the details of its contingent liabilities, income earned, balances in foreign exchange fluctuation reserves account and the exchange equalisation accounts. India is among the 50 countries, which have adopted the SDDS template for publication of detailed data on foreign exchange reserves.

9.90 In the area of financial sector, wide ranging reforms have been initiated. In the first phase of reform, initiated under the recommendations of the Committee on the Financial System (Chairman: M. Narasimham) in 1992, regulations and laws which were coming in the way of development of a sound and competitive banking system were removed. This included, progressive reduction of Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR), interest rate deregulation, introduction of capital to risk weighted asset system in line with international standards, introduction of objective criterion of income recognition, asset classification and provisioning, enhancing transparency in financial statements and autonomy measures for public sector banks. The second phase of reforms, based on the recommendations of the Committee on Banking Sector Reforms (Chairman: M. Narasimham) in 1998, which is currently underway, relates to introduction of sophisticated financial instruments and facilitating consolidation and rationalisation of banking system. The main reforms undertaken include increasing the CRAR from 8 per cent to 9 per cent, enhancing the provisioning requirement, bringing the norm for asset classification at par with the international practice and compliance with international accounting standards.

9.91 The central plank in strengthening the financial sector and improving the functioning of financial markets is a set of prudential norms aimed at imparting strength to banks and financial institutions as well as greater accountability and market discipline. These norms include not only capital adequacy, asset classification and provisioning but also accounting standards, exposure and disclosure norms, investment, risk management and asset-liability management guidelines. There has been considerable progress in the implementation of risk management systems although there is a need for substantial upgradation of management information systems, preparation of contingency plans and stress testing. Internal systems need to be developed further for quantifying and monitoring operational risk. Efforts are on strengthening of the regulatory and supervisory framework and achieving international best practices in banking supervision. In recent years, there has been a shift in emphasis from micro-regulation to macro-management, supported by a tightening of prudential norms and improvements in the functioning of the financial markets (Jalan, 2002). Banks are being encouraged to improve the reliability and robustness of their risk management, management information and supervisory reporting systems. A scheme of prompt corrective action based on early warning triggers is being developed as a supervisory tool. The Reserve Bank and the Government have initiated a wide range of legal reforms to enable the regulatory and supervisory regime to keep pace with advancements in information and communication technology. The envisaged reforms relate to electronic cheques, cheque truncation, securitisation and reconstruction of financial assets, the payment system and money laundering. In respect of the financial institutions, the Reserve Bank has been in favour of divesting all or part of its holdings to mitigate the conflict of interest that could potentially arise in regulating the entities (Jalan, 2002).

9.92 The Reserve Bank of India has generally welcomed the proposed Basel II norms. Since Basel II would be implemented initially on internationally active banks and other significant banks as the national supervisors may deem fit, a precise definition of an internationally active bank is imperative for ensuring competitive equality and consistency of application of various requirements. The Reserve bank has suggested to BCBS that all banks with cross-border business exceeding 20 to 25 per cent of their total business may be defined as internationally active banks. Second, in view of greater probability of contagion and systemic risk inherent in cross holding of capital, a material limit (up to 10 per

cent of the total capital) on cross-holdings of capital and other regulatory investments may be prescribed and any excess investments over and above the limit would be deducted from total capital. Third, risk weighting of banks should be de-linked from the credit rating of sovereigns in which they are incorporated. Fourth, supervisors are neither equipped nor competent to identify whether the External Credit Assessment Institutions (ECAIs) are using unsolicited ratings to put pressure on entities to obtain solicited ratings and hence cannot decide on their suitability for capital adequacy purpose. Fifth, while internationally active banks in emerging economies may initially be required to follow the Standardised Approach, they may be allowed to use the internal ratings for assigning preferential risk weights on certain types of exposures, after validation of the internal rating systems by national supervisors. Sixth, there is a strong case for revisiting the risk weights assigned to sovereign exposures when the exposures are aggregated as a portfolio which enjoy the benefits of diversification similar to the approach adopted for retail procedures. Lastly, the capital charge for specific risk in the banking and trading books should be consistent to avoid regulatory arbitrages (RBI, 2003b).

9.93 A set of "Core Principles for Systemically Important Systems" to promote safe and efficient payment systems worldwide was developed under the aegis of the BIS in 2001. The Reserve Bank has been taking steps towards achieving these international best practices as part of the overall reform in the financial system.

9.94 One of the guiding principles behind the reforms in the payment and settlement systems of the country has been the need to provide for safe, secure and efficient systems. The Reserve Bank has strived to provide systems which are compliant with the Core Principles for Deferred Net Settlement Systems. As a first step, the Reserve Bank had identified the Systemically Important Payment Systems, which have the propensity for systemic risks. These include, among others, inter-bank clearing, high value clearing, government securities clearing and settlement and foreign exchange clearing apart from the Main/MICR clearing. The introduction of screen based trading in Government securities following the delivery versus payment (D*v*P) II model in the form of the Negotiated Dealing System (NDS), was a milestone in this regard. The commencement of foreign exchange clearing by the Clearing Corporation of India Ltd. aimed at net settlement of the foreign exchange transactions. This is a major step forward, which has brought about more efficiency and safety. The Reserve Bank has also embarked upon the introduction of a Real Time Gross Settlement (RTGS) System for settlement of inter-bank and customer related funds transfers on a real time mode. The Reserve Bank is also in active deliberation with the CPSS-IOSCO Task Force for laying down sound practices for central counterparties. These initiatives would result in payment and settlement systems being at par with international standards.

9.95 There has been considerable thinking on corporate governance issues recently in India. A number of committees and Advisory groups including, among others, the Kumaramangalam Birla Committee, the Advisory Group on Corporate Governance (Chairman: R. H. Patil) and the Committee on Audit and Corporate Governance (Chairman: Naresh Chandra) framed codes for corporates. The Advisory Group on Banking Supervision (Chairman: M. S. Verma), the Advisory Group on Corporate Governance (Chairman: R. H. Patil) and the Consultative Group of Directors of Banks/ FIs (Chairman: A. S. Ganguly) have made wide ranging recommendations relating to corporate governance both in respect of corporate firms and financial institutions in India. While several recommendations of these Committees/ Groups have already been implemented, others are under consideration of the authorities.

9.96 Opening up of the economy has also necessitated reforms in the debt markets in India. The Reserve Bank took on the responsibility of developing the Government securities market. The strategy adopted by the Reserve Bank was to set up institutions and then divest its holdings as the market matured to avoid the problems of moral hazard of the lender of last resort and the conflict between ownership and regulation and supervision. The system of Primary Dealers (PDs) was adopted from advanced countries that used it to widen and deepen markets. To widen the market and infuse foreign funds, foreign institutional investors were allowed to invest in Government dated securities. Recently, the Government securities market was thrown open to retail investors through the introduction of screen-based trading. The Reserve Bank is also giving unstinted support to development of the technological infrastructure in the financial markets for ensuring greater efficiency and transparency in operations as well as risk free settlement.

9.97 In the capital market, reform measures have focused on regulatory effectiveness, boosting competitive conditions, reducing information asymmetries, mitigating transaction costs and

controlling of speculation in the securities market. Capital Issues (Control) Act, 1947 was repealed in 1992 paving the way for market forces to play its role in the determination of price of issue and allocation of resources for competing uses. The Indian capital market was opened to foreign institutional investors (FIIs) in 1992. In order to provide greater transparency, anonymity, and lower transaction costs, the 'open outcry' system prevalent earlier, was replaced with 'screen-based trading'. The Securities and Exchange Board of India (SEBI) has been entrusted with considerable regulatory powers to ensure fair play. The National Stock Exchange (NSE) was incorporated in 1992. In order to ensure free and speedy transferability of securities, the Depositories Act, 1996 was enacted enabling electronic settlement of securities. Over the last few years, several measures have been taken to deepen and widen the foreign exchange market so as to provide the market participants to undertake foreign exchange transactions with reduced uncertainty (see Chapter VII).

IV. INTERNATIONAL FINANCIAL ARCHITECTURE: AREA OF FURTHER REFORMS

9.98 As has been discussed in the foregoing sections, the underpinnings of the evolving international architecture hinge on various issues such as adherence to globally accepted standards and codes, equitable sharing of burden between the private creditors and the sovereign debtors, effective surveillance, adequate transparency, and effective disclosure practices. However, it should be recognised that the changes in the international financial order is reflective of the underlying changes in the global financial system. Here, an important issue arises relating to the speed of adjustment of the global order to independent changes in the global financial system and the recognition that such changes represent a continuous process. Thus, there cannot be any "straight-jacketed" approach towards reforming the existing financial architecture. Moreover, the adoption of the new initiatives by the sovereigns for debt restructuring, both in terms of content and timing should be guided by the fundamental premise of voluntarity as reflected in specific country situations. In recognition of such basic principles, there are some areas where further reforms are called for. They could be broadly divided into two categories, *viz.,* (i) reform of the multilateral financial institutions, especially the IMF; and (ii) other reforms.

Reform of the Multilateral Financial Institutions

9.99 The role of financial assistance for countries facing exogenous shocks can hardly be overemphasised, given the fact that these shocks can have negative impact on developing countries' growth, macroeconomic stability, debt sustainability and poverty ratios. The impressive gains made by developing countries in recent years can be eroded considerably when they face such exogenous shocks. The IMF has taken steps to include a systematic focus on surveillance and fund assistance programmes towards tackling the adverse effects of exogenous shocks, with a view to reducing response delays. The recent initiatives to strengthen the existing instruments with the Fund [*e.g.*, Emergency Natural Disaster Assistance, Compensatory Financing Facility (CFF), Stand by credit tranches, and augmentation of Poverty Reduction and Growth Facility (PRGF) programmes] are welcome. However, there is a clear need to establish a broad menu of instruments, and apply the appropriate instrument depending on the nature of the shock, based on country-specific requirements. Sufficient flexibility is needed on the part of the multilateral agencies to meet the financing and adjustment needs of low income countries affected by exogenous shocks. Enhanced financing may be warranted depending on the intensity of shocks (Reddy, 2003b).

9.100 The evolving debate for reform in the international financial architecture has sharply brought into focus the need for reform in the structure of the international financial institutions, particularly the IMF. The debate on the need for reform of the IMF is basically centered around the issues of (i) surveillance and governance of the IMF, involving the need for change in the present quota formula so as to adequately represent the interests of the emerging market economies and adequacy of Fund resources; (ii) the role of the IMF in the context of a Lender of Last Resort as was suggested in the Meltzer's Report (2000); (iii) the role of IMF conditionality; and (iv) the policy with respect to Fund lending in arrears and its implications for enforcing a more orderly debt restructuring mechanism.

9.101 In this context, Reddy (2003b) aptly pointed out: "As regards strengthening of surveillance, we have come to a stage when we have all the tools available, but there are still doubts about their effectiveness for a variety of reasons. We should recognise that origins of crises in the past were also in the industrial countries and advanced financial centres leading to sudden capital flow reversals. While

markets have started to learn to discriminate among countries, there is still a long way to go". Recognising that in surveillance, the Fund has a significant role in building confidence of both borrowers and lenders, which is important for an orderly market behaviour, several issues, including suggestions to improve the efficacy of the surveillance mechanism, have been raised. These include: (i) the vulnerability assessment exercise for the emerging market economies needs to be improved; (ii) early warning system models today are far from perfect and suffer from high false-to-signal ratios; (iii) noting that the IMF management has proposed an even handed approach to the Fund's surveillance, the fundamental question relates to what purpose it serves and whom it is meant for; (iv) given that the objective is no doubt to identify vulnerabilities and pre-empt crises from occurring or minimizing severity of such crises, when they occur, some clarity and transparency about the target of surveillance would be in order. It has also been emphasised that the Fund has to take a view on whether the Fund's assessment is meant for national governments in its role as a confidential advisor, or for the market players who in any case rely on alternative avenues for assessing publicly available information (Reddy, 2003b).

9.102 In recent years, there has been a growing realisation that the finances available from the IMF would not be sufficient to meet the requirement if most of the member countries need them at the same time. The IMF gets ordinary resources from its members quota subscriptions, which could be supplemented occasionally by borrowed resources when in need. Several suggestions have been put forward to improve the resources of the IMF. The main proposals include:

(i) Enlarge the total quotas commensurate with the growth of world output and the growth in the volume of world trade with some emphasis on the redistribution of these quotas with adequate weightage to developing countries;

(ii) Fund could issue SDR to itself for use in Lender of Last Resort (LOLR) operations subject to pre-determined cumulative limit and other appropriate safeguards under Article XVIII of the Articles of Agreement; and

(iii) Mobilise significant bilateral/multilateral resources to supplement its own during crisis.

9.103 The decision of the Twelfth General Review of quota in January 2003 not to increase the Fund quotas has brought into focus the issue of Fund governance. Over the years, the prevailing system of quota and voting power have created distortions, which, in turn, have raised issues of equity. Presently, a group of 24 industrial countries control 62 per cent of the voting power, while more than 85 per cent of the members (159 out of the 183 members) together hold the remaining 38 per cent of the votes. In the present milieu, the existing imbalance is viewed as evidence of the lop-sidedness of the governance of the IMF. Effective governance of the IMF demands that the institutional benefits and burdens are equitably shared among the members and that the checks and balances operate efficiently in the decision-making process. Improving IMF governance and thus reducing the 'democratic deficit' in its functioning needs to be approached through structural reforms aimed at redistribution of the voting power amongst member countries (Reddy, 2003a).

9.104 Closely related to the issue of enhancing the Fund resources through revision of quotas is the evolving role of the Fund as the supplier of international liquidity. In the late 1990s, several economists including Giannini (1999) and Fischer (1999) favoured an international institution serving as an international lender of last resort. Fischer (1999) and Giannini (1999) argue that the main function of the lender of last resort in most modern industrialised economies is that of "crisis manager", a role that does not necessarily require vast amounts of capital. The management of international liquidity has a special role in preventing and avoiding contagion from financial crises and lessening their adverse economic effects. The arguments for a 'lender of last resort' (LOLR) are centered on the requirements for providing adequate international liquidity in times of crises. The role of IMF should not be viewed as a LOLR as it is not in a position to supply unlimited liquidity. However, much can be done to improve the way IMF operates so that, in effect, it moves in that direction. Thus, IMF resources need to be sufficiently enlarged in order to enable it to enhance the stability of the international financial system (Reddy, 2003a).

9.105 For the IMF to take over the International Lender of Last Resort (ILOLR) function, sufficient augmentation of its general resources appear critical. It is felt that the "the liquidity creation ability of the IMF should be in situations when (i) countries in financial crisis require support; and (ii) when the IMF has run out of its own resources as well as the available funds under the arrangements to borrow" (Reddy, 2003a). Even though the aggregate quota of all members amount to about SDR 212 billion, usable resources at the disposal of the Fund at any point of time are about 30 to 40 per cent less since a large

part of the quota based resources are not usable. New Arrangements to Borrow (NAB) and General Arrangements to Borrow (GAB) can supplement the Fund resources to a maximum of SDR 34 billion. The IMF has the option of assuming the ILOLR function as under Article XVIII it can allocate SDRs "to meet the long-term global need, as and when it arises, to supplement existing reserve assets". In other words, "IMF can remain as a quasi lender of the last resort" (Reddy, 2003a) or it could be said as "IMF is lender of some sort" (Jalan, 1999).

9.106 India has also raised this issue on several occasions that IMF could issue SDRs to itself to augment its resources at the time of need and relinquish the additional liquidity so created as and when the member countries effect the repurchases (Jalan, 1999). If this arrangement can be implemented, the IMF can effectively create unlimited liquidity and support the national initiatives in bridging any liquidity shortfall. The role of the IMF as an "lender of some sort" would further improve its standing among EMEs, "....IMF's effectiveness would be enhanced even as a conditional limited liquidity creator irrespective of whether this facility is actually operated or not. The fact of availability itself could enhance the IMF's capacity to influence markets. Coupled with the ongoing work on the SDRM as well as progress in Collective Action Clause, this initiative would strengthen the IMF's effort towards crisis resolution" (Reddy, 2003a).

9.107 In the context of the financing framework of the IMF, four main concerns have been expressed (Reddy, 2003a). These concerns relate to (i) the burden of additional expenditures borne almost entirely by the borrowers in the General Resources Account (GRA) and not shared by other members of the IMF despite the fact that the financial support to borrowing countries account for only 35 per cent of the total budget of the IMF, while 65 per cent is spent on activities which benefit almost all members; (ii) complexity of the income generating structure and the accounting procedure inhibits reduction in the rate of charge applicable to the GRA borrowing countries; (iii) the entire burden of the increasing the reserves of the IMF is placed on the GRA borrowing countries through charges and surcharges levied on them; and (iv) neutral members who are neither creditor or debtor do not bear any part of the expenditure burden of the IMF. Again, certain dilemmas from the point of view of the countries approaching the IMF in view of undesirable domestic political message attached, compliance with Fund conditionality and necessary adjustments have been highlighted (Reddy, 2003a). These dilemmas relate to the stage at which the country approaches the Fund for support, level of adjustment the country is prepared to undertake, minimum amount needed from IMF for managing the crisis, how much support IMF would provide and how does one assess both upside and downside risks of alternative paths of adjustments.

9.108 The fact remains that the Fund programmes represent a delicate balance between uniformity of treatment of members and flexibility that accounts for country specific situations. The scope of conditionality was expanded significantly in the aftermath of a series of financial crises that gripped a number of systemically important emerging market economies in the 1990s. Some conditionality is legitimate for drawings that are made when a country is experiencing balance of payment problems originating in inappropriate macroeconomic policies, or for the use of funds which is greater than the automatic low-conditionality facilities. However, there is some evidence that such conditionalities are attached without due regard for the borrower countries' circumstances. Moreover, the prescriptive recommendations by the IMF also fail to resolve the economic problems within the countries. A number of criticisms have arisen on IMF conditionality in the East Asia. It has been argued that conditionality should not include issues related to economic and social development strategies and institutions, which, by their very nature, should be decided by the national authorities, based on broad social consensus. Nor should conditionality cover areas within the purview of other international institutions and agreements, such as the World Trade Organisation (Fischer, 2002). Thus, the ongoing debate underlines the need to review the effectiveness of the present framework of Fund conditionalities.

Other Reforms

9.109 Apart from reforms in the international financial institutions, some other reforms are also needed which would have significant ramifications on the design of the future financial architecture.

9.110 First, there is immediate need to improve the consistency of macroeconomic policies at the global level (UN, 1999). The past economic crises have highlighted the need to enhance the coherence of macroeconomic policies at the global level. Global coherence should aim at adoption of a set of interrelated national policies, rather than the adoption

of identical decisions, since economic conditions would be varying in different economies at a given time. For achieving this objective, there should be some mechanism to ensure co-ordination of national policies.

9.111 Second, it is important to ensure that the manner in which the standards/codes/transparency norms/Macro Prudential Indicators (MPIs) are developed and monitored does not degenerate into categorising countries into performers and non-performers. Furthermore, the type of transparency/ disclosure norms that could be prescribed for matured financial systems, could at best serve only as guiding reference points for not so matured financial systems, requiring implementation of such norms only in a flexible and gradual manner. Given the enormous prevalent divergences in institutional development, systems, and the nature of relations amongst various arms of national governments, the implementation of standards and codes should continue to be voluntary in nature and keeping in view the country specific conditions.

9.112 Third, the regulation of the credit rating agencies is emerging as an important issue. Capital flows to a large number of emerging and developing countries are to a large extent affected by the assessments and the ratings assigned by the international credit rating agencies (such as, Moody's, or Standard and Poor's) to them. The shortcomings of the ratings assigned by these agencies was clearly exposed during the East Asian crisis in 1997 when they failed to warn these countries of the impending crisis (Reddy, 2000a). *Ipso facto* these agencies had focused too narrowly on the conventional indicators of country risk such as fiscal balance, banking sector health, national trade and current account balances, and overlooked more dangerous imbalances building up in capital accounts, particularly in short-term money market flows, and the huge pre-crisis build-up of Asian corporate debt. In view of this, there is a need for an international framework having a equitable representation of the borrowers and lenders for monitoring the credit rating agencies. Furthermore, a more continuous scale may be devised for the credit ratings of countries so that changes in these are gradual and not dramatic. This will allow the affected countries to take corrective measures before the situation gets out of control (see Chapter VI).

9.113 Fourth, the need for transparency in an integrated world can hardly be over emphasised. However, at the same time it is important to assess whether the market interprets the available information appropriately. Prior to all the crises in the emerging markets in the 1990s, information on a whole range of important indicators was already available. Post-crises analyses have prominently prompted measures to enlarge the list of indicators. The speed at which most financial firms alter their both on-balance sheet and off-balance sheet positions makes even the most recently reported information obsolete. It is also not clear whether these position shifts are triggered by any assessment of new information or by noise driven panic. Accordingly, there is need for a careful assessment of various issues involved (See Chapter VII).

V. CONCLUDING OBSERVATIONS

9.114 The issue of an appropriate international financial architecture, which has been debated from time to time, resurfaced with a renewed thrust after the East Asian crisis. The surge in global capital flows in the late 1980s and the early 1990s coincided with the opening up and financial liberalisation in several developing economies. Accordingly, capital flows to the emerging market economies rose significantly until the East Asian crisis. However, the experience from the East Asian and subsequent crises elsewhere in the 1990s highlighted the serious downside risks associated with capital flows. Recurrent incidents of crisis and contagion resulting largely from the reversal of capital flows seriously exposed the weaknesses of the existing international financial architecture both in terms of crisis prevention and resolution. In particular, episodes of the 1990s highlighted the inadequacy of the resources available with the international financial institutions (IFIs) to help the countries in distress.

9.115 The need to reform the existing international financial architecture, thus, emanated from the compulsion of developing the necessary safeguards to ensure global financial stability in the wake of volatile capital flows. The focus of the new evolving international financial architecture, accordingly, has been on the development of a transparent and stable global financial system so as to minimise the risks of crisis and contagion. However, in order to pursue the objective of growth with stability effectively, it is important to take into account several factors. First, the inter-relations amongst the various components of the emerging architecture should be clearly recognised. Reliance on any one or even a few of the different proposals for reform, without a clear understanding about the implicit inter-dependence among the various components may weaken the

process of globalisation. Second, the need for restructuring the existing international financial architecture should necessarily be complemented by the adoption of appropriate domestic policies based on sound macroeconomic management and an efficient financial system supported by comprehensive prudential regulation and supervision of financial institutions. A strong and resilient domestic system can withstand shocks and reduce the probability of crises or contagion. Third, in view of the fact that the resources available with the IFIs have been grossly inadequate to support countries facing rapid capital outflows, there is an urgent need to augment such resources. Along with this, concerns regarding governance of IFIs would also need to be addressed. Finally, in the present era of transition of the existing international financial architecture, the need to maintain adequate international reserves can hardly be over-emphasised. Accumulation of international reserves can act not only as a 'safety valve' against capital flight, but more importantly, can serve as an effective market signal about the strength of an economy.

9.116 Keeping in view the weaknesses of international financial architecture, India has followed a gradual and cautious approach towards globalisation, in general, and financial integration, in particular. The pace and sequencing of integration have been carefully calibrated. Along with the increased integration, emphasis has also been laid on building domestic financial institutions and financial infrastructure, development of an appropriate regulatory framework, adherence to international standards and codes and strengthening of corporate governance. These policies have held India in good stead.

9.117 Developing an appropriate international financial architecture is a continuous and evolving process. India has been playing an important role in the new international financial architecture in various international fora. Future deliberations on the issue of international architecture should be consultative, providing an adequate and just representation to various economic groups in general, and to developing and emerging economies in particular.

X ASSESSMENT OF THE EXTERNAL SECTOR

10.1 More than a decade has passed since the balance of payments crisis of the early 1990s. Whereas the crisis of the early 1990s provided the proximate incentive for the subsequent macroeconomic stabilisation and structural reforms programme, the perimeter of the reform process turned out to be much broader. Structural reforms have virtually encompassed all areas of the economy, but these have been more widespread and extensive in the external sector arena. In the process, India has transformed herself from a relatively closed economy to a fairly open economy. A number of key features of this opening up process are discernible such as focus on export growth, attracting non-debt creating capital flows, de-emphasis on short-term external borrowings, and a flexible exchange rate policy. All these led to a number of consequences like build-up of adequate reserves, and reduction in short-term debt. It is now widely recognised that the reform process was marked by a sense of gradualism. Reform in the external sector is no exception to this general tendency – thus India has followed a cautious approach to capital account convertibility, exchange rate management, and trade liberalisation. Careful monitoring of capital account transactions to ensure orderly process of liberalisation and macroeconomic stability with a view to maintaining sustainability of the balance of payments and overall macro economic stability have been advocated.

10.2 The success of the policy reforms is evident in the strength and resilience built up in the external sector as reflected across a range of key indicators. The openness of the economy has almost doubled in the 1990s, with services and transfers remaining buoyant. The current account deficit has remained moderate before turning into a small surplus in 2001-02 and 2002-03 after a gap of 25 years. Substantial increase in capital flows with dramatic shifts in its composition has been witnessed. Up to the end of the 1980s, the bulk of capital flows into India were debt flows in the form of external assistance, commercial borrowings and non-resident deposits. Since the mid-1990s, more than half of net capital flows have been in the form of foreign investment. External debt-GDP as well as debt service ratios have almost halved and India is now classified as a less-indebted country by the World Bank. The Indian approach to exchange rate management with a focus on managing volatility has stood the test of time. The foreign exchange reserves have increased substantially from US $ 5 billion as at end-December 1990 to more than US $ 100 billion in December 2003. The distinct improvement in the external sector has enabled a progressive liberalisation of the exchange and payments regime in India. Quantitative restrictions on merchandise trade have been abolished and tariffs are progressively being brought down. A judicious policy is being pursued for management of capital account liberalisation. In the recent period, significant relaxations have been allowed for capital outflows in the form of direct and portfolio investments, non-resident deposits, repatriation of assets and funds held abroad. For the first time after Independence, the fragility of the balance of payments is no longer a policy concern.

10.3 The previous Chapters analysed various issues related to the opening up of the Indian economy in detail. The present Chapter provides a normative assessment of the external sector reforms and the challenges ahead. Some issues relating to the linkages between monetary, fiscal and financial sector policies within an open economy framework are highlighted.

Merchandise Trade

10.4 India's policies towards progressive opening up of the economy since the early 1990s were undertaken with the professed objectives of improving the overall productivity, competitiveness and efficiency of the economy in order to attain a higher growth profile. Trade policy reforms were an intrinsic part of the structural reforms initiated in the early 1990s. Policies were geared towards reduction of import tariffs, a phased elimination of quantitative restrictions on imports, export promotion and strengthening of incentives. The momentum of trade growth witnessed in the early part of the 1990s, however, could not be sustained in the face of various domestic bottlenecks coupled with exogenous constraints. A series of financial crises beginning with that in East Asia coupled with the slowdown in the US economy dampened world trade growth. The domestic factors contributing to the slowdown included stagnation in investment rate and sluggish industrial growth.

10.5 Internationally, rising shares of investment and manufacturing value-added in an economy's total output are associated with a rising share of manufacturing exports in total exports and GDP. In more open economies, manufacturing exports have outpaced manufacturing value added by a large margin. In India, there has been a decline in both the investment rate as also the share of the manufacturing sector in GDP in the recent period. Consequently, the gap in the recent period between the relative share of manufacturing in India's GDP and merchandise exports has showed a marked divergence since 1997-98; however, there are signs of pick up in manufacturing exports since 2002-03. A higher overall investment rate may help in augmenting such exports further.

10.6 Despite significant reduction in the level of import tariffs since the early 1990s, import tarrifs in India remain amongst the highest in the world. India's average tariffs are more than twice that in China and Brazil and around four times that in Indonesia and South Korea. This suggests considerable scope for further reduction in import tariffs in India that would have a beneficial effect on the competitiveness of the economy. The most active and enduring means of encouraging outward orientation is to lower tariffs on imports so that the anti-export bias gets corrected. The increased interaction with the world economy is expected to be facilitated by the overall reduction in the cost of transaction and communication.

10.7 It is important to note that despite significant liberalisation of imports with reduction in tariffs, phasing out of quantitative restrictions and allowing bullion imports through the formal channel, the country's current account deficit has remained modest during the 1990s. Besides, the overall balance of payments has been in surplus for most of the years and consequently the country's foreign exchange reserves have increased significantly. Thus, in contrast to fears expressed at the time of the economy's opening up, import liberalisation policies, in conjunction with other external sector and overall structural reforms, have enabled a strengthening of the country's external sector since 1990-91. This suggests that tariff reductions could be carried out faster than envisaged earlier, without posing any significant risk to the balance of payments. While an across-the-board lower tariff regime is beneficial to the country's competitiveness, an effective and fast-responsive trade defence mechanism could take care of unfair trade practices. It is increasingly being realised that the desirable structure of tariff rates should comply with the basic principles of simplicity, transparency, stability and international best practices.

10.8 Against this backdrop, the greatest challenge facing the Indian economy is to enhance its productivity and competitiveness so as to achieve a sustained growth in exports of goods and services. As the Tenth Five Year Plan (2002-03 to 2006-07) recognises, growth prospects can be enhanced considerably by tapping the opportunities offered by the international economy in terms of markets, investment and technologies along with improvement in efficiency and absorbing excess capacity available in the economy. This would need an expanding production base of tradable goods and services, which is able to withstand external competition. The Tenth Five Year Plan projects a growth rate of 12.4 per cent in exports. The road map for the achievement of this export growth in the medium term is delineated in the Medium Term Export Strategy (MTES), which is aimed at augmenting the country's share in world trade to one per cent by 2006-07 from the existing 0.7 per cent which implies doubling exports from the present level. The MTES also takes into account the international developments and the complexities arising in the new world trade order under the WTO. A number of key macro policy issues for the commodities sector are discussed in the MTES, such as, price competitiveness, implementation of trade defence mechanisms, efficient administration of tax rebate schemes, and conclusion of strategic free trade agreements. The need to carry forward emphasis on movement of natural persons in WTO negotiations on trade in services, while utilising the opportunities already existing in other modes like consumption abroad Mode (Mode 2), has also been emphasised. Some of the sectors to be given emphasis are: engineering / electronic / electrical and allied sectors, textiles sector, gems and jewellery, chemicals and allied sectors, agriculture and allied sectors, leather and leather manufactures. An institutional mechanism is being set up to monitor the implementation of the strategy.

10.9 Export schemes need to be devised to help exporters to get back the input taxes paid by them efficiently and quickly. Such a system would get a boost from a comprehensive value added tax (VAT) system, introduced at every level. Lower customs and excise duties for major inputs needed for exports can minimise the need for duty drawback. Systems like Electronic Data Interchange (EDI) enable enhanced connectivity for exporters by processing documents electronically and through digital signatures that

reduce processing time and, thus, transaction costs. Increasing the accountability of export processing personnel will enhance reduction of transaction costs. Even if the labour cost of producing a unit of manufacturing exports in India is one of the lowest among the developing countries, labour market rigidity is perceived as a major operating constraint and, for boosting foreign investment infusion, labour policies will have to be made more flexible. There is a need for a radical strategy to promote services exports in which India has a competitive advantage.

10.10 In the aftermath of the negotiations of the WTO held in Cancun, the issues relating to multilateral co-operation, especially among developing countries, have assumed greater significance. The Ministerial Conference was unable to reach consensus on some outstanding issues. The negotiators, however, pledged to continue the process with a renewed sense of urgency in Geneva. In some quarters, concerns have been raised on the very structure of the WTO and its process of negotiations after Cancun. In this context, it may be noted that all the previous trade rounds took far longer to finish than planned (*e.g.* the Uruguay round took eight years to complete rather than the originally mandated three years). The Cancun Ministerial Conference was mainly stocktaking in nature and therefore, its inability to reach consensus should technically result only in lengthening of the negotiating period rather than abandonment of the whole mechanism.

Current Account

10.11 Drawing from the experience of the second half of the 1980s, a key policy objective has been to ensure a sustainable current account deficit. While the High-Level Committee on Balance of Payments (Chairman: C. Rangarajan) suggested that a current account deficit of 1.6 per cent of GDP was sustainable, the Committee on Capital Account Convertibility (Chairman: S. S. Tarapore) observed that sustainability of current account balance could be viewed in relation to growth in current earnings. The actual outcome during the 1990s was a very modest deficit in the current account – averaging around one per cent of GDP - and even a surplus in the recent two years. The modest deficits reflected, *inter alia*, a robust growth in invisible earnings led by a surge in software and other IT-enabled exports, buoyancy in private remittances and improved merchandise export performance. The ratio of current receipts to GDP more than doubled from 8.0 per cent in 1990-91 to 18.7 per cent in 2002-03. This reflected the policy push provided to exports of goods and services by the phased reduction in the anti-export bias through progressive lowering of import tariffs and removal of quantitative restrictions on imports as well as a market-determined exchange rate system. At the same time, the low level of current account deficits can also be attributed to lack of absorptive capacity of the economy.

10.12 The modest current account surpluses in recent two years, *viz*., 2001-02 and 2002-03, are often attributed to cyclical factors such as subdued domestic demand at home and abroad. Over a longer period, current account dynamics reflect inter-temporal smoothing of consumption and, therefore, can be attributed to gaps between domestic savings and investment. Savings behaviour, in turn, is the result of evolving demographic patterns. Regional demographic trends indicate that the current account surpluses witnessed by India and other economies in recent period may not be temporary (Mohan, 2003). Given the higher share of the aged in their population, advanced economies are projected to experience a substantial decline in their saving rates relative to investment in the coming decades, which would then be reflected in current account deficits. These regions will switch to importing capital. Increasingly, it would be the moderate and the low performers among the developing countries which would emerge as exporters of international capital. India is entering the second stage of demographic transition and over the next half-century, a significant increase in both saving rates and share of working age population is expected.

10.13 In this scenario, the current phenomenon of overall surpluses in the balance of payments being run by several emerging market economies (EMEs), including India, may not be a temporary one. The key challenge for macroeconomic policies would be to ensure that the anticipated expansion in saving in developing countries is productively utilised within the economy and not exported abroad. Accordingly, it is vital to ensure that the investment rate rises in close co-movement with the saving rate. This requires massive investments to close the gaps between demand and supply in key infrastructural areas such as power, roads and highways, ports, telecommunication, cities and urban utilities. The future growth strategy will also need to be more labour absorbing to accommodate the projected expansion in the work force. Reforms in the labour market, educational system, pensions and medical care would gather importance within the overall intensification of

structural reforms so that an average current account deficit of 1.6 per cent of GDP during the Tenth Plan period (*i.e.*, 2002-03 to 2006-07) could be realised.

10.14 The cross-country evidence on current account deficits reveals that their persistence at high levels can pose serious problems for the external stability. The macroeconomic dimensions of current account balance that have received increasing attention are its linkages with the financial sector as well as the real sectors of the economy. In the medium to long run, current account dynamics reflect the forward-looking behaviour of agents on savings and investment decisions. In an open economy framework, the required rate of investment sets the level of current account deficits, given the domestic savings rate. The sustained productivity growth in goods as well as services producing sectors helps maintain higher marginal productivity of capital and thus, enhances the capacity of the economy to sustain higher rate of investment through external capital flows. Furthermore, the short-term deviations of consumption levels are seen to be smoothened by current account changes.

10.15 An important dimension of the current account dynamics that has remained at the core of policy debate in the aftermath of recent currency crises, particularly in the EMEs, is the spillover of fiscal deficits to the external sector. Imbalances in the external sector imply that the aggregate absorption in the economy exceeds the domestic production of goods and services. Excess absorption can emanate either from a decline in private savings relative to private investment or from a growing fiscal deficit of the government sector or both. More often than not, it is the fiscal deficit of the public sector that tends to be associated with large current account imbalances. The link between fiscal deficits and current account balance implies that if the private sector is in balance, the government deficit will be fully reflected in the current account deficit. Although the relationship between external and internal balance is essentially an *ex post* one, it shows that improvement in current account balances can be brought about either by an improvement in domestic public or private sector balances, or equivalently through higher income relative to domestic absorption. This is, of course, contrary to the theoretical construct of Barro-Ricardian debt neutrality. According to the latter, rational households fully anticipate that present borrowing has to be repaid later, and hence may not change their consumption in response to changes in taxes, given the path of government consumption. By now the practical irrelevance of the Barro-Ricardo equivalance is widely recognised (Feldstein, 2004). The results of cross-country causal relationship between current account balances and fiscal deficits suggest that for developing countries the causality runs from fiscal deficits to current account deficits. In India, the current juxtaposition of high fiscal deficits and low current account deficits or even surpluses reflects mainly high private sector savings, especially that of the household sector, coupled with sluggishness in investment demand. The spillover of fiscal deficits to current account deficits could easily occur in the event of a pick-up in investment demand. Thus, it underlines the importance of fiscal consolidation to avoid any spillover to external imbalances.

10.16 Invisibles surpluses have played an important role during the 1990s in providing resilience to India's current account. The current account dynamics have been significantly influenced by increasing tradability of services, particularly in developing countries. The sizeable trade accounts, which were structural in nature, have been to a considerable extent offset by rising invisible surpluses in India. Buoyant workers' remittances and a dramatic rise in exports of software and other IT-related services have been the key sources of the growing strength of India's invisible earnings. This can, in turn, be attributed to the availability of a vast pool of skilled and semi-skilled labour in India. In contrast to the Indian experience, the invisible account continues to reflect a persistent deficit in most of the emerging economies. Cross-country comparison of service orientation of domestic output and trade indicates that increasing export intensity of services is significantly determined by the domestic structure of output in favour of services.

10.17 Private transfers, particularly workers' remittances have increasingly become an important source of current account receipts and stable source of development finance for many developing countries. Moreover, the fastest growing segment among services exports of India is software services, which grew at an average rate of 46 per cent since the mid-1990s. India has emerged over the last decade as the most preferred destination for IT services outsourcing by clients in the US and the UK, accounting for more than 90 per cent of the export revenues generated from the Indian IT enabled services - Business Process Outsourcing (ITES-BPO) segment. A comparative analysis of India *vis-à-vis* its competitors in ITES segment clearly provides an edge

to India over others because of its quality of labour pool, cost advantage, English proficiency and supportive government policies. To preserve and build on its lead in IT services and BPO, it is essential for India to facilitate further deregulation and privatisation in key sectors, such as, financial services, retailing and telecom, penetrate new markets such as Japan, and make Indian exports more broad based.

Capital Account

10.18 One of the most significant characteristics of the 1990s has been the spectacular surge in international capital flows, with the expansion of capital flows being much greater than that of international trade flows. Private (bond and equity) flows, as opposed to official flows, have become a dominant source of financing large current account imbalances. Another noteworthy feature of the capital flows during the 1990s has been a shift towards equity flows (especially direct investment) away from debt flows. Foreign investment inflows, both direct and indirect, have emerged as the predominant source of capital inflows.

10.19 Like most of the financial flows, there are costs as well as benefits associated with cross-border capital movement. In principle, free capital movements foster economic growth and welfare, smoothen inter-temporal consumption and expose the domestic financial system to the rigours of international competition. In practice, large capital flows are not without problems, with the potential of destabilising macroeconomic management and constraining the conduct of monetary policy. The experience of the Asian crisis revealed that large and volatile capital flows influenced the exchange rate and interest rate, which led to overshooting of exchange rates often out of alignment with fundamentals. Such volatility imposes substantial risks on market agents, which they may not be able to sustain or manage. As a result, foreign exchange markets are often prone to herd behaviour, particularly during episodes of sudden reversal in capital flows. Furthermore, financial markets, driven by massive cross-border capital flows and the information technology revolution, immediately transfer the valuation of risks associated with uncertainty across the globe and this can lead to contagion. Indeed, global interdependence is marked by common shocks and a "confidence channel" rapidly transmits these shocks to various parts of the world (Mohan, 2003). In such circumstances, the key issue under consideration of the monetary authority is to determine whether the capital inflows are of a permanent and sustainable nature or whether such inflows are temporary and subject to reversal. In practice, this is often difficult to determine. Since external capital flows cannot be easily predicted and can also reverse even in the presence of sound fundamentals, monetary authorities have to make choices for day-to-day exchange rate and monetary management. Against this background, policy makers in developing countries, therefore, have to manage their capital accounts to ensure an orderly process of liberalisation. In this context, management of capital account involves management of control, regulation and liberalisation. Gradualism in liberalisation implies that the mix between controlled, regulated and liberalised capital transactions keeps changing gradually in favour of the latter (Reddy, 2000).

10.20 The debate on capital account convertibility (CAC) acquired a sharp focus all over the world during the 1990s. In the aftermath of financial crises in several countries, scepticism is being expressed about the apparent benefits of an open capital account – all the more so when the international financial community is hard pressed to come up with a conclusive set of prescriptions for taming ill-effects of such flows. The Asian crisis amply demonstrated the need to proceed with caution in opening the capital account. It has been recognised that capital account liberalisation needs to be undertaken as an integral part of economic reforms and synchronised with appropriate macroeconomic, exchange rate, and financial sector policies with prudential restrictions on short-term speculative flows.

10.21 In India, like in several other emerging market economies, liberalisation of the current account preceded the liberalisation of the capital account. Current account convertibility was achieved in August 1994 by accepting Article VIII of the Articles of Agreement of the IMF. Capital account transactions were gradually liberalised during the 1990s. Restrictions on inflows were relaxed first, with an emphasis on encouraging FDI and portfolio equity investment and discouraging short-term and debt-creating inflows. Restrictions on capital outflows are being gradually relaxed. Convertibility for capital of non-resident institutional investment has all along been a basic tenet of the Indian foreign investment policy.

10.22 The Indian approach to capital account convertibility has emphasised that capital account liberalisation is a process, contingent on achieving certain preconditions related to health and strength

of the financial sector, sustainability in the fiscal sector and containment of inflation. Over the years, the policy regime in regard to capital account inflows and outflows in India has witnessed a significant liberalisation. At present, foreign direct investment is allowed on an automatic basis in all sectors, except for a negative list, subject to specified sectoral limits. Portfolio investment is open to registered foreign institutional investors. A new, more liberalised external commercial borrowings (ECBs) policy to promote investment activity in industry has been announced. To attract stable non-resident deposit inflows, the interest rates on foreign currency deposits are linked to LIBOR. Similarly, capital outflows for joint ventures abroad have been permitted. Thus, over time, both inflows and outflows under capital account have been gradually liberalised. Notwithstanding a significant increase in overall capital flows to India during the 1990s, these remain smaller than other countries of similar economic size. There are, however, two areas where extreme caution continues to be exercised, *viz*., (i) unlimited access to short-term external commercial borrowing; and (ii) providing unrestricted freedom to domestic residents to convert their domestic bank deposits and idle assets (such as, real estate).

10.23 The approach of multilateral institutions towards capital account convertibility has undergone a significant shift after the Asian crisis. In April 1997, the then Interim Committee of the IMF had come out in favour of amending the IMF's Articles of Agreements to make liberalisation of the capital account as one of the objectives of the IMF. Noting the linkage between rapid growth and large capital inflows, it was argued that although developing countries might experience increased volatility, it should be managed with greater exchange rate flexibility without imposing capital controls. In the wake of the Asian crisis, however, the basic premises of pursuing capital account liberalisation were questioned, as was the advocacy of vesting the IMF with the responsibility for promoting orderly liberalisation of capital flows. In the face of intellectual opposition to its policies, a moderation of the IMF's stance became evident. The IMF recognised the role of capital controls and acknowledged the existence of important preconditions for an orderly liberalisation of capital movements. Since then, the IMF, in general, has favoured a gradual approach to opening the capital account if the preconditions for effective liberalisation are not in place. The World Bank also came out with the suggestion that capital account liberalisation should proceed cautiously, in an orderly and progressive manner in developing countries, given the large risks of financial crises – heightened by international capital market failures. The multilateral institutions now underscore the importance of creating appropriate conditions for encouraging capital flows.

10.24 A policy concern in regard to capital inflows has been that actual foreign direct investment inflows have been low both in relation to approvals as well as compared to many other emerging markets. Since the FDI policy regime in India is considered as one of the most transparent and liberal amongst emerging markets, the modest FDI inflows are attributed largely to hurdles on account of domestic policy, rules and procedures. The thrust on attracting higher FDI inflows in the infrastructure sector should be dovetailed into the regulatory and pricing reforms in major infrastructure services such as power and transportation. Furthermore, export promotion policy needs to utilise the natural complementarity of FDI with export activity.

10.25 In the context of large foreign exchange inflows, the issues concerning extent of intervention in the foreign exchange market and sterilisation assumes paramount importance. It is evident that operations involving sterilisation are undertaken in the context of a policy response which has to be viewed as a package encompassing exchange rate policy, level of reserves, interest rate policy, along with considerations related to domestic liquidity, financial market conditions as a whole, and the degree of openness of the economy. India has made conscious attempt to manage external liabilities and assets to ensure growth with stability through coordinated policy framework and careful calibration of instruments to moderate market pressures without any distortionary shocks on the performance of the economy. As a result, consistent with its macroeconomic objectives, the Reserve Bank was able to offset the expansionary effect of foreign capital flows on domestic money supply. Nonetheless, the policy response was able to soften domestic interest rates.

10.26 Another noteworthy development in external sector management has been the containment of the country's external debt. Since March 1995, outstanding external debt stock has been largely stable, moving around US $ 100 billion. The increase

in the stock in the recent period is entirely on account of the conversion of maturing erstwhile non-resident non-repatriable deposits into deposits in repatriable schemes and their subsequent inclusion in the debt stock. The improvement in external debt position comes out clearly when viewed in relation to GDP - the ratio of external debt to GDP has almost halved from its peak of 38.7 per cent at end-March 1992 to 20.3 per cent by March 2003. Similarly, debt service ratio has more than halved from its peak of 35.3 per cent in 1990-91 to 14.7 per cent in 2002-03. Short-term debt remains modest at around five per cent of the total external debt. The improvement in India's external debt position is attributable to a conscious debt management policy that focussed on high growth rate of current receipts, encouraging non-debt creating flows, keeping the maturity structure as well as the total amount of commercial debt under manageable limits and encouraging stable non-resident deposits through interest rates close to international levels. In the recent period, external debt has been further consolidated through recourse to pre-payment by the Government as well as the corporates. The strategy that was actively put in place in the early 1990s has paid dividends with sustained improvement in external indebtedness position of the country, with India being classified presently as a less indebted country.

Foreign Exchange Reserves

10.27 The Asian financial crisis not only highlighted the need for maintaining adequate levels of foreign exchange reserves, but also underlined the need for prudent management of a country's reserves assets. Sound practices in the areas of risk management and liquidity management have attracted increased emphasis in recent times.

10.28 In the context of growing foreign exchange reserves, the issue of costs and benefits of reserve build-up has attracted a lot of attention. In any cost-benefit analysis of holding reserves, it is essential to keep in view the objectives of holding reserves which, include: (i) maintaining confidence in monetary and exchange rate policies; (ii) enhancing the capacity to intervene in forex markets; (iii) limiting external vulnerability so as to absorb shocks during times of crisis; (iv) providing confidence to the markets that external obligations can always be met; and (v) reducing the volatility in foreign exchange markets. Sharp exchange rate movements can be highly dis-equilibrating and costly for the economy during periods of uncertainty or adverse expectations. These economic costs are likely to be substantially higher than the net financial cost, if any, of holding reserves. In this context, it is important to note that in India, in the last few years, almost the whole addition to reserves has been made without increasing the overall level of external debt. The increase in reserves largely reflects higher remittances, quicker repatriation of export proceeds and non-debt inflows. Even after taking into account foreign currency denominated NRI flows (where interest rates are linked to LIBOR), the financial cost of additional reserve accretion in India in the recent period is quite low.

10.29 It is now widely recognised that in judging the adequacy of reserves in emerging economies, it is not enough to relate the size of reserves to the quantum of merchandise imports or the size of the current account deficit. In view of the importance of capital flows, and associated volatility of such flows, it has become imperative to take into account the composition of capital flows, particularly, short-term external liabilities, in judging the adequacy of foreign exchange reserves. An additional factor which is being built into this assessment is the need to take into account contingencies such as unanticipated increase in commodity/asset prices. Based on various indicators of the adequacy of reserves, India's reserves holding are comfortable. At their present level, the reserves provide a cover of more than 15 months of imports and over seven years of annual debt servicing. In terms of short-term debt, reserves are almost 16 times the volume of short-term debt. Apart from adequate level of foreign exchange reserves, the Asian financial crisis underlined the need for its prudent management. In this context, benchmarking the reserve management practices followed in India against some major countries reveals the comparability of India's position to these countries.

Exchange Rate Management

10.30 Conventionally, trade flows were deemed to be the key determinants of exchange rate movements. In more recent times, the importance of capital flows in determining the exchange rate movements has increased considerably, rendering some of the earlier guideposts of monetary policy formulation possibly anachronistic (Mohan, 2003). Furthermore, on a day-to-day basis, it is capital flows that influence the exchange rate and interest rate arithmetic of the financial markets. Rather than the real factors underlying trade competitiveness, it is expectations and reactions to news that drive capital flows and exchange rates, often out of alignment with fundamentals. Capital flows have been observed to

cause overshooting of exchange rates as market participants act in concert with pricing information and foreign exchange markets are prone to bandwagon effects. The effects of capital flows on the exchange rate are amplified by the fact that capital flows in 'gross' terms can be several times higher than the 'net' capital flows (Jalan, 2003).

10.31 In the face of large capital flows, considerations of maintaining a competitive exchange rate, on the one hand, and controlling inflation, on the other, create conflicting objectives for a central bank. It is essential to recognise that the capacity of economic agents in developing economies, particularly poorer segments, to manage volatility in all prices, goods or foreign exchange are highly constrained and there is a legitimate role for non-volatility as a public good (Reddy, 2003). Accordingly, the broad principles that have guided India after the Asian crisis of 1997 are: (i) careful monitoring and management of the exchange rate without a fixed or pre-announced target or a band; (ii) flexibility in the exchange rate together with ability to intervene, if and when necessary; (iii) a policy to build a higher level of foreign exchange reserves which takes into account not only anticipated current account deficits but also 'liquidity at risk' arising from unanticipated capital movements; and (iv) a judicious management of the capital account. This policy has stood the test of time and the Indian approach to exchange rate management has been even described as an ideal for Asia.

10.32 Empirical evidence shows that foreign exchange markets in India are efficient in the sense that while over the medium-term, forward premia and interest differentials move together, in the short-run, deviations from covered interest parity arise due to demand-supply mismatches. Short-run deviations from uncovered interest parity indicate that sterilised foreign exchange market intervention and monetary tightening can be effective in ensuring orderly conditions.

10.33 An analysis of the complexities, challenges and vulnerabilities faced by the emerging market economies in the conduct of exchange rate policy reveals that the choice of a particular exchange rate regime alone cannot meet all the requirements. The experience with capital flows has important lessons for the choice of the exchange rate regime. The advocacy for corner solutions – a fixed peg *a la* the currency board without monetary policy independence or a freely floating exchange rate retaining discretionary conduct of monetary policy – is distinctly on the decline. The weight of experience seems to clearly be in favour of intermediate regimes with country-specific features, no targets for the level of the exchange rate, exchange market interventions to ensure orderly rate movements, and a combination of interest rates and exchange rate interventions to counter extreme market turbulence. In general, emerging market economies have accumulated massive foreign exchange reserves as a circuit-breaker for situations where unidirectional expectations become self-fulfilling. It is a combination of these strategies that will guide monetary authorities through the impossible trinity of a fixed exchange rate, open capital account and an independent monetary policy (Mohan, 2003).

10.34 Recent experience has highlighted the need for developing countries to keep a continuous vigil on market developments, and the importance of building adequate safety nets that can withstand the effects of unexpected shocks and market uncertainties. The important message that comes out from the analysis of various episodes of volatility and the policy responses is that flexibility and pragmatism are needed in exchange rate policy in developing countries, rather than adherence to strict theoretical rules. Tackling of the contagion of the East Asian crisis clearly points out that there is a need for central banks to keep instruments / policies in hand for use in difficult situations. Against this background, India's exchange rate policy of focusing on managing volatility with no fixed rate target while allowing the underlying demand and supply conditions to determine the exchange rate movements over a period in an orderly way has stood the test of time. The Reserve Bank continues to follow the same approach of watchfulness, caution and flexibility in regard to the foreign exchange market. It co-ordinates its market operations carefully, particularly in regard to the foreign exchange market with appropriate monetary, regulatory and other measures as considered necessary from time to time.

10.35 Central banks all over the world are concerned over development of markets in order to allow market participants to manage their own risks, *viz.,* micro risks. As the market develops, the concern of the central bank is limited to managing the macro risks. Over the last few years, several measures have been taken in India to deepen and widen the foreign exchange market so as to allow the market participants to undertake foreign exchange transactions with reduced uncertainty.

International Financial Architecture

10.36 Increased financial globalisation provides greater access to international capital. At the same time, financial crises have been more frequent and severe since the 1990s than in earlier decades. A distinguishing characteristic of this period is the marked increase in volatility of capital flows and exchange rates and the associated contagion. A series of financial crises in the second half of the 1990s exposed various shortcomings of the international financial architecture in respect of both crisis prevention and crisis management. These shortcomings include: (i) lack of strict and reliable monitoring and surveillance of financial system; (ii) untimely and inadequate financial assistance; (iii) absence of an effective debt resolution mechanism; (iv) lack of comprehensive and reliable early warning system; (v) absence of effective means to involve the private sector in resolving crisis; and (vi) non-availability of adequate international liquidity to build confidence. Accordingly, efforts are underway to strengthen the structure of the existing architecture to reduce the probability of a crisis, contain the severity of crises when they occur, and insulate the global economy from contagion, while providing the desirable level of confidence to the national authorities to sustain the process of globalisation. The emphasis has been on establishing best practices through standards and codes, greater transparency and accountability, early detection, better supervision, stronger prudential requirements, sustainable exchange rate regimes and a greater sharing of the burden of crisis resolution with the private sector.

10.37 In the discussion on the international financial infrastructure, increased recognition has been given to three pre-requisites for efficient functioning of the financial sector, *viz.*, a well-designed infrastructure, effective market discipline, and a strong regulatory and supervisory framework. As a member of various international groups such as, the International Monetary and Financial Committee (IMFC) at the International Monetary Fund (IMF), Development Committee of the World Bank, the Bank for International Settlements (BIS), the Group of 20 and the Working Group set up by the Financial Stability Forum and various other organisations, India has been playing an active role in the discussions on the international financial architecture and related issues. India has been closely monitoring the developments on all aspects of the new international financial architecture and has been fine-tuning and strengthening the internal crisis prevention and management frameworks. India is also one of the first members to subscribe to the IMF's Special Data Dissemination Standard (SDDS) through which information, relevant for assessment of macro-economic stability is being disseminated regularly. India voluntarily agreed for Financial Stability Assessment Programme (FSAP). After the completion of the programme in 2001, India's internal frameworks for assessing financial system stability have been validated.

10.38 In addition to being closely associated with several international standards setting bodies, India was a part of the Task Force on the Implementation of Standards and participated in the Joint Committee Group meeting of the Financial Stability Forum (FSF). Recognising the importance of self assessment, the Reserve Bank, in consultation with the Government, appointed a Standing Committee on International Financial Standards and Codes (Chairman: Y. V. Reddy) in December 1999. In respect of Standards and Codes, India has been stressing the importance of ensuring that the manner in which these standards are developed and monitored does not degenerate into categorising countries as performers and non-performers.

10.39 In recent years, there has been a growing realisation that the finances available from the IMF would not be sufficient to meet the requirement if several member countries need them at the same time. Several suggestions have been put forward to improve the resources of the IMF. The decision of the Twelfth General Review of quota in January 2003 not to increase the Fund quotas has brought to focus the issue of Fund governance. Over the years, the prevailing system of quota and voting power has created distortions, which, in turn, have raised issues of equity. Effective governance of the IMF demands that the institutional benefits and burdens are equitably shared among the members and that checks and balances operate efficiently in the decision-making process. Improving IMF governance and thus reducing the 'democratic deficit' in its functioning needs to be approached through structural reforms aimed at redistribution of the voting power amongst member countries (Reddy 2003a).

10.40 Closely related to the issue of enhancing the Fund resources through revision of quotas is the evolving role of the Fund as the supplier of international liquidity. The arguments for a lender of last resort (LOLR) are centred around the requirements for providing adequate international

liquidity in times of crises. The role of IMF should not be viewed as a International Lender of Last Resort (ILOLR) as it is not in a position to supply unlimited liquidity. However, much can be done to improve the way IMF operates so that, in effect, it moves in that direction. The IMF has the option of assuming the LOLR function as under Article XVIII it can allocate SDRs "to meet the long-term global need, as and when it arises, to supplement existing reserve assets". In other words, "IMF can remain as a quasi lender of the last resort" (Reddy, 2003a) or it could be said as "IMF is lender of some sort" (Jalan, 1999). Coupled with the ongoing work on the Sovereign Debt Restructuring Mechanism (SDRM) as well as progress in Collective Action Clauses, this initiative would strengthen the IMF's effort towards crisis resolution (Reddy, 2003a).

10.41 Further improvements need to be made in ensuring quick and relatively less conditional access to emergency financing facilities with the IMF. The Contingent Credit Line (CCL) was expected to play a critical role to serve as a precautionary line of defence, reducing vulnerability and bolstering investor confidence in eligible emerging market economies. Unlike other existing Fund facilities, the objective behind CCL was to prevent crises by making available adequate liquidity upfront to a member with sound fundamentals so as to deal with the pressure of contagion. CCL, however, was not used by any member during the period of its operation and it was, therefore, allowed to expire in November 2003. The lack of resort to CCL reflected a number of concerns, including: (i) the entry problem, *i.e.,* the fear that access under CCL would convey a negative signal to the market; (ii) the exit problem, *i.e.,* the uncertainty about the withdrawal of eligibility; (iii) insufficient automaticity; and (iv) stringent pre-qualifying norms. This experience with CCL stresses the need for evolving workable strategies in the near future (Reddy 2003b).

10.42 A more supportive role of international institutions in crisis management is called for, with a greater sensitivity to the needs of developing countries in line with their increasing economic strength and participation in international trade and finance. In the ultimate analysis, however, the responsibility for coping with instability and uncertainty rests with each individual country. Preventing financial instability requires a number of conscious efforts, such as, (i) careful monitoring and management of the exchange rate without any fixed target, but with the flexibility to intervene as and when necessary; (ii) safety walls in the form of high levels of foreign exchange reserves covering not only anticipated current account deficits but also liquidity at risk arising from unanticipated capital movements; and (iii) prudent management of the capital account emphasising durable non-debt creating flows such as FDI and discouraging quickly reversing flows. Augmenting the access to lendable resources with multilateral institutions on a more automatic basis than now will hold the key to managing the disruptive effects of instability when crises do occur.

Fiscal Policy

10.43 In an open economy, a prudent fiscal policy is an essential ingredient of macroeconomic stability as well as a crucial determinant of external balance. Widening fiscal deficits over time get reflected in unsustainable external current account imbalances and higher inflation with adverse consequences for exchange rate stability as illustrated by developments during the second half of the 1980s in India. The recent twin deficits in the US – with both fiscal and current account deficit exceeding 5 per cent of GDP – and the sharp movement in the US dollar also bring forth the importance of fiscal prudence. In India, higher fiscal deficits in recent years have so far not been reflected in external imbalances and inflationary pressures, on account of subdued private investment. In a medium-term framework, external sector and overall macroeconomic stability will hinge upon fiscal prudence. In this context, the Fiscal Responsibility and Budget Management (FRBM) Act with its objective of a phased elimination of revenue deficit and reduction in fiscal deficit is a welcome step.

10.44 With greater opening of the economy, domestic taxes have to be in sync with those prevailing internationally. "Tax neutrality" would be the prime guide for any tax system designed to work with market forces. With increasing presence of multinational enterprises, divergent tax rates could provide incentives for transfer pricing. Transfer pricing needs to be regulated in ways that minimise conflicts with other jurisdictions and do not discourage future investment, while, at the same time, safe guarding their revenue base. Some of the measures suggested for developing countries include: (i) enactment of legally enforceable measures against transfer pricing practices which erode the tax bases; (ii) imposing withholding taxes at moderate rates on non-arm's length royalties and other fees paid abroad; and (iii) closer co-operation between customs and income tax departments to ensure against the practice of double invoicing of inputs - declaration of low prices

to customs authorities and high prices to income tax authorities. Finally, tax on services should be made an integral part of any comprehensive value added tax system to be introduced.

10.45 In a globalising economy, State intervention would have to be limited to providing public goods or goods, which have considerable externalities, natural monopoly or where information is asymmetric. The focus of the fiscal policy should, thus, be geared more towards facilitating the growth process rather than directly involving the State in the production and distribution of services. This may necessitate a step-up in public investment in infrastructure and human capital formation. External sources could play a vital role in providing the necessary resources.

Monetary Policy

10.46 Recent global developments have transformed the environment in which monetary policy operates, throwing up opportunities as well as challenges. Monetary policy formulation has become more complex and interdependent. Increasingly, monetary policy decisions have to be made in an environment of heightened uncertainty. A key factor that guides the conduct of monetary policy is how to reap the benefits of market integration while minimising the risks of market instability. An integral component of functions of any central bank is the development of financial markets that can increasingly shift the burden of risk mitigation and costs from the authorities to the markets. The adverse implications of excess volatility leading to financial crises are more severe for low-income countries. They can ill-afford the downside risks inherent in a financial sector collapse (Mohan, 2003). Maintenance of stability of the financial system must be regarded as a key objective of monetary and financial sector policies.

10.47 More recently, monetary policy in a number of emerging market economies, including India, is grappling with persistent external flows and their impact on exchange rate and inflation. If the central bank does not absorb excess supplies in the foreign exchange market, it can lead to appreciation of the exchange rate, with implications for external competitiveness. On the other hand, if the capital flows are absorbed by the central bank, this could lead to expansion in domestic money supply and, over time, to higher inflation. The policy response depends on several considerations such as: (i) trade-offs between the short term and the long term; (ii) judgement on whether capital flows are temporary or enduring; and (iii) the operation of self-correcting mechanisms in the market and market responses in terms of sentiments. Although the distinction between short term and long term flows is conceptually clear, in practice, it is not always easy to distinguish between the two for operational purposes.

10.48 Central banks use a combination of measures to deal with excess supplies in the market. Sterilisation through open market operations is the most popular policy response and has been used by almost all countries facing capital surges during the 1990s. Sterilisation as a policy response can be effective only for a limited time since there are practical limits to its size in view of implications for domestic interest rates, quasi-fiscal costs and availability of ample marketable government securities with the central bank to carry out the necessary open market sales. In addition to sterilisation, increase in cash reserve requirements and other tax measures have been widely used to manage capital flows. However, these measures impose a tax on the commercial banking system and promote disintermediation. Furthermore, their effectiveness would require progressive widening of the scope of the controls with long-run costs which may outweigh the short-run benefits. If capital flows persist, the monetary policy instruments would need to be supplemented by other durable macroeconomic policies, such as, fiscal adjustment, liberalisation of trade policies and capital outflows, and finally, a greater degree of flexibility in the exchange rate. Fiscal restraint as a policy response, however, is constrained by inflexibility of fiscal policy. Trade and capital account liberalisation to manage capital flows may be ineffective as it could induce further capital inflows since liberalisation might increase foreign investors' confidence in domestic economy.

10.49 In India, a number of steps have been taken to manage the excess supply in the foreign exchange market. The Reserve Bank's Working Group on Instruments for Sterilisation observed that while the Reserve Bank may continue to resort to the existing instruments of sterilisation, new instruments are needed to enhance ability to sterilise the impact of increase in its foreign currency assets. It is important to put in place durable and consistent policies that expand the country's capacity to absorb such capital flows so as to achieve the higher growth trajectory as envisaged in the Tenth Plan.

Financial Sector Policies

10.50 The financial crises have brought to the fore, *inter alia*, the need for strengthening the financial system. In the context of cross-border capital flows,

in the absence of procedures for dealing with international bankruptcy and facilities for the lender of last resort, the liabilities incurred on private account can devolve on public account. Since weakness in financial institutions plays a major role in perpetuating and exacerbating crises related to capital flows, sound balance sheets and regular operational procedures of financial institutions, mainly banks, is an essential ingredient of the package for mitigating the vulnerability of the economy as a whole to crises.

10.51 An efficient oversight of the financial system reduces the information asymmetry and moral hazard problems. In fact, supervision is about promoting financial market stability. Strengthening of the regulatory and supervisory framework and achieving international best practices in banking supervision has also been receiving due attention. Central banks, in particular, have an important role to play in promoting financial stability in emerging economies, ranging from providing liquidity (lender of last resort) to performing crisis management. Central banks, on account of their close interaction with financial intermediaries, do possess informational advantage compared to other supervisory entities. It is necessary that off-site monitoring of financial intermediaries supplements on-site monitoring to detect problems at an early stage and prevent them from spreading to other financial intermediaries. Under the prudential regulatory and supervisory framework, the key elements are: (i) sound capital adequacy standards; (ii) effective supervision; and (iii) risk-based management system. In relatively open economies, it is important to focus on foreign exchange transactions and external liability management in the exercise of oversight. In particular, short-term borrowings from abroad would need to be contained at sustainable levels. Accordingly, the Reserve Bank has been expressing concern over unhedged foreign currency borrowings by corporates since these entail significant but avoidable risks not only to corporate balance sheets but also a possible impact on the quality of banks' assets.

10.52 Cross-country empirical evidence has shown that the cost of financial intermediation declines and quality of financial services improves with opening of the economy. Openness should, however, be preceded by deregulation and strengthening of institutional framework in order to limit contagious influences. The strategy adopted in India was to maximise the beneficial effects of openness while minimising the adverse consequences. Financial crises, internally or from contagious influences in the neighbourhood, have been averted, while the financial system has been progressively deregulated and strengthened. The convergence of the domestic prudential norms with international best practices and of the performance of domestic banks *vis-à-vis* foreign banks in the domestic sector has provided the ground for further openness with minimisation of vulnerabilities that may arise therefrom. The policy of gradualism that has been followed by India may be attributed to evolution of appropriate institutional framework and the sequencing of reforms based on the experience gained as reforms progressed. Recent crises have also lent support to this approach towards reforms.

Concluding Observations

10.53 Looking ahead, there is a growing recognition that openness matters and globalisation is an irreversible process entailing both opportunities as well as challenges. With increasing openness, monetary and fiscal policies are expected to play a key role in ensuring macroeconomic stability while facilitating sustained economic growth within the framework of a market economy. In view of increased uncertainty, central banks need to take into account developments in the global economic situation, the international inflationary situation, interest rate situation, exchange rate movements and capital movements while formulating policy responses. The maintenance of financial sector stability has assumed much greater importance with opening up of the economy to the influence of globalisation.

10.54 Monetary policy would have to play an important role in this context by ensuring appropriate real interest rates and low and stable inflation. The key challenge for macroeconomic policies would be to ensure that the anticipated expansion in saving in developing countries is productively utilised within the economy and not exported abroad so that the investment rate rises in close co-movement with the saving rate. As sustainable growth hinges around the existence of a critical minimum in terms of physical infrastructure, an acceleration of growth in the future requires massive investments to close the gaps between demand and supply in key infrastructural areas such as power, roads and highways, ports and telecommunication, cities and urban utilities. More rational user charges have to be levied to finance the restoration of public investment in agriculture.

10.55 Real sector developments have close connection with the process of opening up. In order to reap the fruits of opening up, enabling conditions need to be created. Illustratively, decisive actions are required to promote agricultural diversification and active investment in rural infrastructure to enable greater food processing and value addition to agricultural products. A proper incentive structure needs to be put in place to encourage private investment in hi-tech horticulture with micro propagation, protected cultivation, drip irrigation, and integrated nutrient and pest management. A progressive correction is required in the incentive structure for agriculture so that the excessively high minimum support prices that currently exist for wheat and rice do not continue to distort resource allocation in agriculture as a whole. Corresponding changes would also need to be made in the current policies related to other subsidies, particularly those related to fertiliser, power and water. The reduction in various subsidies in these areas will provide a very significant fiscal dividend for the country enabling higher public investment where it is required, and particularly in agriculture. In view of the relatively high level of food security, the climate is now right for further policy reforms in agriculture. Similarly, the absorption capacity of the industrial sector has increased after initiation of the liberalisation process, which has impacted on its size and spread. The globalisation process brought about changes in the expenditure pattern of the industries, as there are evidences that the costs of production, including interest payments declined which resulted in increased profitability of the factory sector. The fact remains that whole package of reforms that has been carried out over the past 12 years was expected to lead to significant industrial restructuring. Resources should have moved from the more capital-intensive sectors to the more labour using ones, leading to both higher output and employment growth. It is felt that industrial restructuring in terms of more rapid bankruptcy procedures, easier reallocation of capital, faster transformation of urban land use, and flexibility in labour use, legislative changes, social security mechanism, and technological upgradation need priority.

10.56 The process of opening up of the Indian economy has given birth to a host of new challenges and opportunities. The spirit of the liberalisation process entails a conscious effort on the part of the policy maker(s) to optimise on these opportunities-challenges trade-offs. When a definitive history of the reform process pursued in the Indian economy will be written, it would probably hinge on the synergy between the domestic and external sectors, each throwing up its strengths and threats.

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